

## CIRCULATION.—COUNTRY BANKS.

Average amount of Promissory Notes in Circulation in ENGLAND and WALES, on Saturday, in each Week during the FOURTH QUARTER (Oct.—Dec.) of 1862; and in SCOTLAND and IRELAND, at the Three Dates, as under.

| ENGLAND AND WALES. |  |  |                                | SCOTLAND.         |                 |           |                                | IRELAND.        |           |                                |
|--------------------|--|--|--------------------------------|-------------------|-----------------|-----------|--------------------------------|-----------------|-----------|--------------------------------|
| DATES.             | Private Banks.<br>(Fixed Issues, 433.) | Joint Stock Banks.<br>(Fixed Issues, 330.) | TOTAL.<br>(Fixed Issues, 763.) | Four Weeks, ended | £5 and upwards. | Under £5. | TOTAL.<br>(Fixed Issues, 275.) | £5 and upwards. | Under £5. | TOTAL.<br>(Fixed Issues, 635.) |
| 1862.              | Mins. £                                | Mins. £                                    | Mins. £                        | 1862.             | Mins. £         | Mins. £   | Mins. £                        | Mins. £         | Mins. £   | Mins. £                        |
| Sept. 27           | 3,23                                   | 2,90                                       | 6,13                           |                   |                 |           |                                |                 |           |                                |
| Oct. 4             | 3,37                                   | 3,02                                       | 6,39                           |                   |                 |           |                                |                 |           |                                |
| " 11               | 3,47                                   | 3,04                                       | 6,51                           |                   |                 |           |                                |                 |           |                                |
| " 18               | 3,48                                   | 3,01                                       | 6,49                           | Oct. 18           | 1,59            | 2,60      | 4,19                           | 2,91            | 2,65      | 5,56                           |
| " 25               | 3,45                                   | 2,98                                       | 6,43                           |                   |                 |           |                                |                 |           |                                |
| Nov. 1             | 3,41                                   | 2,98                                       | 6,39                           |                   |                 |           |                                |                 |           |                                |
| " 8                | 3,37                                   | 2,97                                       | 6,34                           |                   |                 |           |                                |                 |           |                                |
| " 15               | 3,31                                   | 2,95                                       | 6,26                           | Nov. 15           | 1,67            | 2,74      | 4,41                           | 3,01            | 2,91      | 5,92                           |
| " 22               | 3,27                                   | 2,94                                       | 6,21                           |                   |                 |           |                                |                 |           |                                |
| " 29               | 3,24                                   | 2,90                                       | 6,14                           |                   |                 |           |                                |                 |           |                                |
| Dec. 6             | 3,17                                   | 2,85                                       | 6,02                           |                   |                 |           |                                |                 |           |                                |
| " 13               | 3,13                                   | 2,80                                       | 5,93                           | Dec. 13           | 1,69            | 2,88      | 4,57                           | 2,89            | 2,95      | 5,84                           |

FOREIGN EXCHANGES.—Quotations as under, LONDON on Paris, Hamburg & Calcutta; —and New York, Calcutta, Hong Kong & Sydney, on LONDON—with collateral cols.

| 1         | 2                      | 3                         | 4            | 5   | 6                      | 7                         | 8            | 9            | 10               | 11                              | 12            | 13                 | 14  |
|-----------|------------------------|---------------------------|--------------|---|------------------------|---------------------------|--------------|--------------|------------------|---------------------------------|---------------|--------------------|---|
| DATES.    | Paris.                 |                           |              |   | Hamburg.               |                           |              | New<br>York. | Calcutta.        |                                 | Hong<br>Kong. | Syd-<br>ney.       | Stand-<br>ard<br>Silver<br>in bar<br>in<br>Lon-<br>don. |
|           | London<br>on<br>Paris. | Bullion<br>as arbitrated. |              | Prem.<br>or Dis.<br>on<br>Gold<br>per<br>mille. | London<br>on<br>Hambg. | Bullion<br>as arbitrated. |              |              | India<br>House.  | At<br>Calcutta<br>on<br>London. |               |                    |   |
|           |                        | Agnst.<br>Engd.           | For<br>Engd. |   |                        | Agnst.<br>Engd.           | For<br>Engd. |              |                  |                                 |               |                    |   |
|           | 3 m. d.                |                           |              |   | 3 m. d.                |                           |              | 60 d. s.     | 60 d. s.         | 6 m. s.                         | 6 m. s.       | 30 d. s.           | pr. oz.   |
| 1862.     |                        | pr. ct.                   | pr. ct.      |   |                        | pr. ct.                   | pr. ct.      | pr. ct.      | d.               | d.                              | d.            | pr. ct.            | d.  |
| Oct. 4 .. | 25.45                  | —                         | 0.1          | par   | 13.8                   | —                         | 0.2          | 129          | 23 $\frac{3}{4}$ | 24 $\frac{1}{2}$                | 55            | 1 $\frac{1}{2}$ p. | 61 $\frac{1}{2}$  |
| „ 18 ..   | .45                    | —                         | 0.1          | „   | .8                     | —                         | 0.1          | 136          | „                | 24 $\frac{1}{8}$                | „             | „                  | 61 $\frac{1}{2}$  |
| Nov. 1 .. | .45                    | —                         | —            | $\frac{1}{2}$ p.                                | .7 $\frac{1}{2}$       | —                         | 0.1          | 147          | „                | 24 $\frac{3}{4}$                | „             | „                  | 61 $\frac{1}{2}$  |
| „ 15 ..   | .42 $\frac{1}{2}$      | 0.1                       | —            | 1 $\frac{1}{2}$ „                               | .6 $\frac{3}{4}$       | —                         | 0.1          | 145          | „                | „                               | „             | „                  | 62 $\frac{1}{2}$  |
| Dec. 6 .. | .42 $\frac{1}{2}$      | 0.2                       | —            | 1 „   | .6 $\frac{3}{4}$       | —                         | 0.3          | 146          | „                | 25                              | „             | „                  | 61 $\frac{1}{2}$  |
| „ 20 ..   | .50                    | —                         | 0.1          | $\frac{1}{2}$ „                                 | .6 $\frac{3}{4}$       | —                         | 0.2          | 146          | „                | 24 $\frac{1}{8}$                | „             | „                  | 61 $\frac{1}{2}$  |

## JOURNAL OF THE STATISTICAL SOCIETY,

JUNE, 1863.

REPORT of the COUNCIL for the FINANCIAL YEAR ended 31st December, 1862, and for the SESSIONAL YEAR ended March, 1863, presented at the TWENTY-NINTH Anniversary Meeting of the STATISTICAL SOCIETY, held at the Society's Rooms, 12, St. James's Square, on Saturday, 14th March, 1863; with the PROCEEDINGS of that Meeting.

RIGHT HON. SIR JOHN S. PAKINGTON, BART., M.P., G.C.B.,  
President, in the Chair.

THE Council have to report that the number of Fellows now on the list (March, 1863) is 365, including 67 Life Members—against 374 (including 70 Life Members) at the same date last year. The losses by death, withdrawal, and default, have been 35; the new elections are 26. In 1861-2, the losses were 23; and the new elections 24.

The Income of the Year ended 31st December, 1862 (exclusive of the Balance of 226*l.* from 1861), was 770*l.* (against 734*l.* in 1861); and the expenditure was 763*l.* (against 744*l.* in 1861), leaving a Cash Balance, on 31st December, 1862, of 233*l.* (against 226*l.* at end of 1861).

The Surplus of Assets, on 31st December, 1862, was 1,720*l.*, after providing for all Liabilities; on 31st December, 1861, it was 1,677*l.* Hence the financial condition of the Society has been satisfactorily maintained during the past year, in spite of a slight, and doubtless only temporary, falling off in the number of its Members.

The Papers read at the Monthly Meetings have maintained the reputation of the Society. They have combined scientific accuracy with practical utility, and have given rise to discussions of a highly interesting and suggestive character.

The following is a List of the Papers which have been read from March, 1862, to March, 1863:—

March, 1862.—*Dr. Mouat.*—On Prison Statistics and Discipline in Lower Bengal.

- April, 1862.—*Mr. F. Purdy*.—On the Earnings of Agricultural Labourers in Scotland and Ireland.
- May, „ *Mr. Tottie*.—On the Powers of the Inclosure Commissioners, and the Principles upon which they have exercised them.
- June, „ *Mr. John Glover*.—On the Statistics of Tonnage during the First Decade under the Navigation Law of 1849.
- „ „ *Rev. Edward Gillett*.—A Plan for the Collection of Agricultural Statistics.
- Nov., „ *Dr. E. S. Hall (of Hobarton)*.—On the Vital Statistics of Tasmania.
- Dec., „ *Mr. Hammick*.—On the Recent Population Statistics of the British Colonies and Dependencies.
- Jan., 1863.—*Dr. Leone Levi*.—On the Cotton Trade and Manufacture as affected by the Civil War in America.
- Feb., „ *Professor J. E. T. Rogers, M.A.*—On the Rationale and Working of the Patent Laws.

The Thirty-Second Meeting of the British Association was held at Cambridge, in October, 1862. The Section (F) of Economic Science and Statistics, was presided over by Edwin Chadwick, Esq., C.B., one of the original Fellows of this Society. Of the many valuable papers brought under the notice of the Section, one-half was contributed by Fellows of our own Society—a few of these have been printed in the *Journal*.

The past year, rendered memorable by the second International Exhibition, was also distinguished by the scientific meetings held in London, as the centre to which the most eminent men from every part of the world had been attracted. It was felt that this great opportunity of bringing together the representatives of science from foreign countries, and from our own provinces and colonies, should not be lost. Accordingly the members of the National Association for the Promotion of Social Science, and those of the Congrès de Bienfaisance, made London their central place of meeting, and held their respective meetings during the month of June.

The Sixth Meeting of the National Association for the Promotion of Social Science, was held at the Guildhall, under the Presidency of Lord Brougham. The proceedings and success of this meeting will be in the recollection of our Fellows, several of whom contributed Papers and took part in its discussions. The wide scope and great importance of the questions there considered, can be best estimated by a reference to the very full volume of reports which the Association has recently published.

The Congrès de Bienfaisance was held at Burlington House,

under the Presidency of the Earl of Shaftesbury. The Papers read by the Foreign Members, had a special attraction for our own Fellows, who became acquainted with the views entertained in other countries, upon subjects debated within these walls. At this Congress, too, the Fellows of this Society bore their part, as the following List of Papers will show:—

Rate of Mortality in London Hospitals, by *Dr. W. A. Guy*.  
 Census of the Blind, and the Deaf and Dumb in England, by *Mr. Hammick*.  
 Sketch of English Poor Laws, by *Mr. Lumley*.  
 Irish and Scotch Poor Laws, by *Mr. F. Purdy*.  
 On Factory Inspection, by *Mr. A. Redgrave*.

Among the deaths of Fellows which have taken place since the last report of the Council, there is one which demands special mention—it is that of the venerable Marquis of Lansdowne. He was one of the Founders of the Society, and its first President, and on many occasions, and in many ways, manifested the interest he took in its welfare.

The Council have placed in the Library a medallion of His Royal Highness the late Prince Consort, as a memorial of the Patron of the Society.

The Society has been recently deprived of the services of Mr. Newmarch as one of its Honorary Secretaries and as the Editor of the *Journal*. The change of circumstances in the business avocations of that gentleman, which have led to his resignation, are stated in the notice printed in the March number of the *Journal*. That notice contains some interesting suggestions by Mr. Newmarch, upon the advantage which would accrue from combining this Society, under certain conditions, with several other Associations devoted to the cultivation of cognate branches of knowledge.

The Council have expressed, in a resolution appended to the notice, their sense of the valuable services which Mr. Newmarch, as Honorary Secretary and as Editor of the *Journal*, has rendered to the Society. They have also appointed a Sub-Committee to confer with the officers or leading members of the Societies upon the plan indicated by Mr. Newmarch in his communication.

Upon the resignation of Mr. Newmarch, the Council appointed Mr. F. Purdy to succeed him as Honorary Secretary and Editor of the Society's *Journal*.

In moving the adoption of the Report, the President referred to the loss which the Society had sustained by the resignation of

Mr. Newmarch, and to the proposal made by him with reference to the amalgamation of the several Societies cultivating Social Science, a plan which he hoped to see carried out.

The Resolution, having been seconded, was carried unanimously.

A Ballot was then taken for the election of a President, Council, and Officers, for the ensuing twelvemonths, and the following was declared to be the List, viz.:—

#### COUNCIL AND OFFICERS FOR 1862-63.

##### President.

COLONEL W. H. SYKES, M.P., F.R.S.

##### Council.

Charles Babbage, M.A., F.R.S.  
James Bird, M.D.  
Sir John Boileau, Bart., F.R.S.  
Swinton Boulton  
Samuel Brown  
William Camps, M.D.  
William Farr, M.D., D.C.L., F.R.S.  
*Right Hon. Earl Fortescue.*  
Humphrey William Freeland, M.P.  
Sir Francis Henry Goldsmid, Bart., M.P.,  
Q.C.  
William Augustus Guy, M.B.  
James Thomas Hammick  
Frederick Hendriks  
James Heywood, F.R.S.  
Sir Rowland Hill, K.C.B.  
William Barwick Hodge

Charles Jellicoe  
Leone Levi, F.S.A.  
William Golden Lumley, LL.M.  
The Rt. Hon. Holt Mackenzie, F.R.G.S.  
Matthew Henry Marsh, M.P.  
*Right Hon. Lord Monteagle, F.R.S.*  
William Newmarch, F.R.S.  
The Right Hon. Sir John Somerset  
Pakington, Bart., M.P., G.C.B.  
Frederick Purdy  
Right Hon. Lord Stanley, M.P.  
Colonel W. H. Sykes, M.P., F.R.S.  
*Major-General Sir A. M. Tulloch,*  
*K.C.B.*  
*Richard Valpy*  
*Cornelius Walford*  
*Rev. William Whewell, D.D., F.R.S.*

*The names of the New Members of the Council are given in Italics.*

##### Treasurer.

William Farr, M.D., D.C.L., F.R.S.

##### Honorary Secretaries.

William Augustus Guy, M.B. | William Golden Lumley, LL.M.  
Frederick Purdy.

Mr. Bohn moved, and Major-General Sir A. M. Tulloch seconded, a vote of thanks to the retiring President, Council, and Officers, for their services during the past year, which was carried unanimously.

The President briefly acknowledged the compliment.

A conversation ensued as to the desirability of adjourning the discussions on the papers read at the ordinary meetings, when there was not a full opportunity for each speaker to make his observations on the same evening.

The President believed there was no law of the Society on the subject, and that it was competent for any member to move an adjournment. He was, however, in favour of prolonging the discussion till twelve or one o'clock, rather than having it adjourned. It being understood that any member could, under existing arrangements, take the sense of the meeting on this point at the time of the debate, the subject dropped.

A vote of thanks to the President brought the proceedings to a close.

The following is the Report of the Auditors:—

“ STATISTICAL SOCIETY,

“ 12, ST. JAMES'S SQUARE.

“ London, 28th January, 1863.

“ The Auditors appointed to examine the Accounts of the Statistical Society for the year 1862, herewith

##### “ REPORT :—

“ That they have carefully compared the Entries in the Books with the several Vouchers for the same, from the 1st January, 1862 to the 31st December, 1862, and find them perfectly correct; showing the *Receipts* (including a Balance of 226*l.* 0*s.* 11*d.* from 1861) to have been 996*l.* 4*s.* 6*d.*, and the *Payments* 763*l.* 5*s.* 2*d.*, leaving a Balance in favour of the Society of 232*l.* 19*s.* 4*d.*

“ They have also had laid before them an Estimate, made by the Council, of the *Assets* and *Liabilities* of the Society, the *former* amounting to 1,828*l.* 19*s.* 4*d.*, and the *latter* to 101*l.* —*s.* —*d.*,—showing a Balance in favour of the Society of 1,719*l.* 19*s.* 4*d.*

“ They further find that at the end of 1861, the number of Fellows was 364, of whom 31 Died, Withdrew, or became Defaulters, and 35 new Fellows were elected during the year 1862, leaving 368 as the number on the list on the 31st December, 1862.

(Signed)

“ CORNELIUS WALFORD, }  
“ H. B. HYDE, } *Auditors.*  
“ SAMUEL BROWN. }

The statement of Receipts and Payments, and Assets and Liabilities, is as follows:—

(I.)—RECEIPTS and PAYMENTS of the STATISTICAL SOCIETY for the YEAR 1862.

| RECEIPTS.                              |      |       | PAYMENTS.                           |      |       |
|--|------|-------|-------------------------------------|------|-------|
|  | £    | s. d. |                                     | £    | s. d. |
| Balance in Bank, 31st December, 1861.. | 226  | - 11  | Rent.....                           | 75   | - -   |
| 1862.                                  |      |       | Salaries .....                      | 181  | 13 4  |
| Dividends.....                         | 25   | 19 -  | Printing <i>Journal</i> .....       | 313  | 15 9  |
| Subscriptions:—                        |      |       | Advertising .....                   | 15   | 18 -  |
| 275 for 1862 at £2 2s. . .             | £577 | 10 -  | Library .....                       | 10   | 7 10  |
| 3 „ 1863 „ 2 2s. . .                   | 6    | 6 -   | Index and Catalogue .....           | 4    | 4 -   |
| Arrears—15 „ 2 2s. . .                 | 31   | 10 -  | Stationery and Sundry Printing .... | 40   | 7 6   |
|  | 615  | 6 -   | Postage and Receipt Stamps .....    | 10   | 18 4  |
| Composition .....                      | 21   | - -   | Incidental Expenses .....           | 17   | 5 6   |
| Journal Sales .....                    | 78   | 12 7  | Ordinary Meetings.....              | 26   | 5 1   |
| Advertisements in <i>Journal</i> ..... | 29   | 6 -   | Fire and Light .....                | 12   | 2 8   |
|  |      |       | Furniture and Repairs .....         | 14   | 7 7   |
|  |      |       | Special Outlays.....                | 17   | - -   |
|  |      |       |                                     | 763  | 5 2   |
|  |      |       | Balance carried to 1863..           | 232  | 19 4  |
|  | £996 | 4 6   |                                     | £906 | 4 6   |

(II.)—BALANCE SHEET of ASSETS and LIABILITIES on 31st DECEMBER, 1862.

| LIABILITIES.                                     |        |       |                                      | ASSETS. |      |   |       |
|--|--------|-------|--------------------------------------|---------|------|---|-------|
|  | £      | s. d. | £                                    | s. d.   |      | £ | s. d. |
| Printing <i>Journal</i> for Dec., } 1862 .....   | 81     | 2 6   | Cash Balance .....                   | 232     | 19 4 |   |       |
| Stationery and Sundry } Printing .....           | 11     | 6 -   | Investments:—                        |         |      |   |       |
| Advertising Dec., <i>Journal</i> ..              | 4      | 7 6   | 3 per Cent. Consols ... cost £300    |         |      |   |       |
| Index to <i>Journal</i> , vol. xxv, } 1862 ..... | 4      | 4 -   | New 3 per Cents. . . . „             | 567     |      |   |       |
|  | 101    | - -   |                                      | 867     | - -  |   |       |
| Balance in favour of Society ....                | 1,719  | 10 4  | Property (Estimated Value):—         |         |      |   |       |
|  | £1,820 | 10 4  | Books in Library.....                | £400    |      |   |       |
|  |        |       | <i>Journals</i> in Stock .....       | 200     |      |   |       |
|  |        |       | Furniture .....                      | 100     |      |   |       |
|  |        |       |                                      | 700     | - -  |   |       |
|  |        |       | Arrears due and recoverable (say) .. | 21      | - -  |   |       |
|  |        |       |                                      | £1,820  | 19 4 |   |       |

On the RATIONALE and WORKING of the PATENT LAWS. By the REV. J. E. T. ROGERS, M.A., Professor of Political Economy in the University of Oxford; and, Tooke Professor of Economic Science and Statistics at King's College, London.

[Read before the Statistical Society, 17th February, 1863.]

I.

ONE of the greatest advantages which the members of this Society possess, to judge from the papers which are occasionally read at their meetings, is that of discussing on purely abstract and scientific grounds the principles on which economical facts are founded, the effect of social practices, and the speculative consequences which might ensue from the removal or modification of rules in action which are so habitual, as not to be out of the prejudice of men obviously capable of actual alteration. It has been, I believe, almost uniformly the case, that all great economical reforms, and not a few social changes of vast and increasing significance, have steadily advanced from the condition of a paradox into that of an axiom, and have met with a final acquiescence as universal as was their original condemnation. The adoption of a limitation on the hours of labour, of the sex employed in some kinds of labour, of the half-time system in the work and education of children, of the principle that able-bodied labour should not be ordinarily relieved, except under the regulations of a workhouse, and a variety of other economical reforms have, I understand, been discussed before this Society in a grave and unprejudiced manner, long before they have been approached as practical questions either by legislation or by the popular press. It is, therefore, a most important and valuable privilege that questions may be raised here and in similar societies, before conclusions derived from them are sent out to bear the brunt of that intolerance and irritability with which popular politics and popular criticism ordinarily grapple with economical novelties. And it is an equal advantage, I may be perhaps allowed to say, that while this Society discusses, it does not judge; and therefore is not, and does not affect to be, an arbiter of economical questions, but a means of ventilating evidence on the most important social problems, and the largest economical interests. The writer, therefore, of this paper feels that there is no place in which he can more unreservedly alledge the reasons which seem to justify adverse conclusions to the practice of granting patents.



## II.

I do not propose to go through the economical history of the legal sanction given to what is called property in invention. The members of this Society are well aware that in its origin the privilege of sole sale in cases where the applicant can satisfy legal authorities that *prima facie* he has been the first to devise an article which shall be in demand, and may be appropriated by others, is only a branch of that mischievous and odious prerogative which sovereigns in most European countries have assumed—that of granting monopolies. The reign of James I, in which period the worst forms of patent privilege were created, was as much characterised by the encouragement given to projectors, as inventors were then called, as by those licenses of sale, for which the crew of Mompessons were so detested. Such licenses are not extinct in our own time. Many of us have witnessed the abolition of the East India Company's privilege of sole trade with the East; all have seen the extinction of the Hudson's Bay Company; all are familiar with what is practically the monopoly of the Bank of England in the issue of a legal tender paper.

It does not follow that such sole privileges are necessarily mischievous. Most persons are agreed that the trading powers of the East India Company were a public inconvenience. A similar judgment has been passed on the Hudson's Bay Company. But on the other hand, it is not generally held that the Bank of England monopoly is hurtful to public interests. In all such matters, what is expedient to the nation at large, is always the question to an economist, though it may be contained in the apparent incongruity of a mercantile monopoly with that principle of freedom which underlies all economical reasonings, and is the basis of all material prosperity. But though a limitation on individual freedom may be necessary, it must be distinctly and continuously proved to be desirable.

## III.

The arguments in favour of the practice of securing a monopoly of sale to inventors of articles in demand are generally three. The first is, that such an invention is property, and society is bound to maintain the rights of property; that is the peaceable and secure possession of what a man has appropriated by his own labour. The second is, that the existence of this legal privilege is a powerful stimulus to invention. The third, that the privilege of sole sale, limited as it is by a defined term, is compensated by the fact that the invention is specified, published, and thus finally secured to the public after the term has expired. I purpose, with the patience of the Society, to argue on these points at a little length.

Property is necessarily that which is capable of appropriation and appropriated. To be appropriated it must be distinguishable. Any indefinite and undefinable claim is a nuisance. Owners of property may have a common interest, and may therefore surrender their distributive rights to a body of trustees or directors, but the interest they have is always supposed to be capable of division, limitation, and identification. No two or more persons can have the same right of property in the same single object or single utility. An acre of land, a share in a railway, a pound of sugar, a sum in consols, are property, because they can be so limited and identified, as that no person can be aggrieved or harmed by the limitation, or aver that the particular quantity what one man possesses—and possesses by a legal appropriation, is that which another man is just as capable of acquiring. In short, the ground on which economists recognize the existence of property, is to be found as much in the fact that a special appropriation has been made of a derived utility, similar productions of which utility are in the power of other labourers, as in the conviction that insecure possession would lead to the destruction of all productive energies. As a rule, then, all these privileges which have been possessed by individuals and corporations of the sole sale of commodities and utilities, are exploded with the common consent of all statist and economists. Whatever cannot be essentially and readily assigned to an individual, partakes of that insecurity which renders the object inappropriate.

Again, it is essential to the protection of property, that equal protection should be accorded to equal or similar kinds of property. The law would fall short of its obligations, if while it protected a man in the possession of his purse, it failed to protect him in his coat; if it could find a means by which to secure him peaceable possession of his land, but denied him equal security in the stock which he possesses or claims to possess, in the public funds.

Nor is that property which is naturally distributed. There is no property in air, in flowing water,—though there may in its force, for this is a power capable of limitation—or even in *feræ naturæ*. None of these have a permanent place, an assignable locality, however much the locality may be suspected, and therefore cannot, in their natural state be objects of property. The exact logical temper of English law cannot recognize what we call game as property, and can only protect it by an exaggerated law of trespass. What may be another's as readily as it may be one's own, cannot, except *in transitu*, be appropriated.

It does not follow, indeed that all property is of a material character. To omit the right of ownership which an individual may have in the indebtedness of others under private or public contracts; it is clear that a man's character is his property, and is often a very

valuable and marketable property. The sign by which a man distinguishes his work, which is at once a form of credit and an evidence of character, *i.e.*, a trademark, is as much a property as a man's signature to a check and a bill of exchange, and as fairly demands all protection which the law can give, on the general hypothesis of average caution, as are demanded for a man's land and chattels, provided he takes reasonable precaution for their safety. Apart from the relation which such a mark bears to the producer, it fulfils a great and important public requisition, though one which is constantly ignored in all reasonings on legal protection, in guarding the interest of the consumer. One may remark by the way, how generally the interests of that important personage—the consumer—are lost sight in the demand for protection to the producer.

Now the position of the patentee appears to be as follows. He believes, and perhaps on good ground, that he has discovered, and if you please, elaborated some article of considerable utility and great demand. He wishes to advertise his invention to the public, his consumer, and to guard against the contingency of the public, or any members of the public generalizing the power of producing his utility. He is willing to admit that his traditional and natural exaggeration of the merits of his own invention is checked by the fact that the public, the judges of his performance, will value his invention at its worth; that is, that it will sell or not, according to the taste or convenience of the customers which he wishes to conciliate; but on the other hand, he claims to limit their choice. His bargain is to give the public a prospective interest in the invention, in return for a temporary monopoly of the process. During the tenure of this monopoly, he allows the public the benefit of his invention at whatever price his discretion or their necessities suggest to him to impose; and he precludes the public not only from itself producing, but from the capacity of production, or from the capacity of purchase from a rival producer, however *bonâ fide* and certain the invention of such a rival is. It is the old theory in short of occupancy, of squatting, transferred to the industrial centres, or rather the highways, of modern civilisation; and of squatting upon materials and powers which are the property, not of individuals, but of the human race. Nay, the claim of the inventor is wider than that of the squatter. It more nearly resembles that which we might conceive would be made if the principle of patent were carried completely out, a demand on the part of a navigator who has discovered a new country, to prohibit, except by the payment of a royalty, any person from settling on the land in question. Such a demand is not without example in the early history of crown monopolies. It does not follow, I repeat, because certain objects are of

great utility, permanent demand, absolute necessity that individuals should be entitled to claim a prohibitive ownership in them.

What people invent—I am speaking of material utilities—is either the result of a sudden conception, or of the elaboration of well known and general natural laws. In neither case, unless the inventor assumes that his genius in discovery is shared by no other man, and that what he has invented can be invented by no other human being, or that the logical sequence by which he has made his conception available for purposes of human utility belongs to himself alone, and could not have been worked out by any other man, is he entitled to a property in such inventive process. It is hardly needful to say, that such an assertion would be a piece of insolent vanity. The law may give him a property, as the law may allow any other privilege which invades the liberty of other men; but his right has a factitious and not a natural origin; and as the law could not distinctly avow that the privilege it confers is one, the utility of which it is competent to recognize; it simply, formal and other conditions fulfilled, demands that the privilege sought for shall not contravene any existing right based upon the known application of industrial powers and processes. In other words, it grants a monopoly to the first applicant. Other persons may have discovered and elaborated the same process, but the privilege is bestowed on the earliest to ask for it. By a perfectly independent train of thought, another person may have discovered simultaneously exactly the same utility, but he has been last in the race, and he must forego his natural privilege of labour; and the consumer, whom nobody even in these days of free trade seems to think deserving of much consideration, has to bear the charges of the sole and protected producer.

#### IV.

It is the custom of those who defend the existing practice, to say that they do not claim a patent for principles, but for the application of principles. But a principle without an instance, is a logical absurdity. People discover the principles of physical science—the groundwork of all material utilities, from the observation of facts; and the inventor of a principle is generally at a long interval from the observer of those facts which are turned to marketable conveniences. The largest inductions of physical science have been made long after the facts from which these inductions are derived have been familiar processes.

But even if one allows the distinction between a principle and a process, it is not difficult to see how unequally favourable the law is to inventors. A man who discovers a mechanical contrivance which a hundred men could as well have invented as himself, and which

many frequently do invent, either simultaneously or speedily, is protected against them and the public; while another man who devises some plan which is equally, perhaps far more useful to society, and which is as much the result of thought, anxiety, and risk, as the process of any mechanician, has no such protection awarded him. If the laws were consistent, such a person should be protected equally; and the natural consequence that everybody would be protected against everybody, and that everybody would have special rights in common powers against everybody else, would bring about a fatal isolation of interests, or what is more likely, a compulsory regulation of these peculiar claims. The difference, if any, can only be one of degree.

The principle on which Mr. Mudie's circulating library is founded, is that of furnishing a succession of books at easy rates to subscribers. But the pains, the thought, the anxiety, the risk at which this principle was carried out, were as well defined and elaborate a process, as any which ever afforded the fulfilment of the day dreams of inventors,—steady demand at arbitrary prices. Mr. Mudie has no patent in his process, and is subject, no doubt, to active competition on the very plan which he elaborated.

Again, the projectors of the London and Westminster Bank had a principle, that of furnishing a system which should afford peculiar advantages to the banking public. Unless I am misinformed, the process by which they attracted custom, was that of offering interest on deposits, and trading on the difference between the rate allowed and the market rate of discount. The process was novel; the risk great; the calculations necessary, were wide, precise, and minute. They got no patent, but great hostility from a patented monopoly, the Bank of England, and from the jealous alarms of the private banks. Now they have abundant, if we can trust rumour, too abundant imitators.

It may be said that if the law fails to protect one set of industrial processes, it should not the less protect others. Not so, however, if they are precisely the same in character. Would the advocates of patents insist that such inventors as I have indicated, should have the sole privilege of their processes? They should do so in order to be consistent.

#### V.

Some persons—there are names of great worth among them—have suggested that a board should be constituted which should determine the utility of patents, and award premiums or prizes for inventions of manifest utility. It is a sufficient answer to such a scheme, that both inventors and the public would view such a board with the greatest suspicion. It might be composed of two elements; a jury

of the public: or a council of inventors; who must be successful or they would be sure to condemn alien projects; who must not be successful, or they would be sure to deny merit to alien inventions; or lastly a board of permanent officers. It is difficult to see which alternative would most certainly develop gigantic jobs.

But even if they were ever so just and ever so wise, what utilities should they further? Are they to confine themselves to an estimate of the public utility of a mechanical contrivance, or to extend it to the utilities of a well devised circulating library, or a sagacious banking system? Nay more, are they not on the hypothesis of the public good, to accord the benefit to all schemes which have as their foundation a considerable public service? If so, Government will go far beyond the limits which we have assigned it in this country, and take upon itself the functions of a Providence special and almost Divine.

Mr. Erskine Clark, of Derby, has had before him in common with many worthy persons a great wish to discover the way in which habits of thrift may have scope given them among the poor. His process, and it is very elaborate, though very effective, is a penny bank. I know no patentee who has a greater right to consideration from a council of equity, appointed to interpret the utility of a process than this gentleman has. But I should be very much surprised to see the committee of the British Association recognize these claims.

But the bargain of the inventor with the public, is thoroughly one-sided. If it be his interest to keep his secret, he infallibly does so, not so much from the cause that a patent is expensive, as because it is his interest. What he demands is the right of monopoly against the public, provided that he chooses to take the public into his counsels. It is perfectly true, indeed it is insisted on by the advocates of the rights of invention, that nothing can compel him to disclose his discovery. Does he ever do so except on the ground that the profits of the monopoly would be more valuable than the profits of the secret?

The wretched impostors who traffic in the follies and weaknesses, and sometimes the vices of their fellow-men, the vendors or inventors of what are called patent medicines, never I believe communicate their valuable secrets to the public. By a very just and wise judgment, the occupier and advertiser of a nostrum, is branded by the medical profession with the name of a quack. I know no occupation in which perseverance and careful observation, and laborious thought are more lavishly given than in the medical profession, there is none certainly which entertains so sound a contempt for the inventor and monopolist of a specific, none so ready to communicate its discoveries.



## VI.

There are other parties too who decline the advantage of a patent right, and who are of a far more useful and genial turn than the patent medicine vendor. I hope I shall not in so grave a society as this be thought anything but serious when I say that that there are very few among us who have not experienced the pleasurable emotions which Messrs. Lea and Perrin's ingenious combination called Worcester sauce imparts to the eating of cold mutton. But these inventors are content with the public judgment, are satisfied with the profits which their extended trade gives them, and are willing to abide by competition. And this is only one among very many of the cases in which the inventor has exercised his undoubted privilege of vending a product, the process of which is a secret. Yet, to be consistent, the advocates of a patent system, if they affect to consider the interests of the public, should maintain that the process of all inventions should be disclosed; not that a discretion should be given to inventors, whether the public will or not, of claiming a monopoly according to their own pleasure, or of keeping their secret.

I cannot therefore discern a single characteristic in mechanical inventions which constitutes a claim to the distinctive features of property. As regards the public, I find that the purchase of articles really useful, is burdened with the charge of the capital sunk in the legal and other fees of the Patent Office, in the necessity laid upon it to compensate the particular expenses of the particular patentee (and his proofs of discovery or adaptation may have been difficult, while another man's may have been easy), and by whatever charges besides his vantage ground over other inventors may afford him to exact from the public. And I can quite conceive it possible that he may be a grievous hindrance to other inventors, without being able to reap much advantage himself, in the same way as a person who had gained a right to occupy an apple stall in the midst of a crowded thoroughfare would be to traffic and passengers. Nor do vague and angry declarations that invention is property, and the lavish use of the expressions, "pirate" and "pilfer," and "stealing the fruit of other men's minds" and labour, prove more than that certain persons gain an advantage, rightly or wrongly, which they wish to keep. Economists are well aware of how freely terms of reproach have been lavished on those who have successfully proved economical necessities, and are not the less aware of the duty laid upon them by the abstract study of this science, that they should do their best in protecting as far as they can the interests of the general public, *i. e.* the interest of the consumers. It is needless to say that this protection consists generally in saving him from those friends, who affecting to consider his interest, are really advancing what they know to be their own.

There are persons indeed who make no small gain out of this facility for petrifying the natural powers and processes of the human mind, or at the best for diverting it from obvious paths. The fortunate purchase of some adaptation of a physical law in mechanics or chemistry, will be the foundation of a capitalist's fortune, the more so when, society having established a demand out of some new want, he is the lucky winner of the privilege of supply by mere priority of application. There are persons too who are misled with the hopes of successful invention, and who, possessed by the familiar spirit of adventurers, are thoroughly intoxicated with the dreams which the ever varying romance of patent privileges engenders. To such persons, the loss of the dream is as great a loss as that of profit to others. And there are, I do not intend the statement to be invidious, a certain number of professional persons, to whom the agency, the advocacy, and the impeachment of patent claims are the source of professional distinction and pecuniary emolument. But it does not seem that these interests should stand in the way of a critical inquiry into the rationale of the privileges they are founded on, or that the existence of a legal right should be construed as though it were a natural and equitable one.

It is said that the legalizing of patent privilege is a direct stimulus to invention. I will not delay on the question as to whether the legislative aids of bounties or protection, are, or ever will be safe and healthy motives to industrial processes. In the abstract, all economists I believe are convinced that they are nugatory, mischievous, unwholesome. The history of trade and of prices is full of evidence to the generally evil effects of such external aids. A tolerably large acquaintance with the history of prices, convinces the author of this paper that the rule has no exception. If particular cases can be defended, they must be defended on a particular showing and on special grounds. Nor is the defence that under such a system as that which has prevailed in this country, great industrial energies and vast comparative wealth have been evoked and accumulated worth a serious reputation, nor even a passing notice, if one did not remember how inveterate is the fallacy of *post hoc, ergo propter hoc*.

## VII.

The real question is to be settled by the judgment of experts, and the practical working of the patent laws on inventors. It is to be admitted that the first of these tests is of a very various kind, and it must be allowed that a decision on the second, as English industry has constantly laboured under the disadvantage, or if it sounds better, been sustained by the protection of the law, is speculative.

The classical authority on the object, and the working of the



patent laws, is the evidence in the report of the Lord's Committee, in 1851. A considerable portion of the evidence is relative to certain provisions in certain bills, then before the Houses of Parliament, but not a little information, and of the most important kind on the general operation of a system which proposes to stimulate invention by defending it, and to reward discoveries and inventions of a particular kind by a monopoly of sale, is to be found in the report in question.

As may be expected, the evidence and the opinions given by the different witnesses, are of a very conflicting character. Some treat the rights of inventors as among the sacred kinds of property, and that any invasion accorded to the public to appropriate "inventions" which result from the labour of inventors, would be logically "extended to the results of any other class of human labour," that is to say, that the plan by which A makes a machine is *ipso facto* as much property as the machine itself. Again that the recognition of patent rights is part of the "broad principle of recognizing honesty" by discouraging piracy," by which I conclude is meant piracy in the general sense. These are the views of Mr. Cole.

Others on the other hand are wholly averse to the continuance of patents in whole or in part. One witness avows his conviction that at present the patent law "discourages" inventions, for that while it appears to offer protection and ultimate gain to parties who are inventors, it leads to a considerably smaller number of inventions than would otherwise be brought out for the benefit of the public, and he believes that practically it involves very great loss upon the class of inventors as a body, a loss which he thinks they could not sustain, if there were no patents or no exclusive privileges at all granted to them. And the same witness enters into an elaborate account of the way in which the principle of granting patents affects the energies of inventors, and impliedly the rights of mankind to the accumulations of past knowledge, and the legitimate and necessary inferences of natural reason, stimulated by ordinary and common economical forces. Again the same witness avows his conviction, that the abolition of the whole patent system would be "an immense benefit" to the country, and a very great benefit to that important class of "men whom we call inventors, who are at present ruined, and their families ruined, and who are, he believes, a great injury to society." The witness is Sir Isambard Brunel.

It is invidious and indeed impossible to determine the comparative value of contradictory opinions on questions of fact, and questions of effect, especially in cases where the natural force of conflicting authorities is very great. I say natural, for there can be no reason to conceive that Mr. Cole's prejudices or interests would have led him to combat what I conceive are the interests of the public, or that

Sir Isambard Brunel was likely to decline or disdain a legal protection which he might have thought just and expedient. I confess to holding the expressed opinions of patent agents, of barristers whose practice is specially concerned with patent causes, and of that important class of men who are continually advocating their own capacities, and underrating the judgment of the public as to the utility of their discoveries, in slighter respect. And I do so, not from any wish to throw any doubt on their integrity or conscientiousness, but because we must needs, as such, dispute the conclusions with which habit and custom, and the general conservatism of men's minds on the special method of their special occupation, are apt to control their judgment.

Evidence for and against any patent system at all, might be multiplied out of the report to which I have alluded. It is needless however in the existence of such a record; and the study of it may be commended to those who, having the interest of the public, and of all who can claim a real or supposed property before them, wish to give a true deliverance on this question, the gravity of which if one considers either public interests, or at the least the position in which the contingent occupiers of patent rights are placed, cannot be exaggerated. It is not I think invidious to say that the mass of affirmative evidence is on the side of the doubtful, of the negative on that of the independent witnesses. Nor is the supposed right of the inventor much helped by its supporters, when the evidence of those who discuss the best way in which it may be secured in the patent office, is contrasted. Some advocate a cheap system of patents, and declare that the real harm to inventors arises from the charge which is levied on the process of security. With those who hold that invention is property, such a view is logically necessary. To put capricious charges upon the right of claiming one's own, is the worst wrong to which the holder of property can be subjected. It is difficult however for such reasoners to meet the objection urged by the opponents of a cheap patent system. It is said, and one cannot see how such a statement can be gainsaid, that a ready and cheap method of patenting would give such an opportunity for encroachment on the processes of invention and adaptation, as would bring all improvement in a very short time to a dead lock. If in fact invention is property, it should be vindicated cheaply and rapidly. If it be vindicated cheaply and rapidly, there is and can be no limit to the hindrance which inventors may put upon other peoples energies, and by implication on the increase of national wealth.

### VIII.

I have hitherto considered this question from the view of public interest, from what appears to me to be the case in relation to the

public, who are deprived of a right on the plea that a stronger right may be urged against them. But the condition of the inventor, of the nominal plaintiff, the John Doe of the patent laws, demands some notice, even on the plea of humanity and pity.

Most persons I believe, even those who advocate most strongly the extension of facilities beyond those afforded at present for the protection of inventors interests, concur in recognising that he rarely gets a return even for his actual expenses in adapting his invention to immediate use. He is stimulated by the promises of protection held out to him by the law, to devote great time, and not a little money to the dangerous pursuit of contingent profit; of all speculations his is the most precarious. For natural reasons, the occasional success of some one man, who either in his own person, or far more frequently in the person of an assignee of the invention, the capitalist who gets the benefit of the monopoly for some small consideration; is sure to call into activity a host of speculations which cannot in the nature of things be any profit by their appropriation, however grievous an inconvenience they may be in the cause of mechanical or other improvements. A mere inventor is strongly infected with the spirit of gambling, and open to the worst misfortunes which can ensue from such spirit. Nay, he is more liable to the most dangerous forms of this mental disorder, because gamblers are more or less open to reasonings from the doctrine of chances and the occurrence of events as well as to the information they may get from the judgment of others, while the inventor, like the poet of the satirist, is ordinarily the prey of his own self love, and is the worst possible judge of the weak side in his specialty. I believe that there are more men ruined in the law courts out of patent cases, and in the exciting and dangerous visions which these legal privileges afford them than by almost any among the stimulants to unreasoning cupidity. Some indeed among those who have had experience of how dubious is the boon which the patent office affords them, are thoughtful enough to avow their distrust in all its presumed advantages; and, like the wise man of old, decline the box of Pandora, the worst among the congregated evils of which is perhaps the hope which is left at the bottom.

Most of the best inventions we are told are the work of mechanics. It is easy to see why this is. The labourer is principally urged, and the law is a fundamental one in economics, to get the greatest possible result with the least possible expenditure of *force or labour*. It is only in a more remote degree that the capitalist, the producer, is urged by the same motive. His wish is to get the largest amount of produce possible, out of the least expenditure of *capital*. The interest of the mechanic in an invention which shortens labour is immediate, of a capitalist indirect. To adopt the invention is often

an affair of cost, of risk, of substitution. Now as the mechanic is the natural inventor, and the capitalist is naturally slow to accept inventions, the makers of a system which shall give the inventor a position hostile to the employer of labour, impedes, or at least postpones, that healthy relation which should subsist between the employer of skilled labour—and the faculty of invention or adaptation differs only in degree from that of other skilled labour—and the labourer himself. If no patent laws existed, it would be to the interest of the capitalist to develop and reward the skill of those whom he employs.

I have heard reasonings similar to those which I have alleged, used by capitalists in the largest sense of the word, where occupation induces them to purchase inventions, and who are forced to secure all adaptations out of the competition to which they are subject. And it will be found in the volume of evidence to which I have referred, that several of the witnesses believe that a fuller reward to invention, and even a more healthy and regular stimulus would be accorded to this particular capacity, if no law interposed between the supply of the inventor and the demand of the capitalist.

That almost all the benefits, the solid advantages of protected invention are reaped by capitalists who have not invented themselves, or have done so in very small degree, is generally admitted. To such persons it may be that the abolition of patent rights would be a comparative loss. I say it may be, for it is not wholly certain. The opportunities for vexatious prosecution for piracy, or for infringement of rights, are so multitudinous, that the purchaser of an invention pretty surely learns that like the Bedouin, every man's hand is against him. How far the risk of infringement diminishes the payment which is made to the inventor, I cannot say, certainly it should do so; and certainly the labour of discovering whether a man's *bond fide* invention has not been appropriated by some other *bond fide* inventor, or even, as in the story told by Mr. Woodcroft, was not originally the property of Hero of Alexandria; is necessarily to be set off against the price which is procured from the capitalist. It can be no light thing to make a long and weary search through nearly 40,000 patents, specified with more or less exactness.

If, however, it be a mere question for capitalists, if the inventor after all gets the fox's, and the capitalist the lion's share, it is still less a question of sympathy and right. It is still more reduced to the lowest conception of a monopoly. Nay, the claim urged upon the public is a fiction in which the nominal plaintiff is the inventor, but the real one is a speculative capitalist.

I shall not detain the Society long with the argument that the disclosure of the invention compensates for the monopoly of the patentee. The reasoning is, as I have said, one-sided, because

the inventor is at liberty to retain as well as to disclose his invention. No one can call that a fair bargain which is voluntary on one side, and involuntary on the other. General grants, by a wholesome provision of law, are void: and by equal reason, contracts which are commenced and carried out without the *ipso facto* consent of any among the parties interested, would, I imagine, receive no mercy at the hands of lawyers, as they would deserve none in the judgment of moralists.

Even, however, if the bargain be made consciously, it may be a very bad bargain, and therefore a very inexpedient one. Any claim to an invasion on the liberty of others, is on its trial. Even mere contracts of a voluntary kind may be rescinded, if no value is received by one of the contracting parties. And I imagine, that in natural justice, the right of *bond fide* invention subsequent to another invention which has been patented, is at least equal. A man may at least pay off a prior mortgage with the produce of another mortgage on better terms. Not indeed, that it is politic to rescind voluntary contracts, even though they are in themselves inexpedient. But it is one thing to stand by the consequences of one's own acts, another to endure the principle that one should be for ever bound to the performance of similar acts. It is, therefore, perhaps worth while to point out in what the service of an inventor differs from the service of one who has an admitted claim to part of the produce of future industry.

Guarantees given for advances made to the community for the public service, have their foundation in natural justice. At the crisis, the community, anxious for self-preservation, and judging that the contract into which it enters is as much a prospective as an immediate benefit, mortgages its industry for a loan. It may be that it was inexpedient to create such a mortgage, it may be that it was unjust to posterity, which, nevertheless, receives a far larger beneficial inheritance from a previous generation, than it does obligations; but the contract was for a real, limitable, tangible value received. But no such proffer is made by the inventor. He claims that you shall take—not his money or his money's worth—but his priority of discovery; and he does not make terms with you by competition, or at your discretion, but demands that you shall tax yourselves for a definite period at his discretion and for his interest. The very right that he arrogates, is an acknowledgment that some one else, or may be yourself, could have supplied equally well with him. He denies the right of competition, and he even takes away the right of choice.

There is one point which I may briefly advert to in connection with the presumed originality of patented inventions. Inexperienced persons are so startled with the novelty of processes and the magnitude of results on these special kinds of human intelligence

which are made the subjects of legal monopoly, that they are apt to conceive that some transcendental and almost supernatural energy must have been the origin of these industrial processes. But to those who are moderately acquainted with facts, the chief utilities which have been patented, appear to be what they really are, little more than common place calculations. I have heard an eminent advocate of the patent system avow that the claims of the patentee are far more founded on laborious adaptation than on splendid discovery. And if this be the case, as I believe it almost invariably is, the argument is driven back again to the position which I laid down in an early part of this paper, that the system at present in existence gives a special privilege to some kinds of laborious adaptation, and denies it to others.

## IX.

The Society will probably recognise that in what I have alleged I have confined my observations to patents properly so called, and have omitted all mention of copyrights. Still less have I entered on the criticism of another class of interests which is fundamentally connected with this subject, the prudence and economical defence of endowments. I cannot, at present, even for the briefest time dwell on the latter. I only mention the case, that I may not be supposed to have ignored it; and I may perhaps conclude this paper, in which I have already trespassed a long while on your patience, by pointing out what occurs to me as a radical distinction between copy and patent rights. And in so doing, I may perhaps say that I believe myself to be quit, in so far as I may be an author, of any profound belief that the compositions of my pen, will possess any saleable merit; and that, therefore, if I seem to defend the rights of authors, I do so with none of that animus which I have ventured to suggest is a leading principle with inventors.

There are, at least, two characteristic forms of copyright. The one is in books, by which I mean generally, literary compositions, the other is in patterns. With respect to the former of these, it is manifest that they partake far more of the nature of property than inventions do, from the fact that they are capable of distinct appropriation and limitation. There is nothing, as I have said before, to hinder any two persons from making simultaneously the same discovery of the same process; as a matter of fact, it is, I believe, the case that nearly all the most important discoveries in mechanical and cognate processes, have been made simultaneously. That the same circumstance is not known to have happened in all cases, is due, I imagine, quite as much to the legal position of the first appropriator, as to any special gift or power which the appropriator in question has possessed. A second person makes as *bond fide* a discovery as



the first, but finds that the privilege of production has been anticipated, and therefore has no opportunity of publishing the fact of his invention.

But the case is far different with literary compositions. No two persons could have, independently of each other, written the same book. No law could give any author a privilege over materials and methods. What it does allow is, that having used the materials of thought and association, a particular person should have a special property in the result, and a privilege of reproducing copies of that result. And it is, I conclude, because it is a moral impossibility that any two persons should have several and joint ownership in the same words, thoughts, expressions, or could contend with each other as to who it was that first composed a particular volume, that the law of copyright stands on a far surer basis of natural right, than the law which protects inventors. A book fulfils the conditions of property, an invention does not. The property in a book is a property in a product, in a mechanical or similar invention in a process.

No one could be aggrieved or anticipated by the fact that Mr. Dickens wrote the "Pickwick Papers," or Mr. Tennyson the "Idylls of the King," or Mr. Mill the "Elements of Political Economy." Indeed the first named author furnishes an apt illustration of the difference between a process and a product. One element of the success of the "Pickwick Papers," however small an element of success it may have been, was the issue of the novel in successive numbers. This in a mechanical invention might have been patented, in a literary production could not be. Of course Mr. Dickens was imitated, or in the language of patentees, his process was pirated, and the serial system, as applied to works, became a common method of publication.

It may be, moreover, in the public interest that a sole privilege of publishing certain works should, under certain conditions, be granted to certain parties. But they should represent opposing interests, and therefore the principle of competition; they should not be compelled to pay office fees for their privilege of sale, and not thereupon be obliged to load the purchaser with the interest of capital expended in such a fashion; and they should, being responsible by their position and credit, be likely to reproduce correct as well as cheap copies of the works in which they have a privilege. This is, I believe, the economical defence of the privilege of printing Bibles, possessed by the Universities and Queen's printers.

Again, it is I believe, in the interest of the public that a different protection should be accorded to works of art and belles lettres, than ought to be granted to mechanical processes. The latter are solely relative, or almost always relative to material utilities. In such cases

the correspondence of supply and demand is generally immediate. Nay, the invention itself is ordinarily subsequent to a pressing demand for the convenience or utility afforded. But literary compositions generally are, and almost always affect to be, part of the process of national education. In the education of a people, the supply of material long precedes the demand for the thing. And yet the most valuable forms of literature are seldom, even under the protection of copyright, a source of much gain to authors, those works I mean which are of a solid and enduring kind; while the most lucrative kinds of composition, as one is informed, those which appear in serials, rarely need, from their perishable and temporary character, any protection at all. If, however, it could be shown that the protection of copyright is any stimulus to education by books, the advantage gained by the public in their composition, is a fair set off against the sole right of sale by the inventor; that right of sale being limited to the impression of a particular form of words, not being hampered by any ambiguity, and not being, except in very rare cases, a possible material for litigation.

The same reasoning, though with far less force, applies to copyright in patterns. It is not likely that two persons should invent the same pattern. It is doubtful whether any serious injury could be done to the draughtsman and the purchaser of his design, by its being copied. At any rate, that which I have heard many patentees allege, that priority in the market,—which any man may procure,—is a far more important element of success than priority of privilege in sale, applies with greater force to the invention of designs than to that of patented processes. Besides, the principle of the protection of patterns is very clearly allied to that of the protection accorded to trademarks. I fully admit that the copying of a trademark with a view which such a copy would generally have, is an offence of the same nature with forgery, and is not very far removed in point of turpitude, from the worst forms of that offence, is as serious an inconvenience to the public, and should be checked by stringent penalties.

The strongest case which can be, I believe, made out for protection to a quasi literary property, is that alleged in favour of engravers as against photographic copies of their originals. One may indeed doubt whether a photographic copy can ever be so exact as to deceive the eyes of such moderately practised persons as are purchasers of engravings. But if as is avowed, the free power of copying engravings in this manner would annihilate the art of engraving, and with it of course the power of making photographs of such works of art as are represented in engravings, a very reasonable plea for protection is set up, on the ground of the public interest. If the value of the engraving, however, consists in the



mere quality of rarity, it is a mere pabulum to contemptible vanity.

In conclusion, I have only to excuse myself for occupying so much of the Society's time in stating what are after all to most of you, I doubt not, very debatable positions. I called attention to the subject at the meeting of the British Association, at Manchester, in the year 1861, chiefly because I thought that a number of resolutions in favour of patents had been carried in an objectionable manner at a meeting of the Mechanical Section of that Society, that is, before parties who are *prima facie* interested in the maintenance, and even the extension, of the present system. From a report issued by the Inventors' Institution, which has been forwarded me since this paper was written, I see that the condition of patentees is to outward appearance, at least, vastly like that which has been recognised from time to time as characteristic of most protected interests, that of chronic lamentation; to the effect that existing guarantees are insufficient or delusive, and that larger measures of protection, easier processes of appropriation are necessary for the due development of patent rights. I see, too, that the authors of this report assume that literary works and inventive adaptations are identical in their nature, with singular simplicity assert a parallel between the copyright of a stupid book and the petrification of a mechanical process, and seem to hold that the patentee "stamps his thoughts on matter," whereas the more natural metaphor is that of planting his hoof upon mind.

The time is, I believe, long past in which the assertions of a privilege, however inveterate and traditional it may have become, are sufficient to establish a right. Without affecting to reconstruct society, thinkers in all branches of human knowledge, are more and more bent on investigating the principles on which social practices are founded. A long and large induction from the facts of history, and a corresponding experience in the working of political and economical causes, but lately accepted, have taught people how fully a wide observation becomes the refutation of a narrow one. One by one the cherished methods of our forefathers, after ages of loss, vexation, and disappointment, have been abandoned for the broad principles of spontaneous action and public utility. Those among us who were spectators or combatants in those economical battles which have characterised our civil history during the last forty years, know how grave and solemn were the appeals to tradition, and custom, and right; how gloomy were the prophecies of impending ruin; how coarse were the accusations of self interest and dishonesty, which even good men, the maintainers of the ancient system, uttered against the sagacious advocates of change. All men now allow the benefits of these fundamental alterations. Not indeed that the work of economical reform is ended, it is hardly more than begun. The

economist will probably, for a long time hence, be constrained to do battle against that protective instinct, which has been so long the enemy of mankind, and which seems, as successive enlightenment and broader experience narrows its powers of mischief, to get more cunning and plausible in defence of the fragments of its prerogative.

[The average number of patents taken out for ten years, 1838-47, in the United Kingdom, was 680 annually; of that number 450 were English, 157 Scotch, and 73 Irish patents. During the decade a marked increase in the number passed is noticeable. Comparing the first and the last year, the figures stand thus,—England, 407—498;\* Scotland, 133—168; Ireland 64—76. What was the cost of obtaining a patent before the amendment of the Patent Law took place, it is not now easy to learn; but all that is officially known of the fees then payable is given in Table I (Appendix). The present scale of charges is set out in Table II (Appendix). Some further statistics of patents are shown by the next statement in the Appendix (Table III). There, under the head of "Applications for Provisional Protection," the same tendency to increase is observable. The number returned against 1858 is excessive, from the cause stated on the table. In 1854, the numbers were 2,764, and in 1861, they rose to 3,276. But much greater equality is seen in the number of patents actually passed during those years. A petition for provisional protection costs 5*l.*; but upwards of 1,000 inventors, real or imaginary, annually take this preliminary step and proceed no further. This sanguine portion of the population thus throw away 5,000*l.* a-year upon their schemes. Of every *three* inventors who propose to themselves the protection of a patent, only *two* obtain it. The uniformity of this ratio, since 1854, considering how small are the numbers, is remarkable.—*Ed., S. J.*]

\* House of Commons Paper, No. 23, Patents for Inventions, Sess. 1849.

## APPENDIX.

TABLE I.—Statement of the Number of PATENTS GRANTED, under the Old Patent Laws, in the UNITED KINGDOM, during the Years 1845-6-7; and of the FEES received by each Public Officer in respect of the same.

| Offices.                             | Number of Patents Granted. |       |       | Total Amount of Fees and Emoluments Received in respect of Patents Sealed and Completed. |       |        |       |        |       |
|--------------------------------------|----------------------------|-------|-------|--|-------|--------|-------|--------|-------|
|                                      | 1845.                      | 1846. | 1847. | 1845.  |       | 1846.  |       | 1847.  |       |
| ENGLAND—                             |                            |       |       | £  | s. d. | £      | s. d. | £      | s. d. |
| Attorney and Solicitor-General *     | —                          | —     | —     | —  | —     | —      | —     | —      | —     |
| Great Seal Patent Office.            | 575                        | 494   | 498   | 10,481   | 5 8   | 9,229  | 6 8   | 9,327  | 13 2  |
| Home Office—                         |                            |       |       |  |       |        |       |        |       |
| English patents.....                 | 575                        | 494   | 498   | 10,838   | 15 —  | 9,311  | 18 —  | 9,387  | 6 —   |
| Scotch „ .....                       | 205                        | 178   | 168   | 3,582  | 7 6   | 3,110  | 11 —  | 2,935  | 16 —  |
| Irish „ .....                        | 99                         | 89    | 74    | 759  | 16 6  | 683    | 1 6   | 567    | 19 —  |
| Privy Seal Office .....              | 582†                       | 493†  | 498†  | 3,218  | 3 —   | 2,608  | 11 —  | 2,627  | 18 —  |
| Signet „ .....                       | 575                        | 494   | 498   | 3,118  | 16 4  | 2,606  | 6 10  | 2,693  | 1 4   |
| IRELAND‡—                            |                            |       |       |  |       |        |       |        |       |
| Chief Secretary's Office             | 99                         | 89    | 74    | 2,114  | 18 9  | 1,883  | 10 8  | 1,578  | 6 2   |
| Attorney and Solicitor-General ..... | 99                         | 89    | 74    | 4,125  | — —   | 3,708  | 6 8   | 3,083  | 6 8   |
| Great Seal Patent Office             | 99                         | 89    | 74    | 1,020  | 9 5   | 961    | 10 —  | 775    | 15 9  |
| SCOTLAND§ .....                      | 205                        | 178   | 168   | —  | —     | —      | —     | —      | —     |
| Total .....                          | 879                        | 761   | 740   | 39,259   | 12 2  | 34,103 | 2 4   | 32,977 | 2 1   |

\* The fees payable on all patents passing through the Attorney and Solicitor-General's Offices are 4*l.* 4*s.* for the report, and 5*l.* for signing the Bill; the particulars as to the amount received in the required period cannot be furnished.

† The number of patents which pass the Privy Seal may vary from the number which have passed the Great Seal; instruments sometimes not being completed.

‡ In addition to the fees payable on patents in Ireland, the sum of 14*l.* 8*s.* 6*d.* is payable to the English officers on each patent, viz., to the Home Office, and for stamp 9*l.* 3*s.* 6*d.*; to the Irish Office, 2*l.* 2*s.*, and to the Clerks of the Signet, 3*l.* 3*s.*

§ No account of the amount of fees received on patents is given in the Return, but the fees payable are stated to be:—1. At the Chancery Office, 25*l.* —*s.* 7½*d.*, whereof, prior to 31st September, 1847, 21*l.* 19*s.* 8½*d.* was paid into Her Majesty's Treasury, and 3*l.* —*s.* 11*d.* to the officers in Chancery; and subsequent to 31st September, 1847, 24*l.* 8*s.* 7½*d.* to the Treasury, and 12*s.* to the officers in Chancery. 2. At the office of the Great Seal, 14*l.* 19*s.* 5½*d.*; of which 14*l.* 12*s.* 9½*d.* is paid into the Treasury, and 6*s.* 8*d.* for box and wax. 3. At the Lord Advocate's Office, 4*l.* 4*s.*; 3*l.* 3*s.* to the Lord Advocate, and 1*l.* 1*s.* to his Secretary.

Note.—Abstracted from House of Commons Paper, No. 457, Letters Patent. Sess. 1847-8.

TABLE II.—Statement of all FEES and STAMP DUTIES in lieu of Fees paid in the UNITED KINGDOM, for passing Patents of Invention under the Patent Law Amendment Act of 1852 (15 and 16 Vict., cap. 83), and under the Act to substitute Stamps for Fees (16 and 17 Vict., cap. 5), from the 1st October, 1852, to 31st December, 1853.

| Number. | Designation of Process.                                  | Cost of Each. | Total Cost to the Patentees. |
|---------|--|---------------|------------------------------|
|         |  | £ s. d.       | £                            |
| 4,256   | Petitions for grants of letters patents ....             | 5 — —         | 21,280                       |
| 2,927   | { Notices of intention to proceed with application ..... | 5 — —         | 14,635                       |
| 190     | Notices of objection to grant.....                       | 2 — —         | 380                          |
| 2,420   | Warrants for patents .....                               | 5 — —         | 12,100                       |
| 2,384   | Patents sealed .....                                     | 5 — —         | 11,920                       |
| 2,136   | Specifications filed .....                               | 5 — —         | 10,680                       |
| 273     | { Entries of assignments of patents and licences .....   | — 5 —         | 68                           |
| 1,500   | Searches and inspections .....                           | — 1 —         | 75                           |
| 128     | { Extension* of English patents to Ireland .....         | 6 13 4        | 853                          |
| 126     | { Extension* of English patents to Scotland .....        | 6 13 4        | 840                          |
| 5       | { Irish and Scotch patents extended* to England .....    | 6 13 4        | 33                           |
| 5,625   | Folios of office copies.....                             | — — 2         | 47                           |
|         | Total .....  | —             | 72,911                       |

\* The 53rd section of the Act applied only to such patents as had passed under the old law, and on which the specification had not been enrolled. The old law allowed six months from the date of the patent for the enrolment of the specification, therefore no extended patents have been passed since the 31st March, 1853.

Note.—Abstracted from the First Report of the Commissioners of Patents.

TABLE III.—Statement of the Number of Applications for PROVISIONAL PROTECTION of Patents, and of the Number of PATENTS PASSED; of the Number of SPECIFICATIONS FILED; and of the Number of Applications LAPSED or FORFEITED in the UNITED KINGDOM during Nine Years; together with the Amount of Stamp Duties Paid on Patents.

| Year.       | Applications for Provisional Protection. | Number of Patents Passed. | Number of Specifications Filed. | Applications Lapsed or Forfeited.* | Amount of Stamp Duties Paid on Passing Patents. |
|-------------|--|---------------------------|---------------------------------|------------------------------------|---|
| 1853†.....  | 4,256                                    | 3,099                     | 2,136                           | 1,157                              | £ 72,911  |
| '54 .....   | 2,764                                    | 1,876                     | 1,828                           | 888                                | 53,030  |
| '55 .....   | 2,958                                    | 2,044                     | 1,989                           | 914                                | 73,582  |
| '56 .....   | 3,106                                    | 2,094                     | 2,048                           | 1,012                              | 91,116  |
| '57 .....   | 3,200                                    | 2,028                     | 1,976                           | 1,172                              | 83,887  |
| '58 .....   | 3,007                                    | 1,954                     | 1,880                           | 1,047                              | 83,582  |
| '59 .....   | 3,000                                    | 1,976                     | 1,897                           | 1,024                              | 95,122  |
| '60 .....   | 3,196                                    | 2,061                     | 1,965                           | 1,135                              | 108,133   |
| '61 .....   | 3,276                                    | 2,047                     | 2,015                           | 1,229                              | 99,979  |
| Total ..... | 28,763                                   | 19,179                    | 17,734                          | 9,578                              | 761,342   |

\* The applicants having neglected to proceed for their patents within six months of provisional protection.

† For the fifteen months ended with December, 1853, the business under the old Patent Acts was suspended for some time, till the opening of the new office on the 1st October, 1852; this caused an extra number of applications to be made in the first year.

Note.—Abstracted from the Annual Reports of the Commissioners of Patents for Inventions, made pursuant to the Act 15 and 16 Vict., cap. 83.

*The TARIFFS and TRADE of VARIOUS COUNTRIES during the last TEN YEARS. By RICHARD VALPY, Esq., of the Statistical Department, Board of Trade.*

[Read before Section (F) of the British Association, at Cambridge, in October, 1862.]

UPON the occasion of another International Exhibition, the chief object of which is to stimulate industry and increase commerce, it will be interesting to examine, shortly, the course of commercial policy in different countries, and the effect upon international trade during the period from 1851 to 1862. England has the first claim to our notice, both on account of the advance it has made in liberating commerce, and the superior magnitude of its foreign trade.

Although great modifications were made in the English tariff, in the ten years from 1841 to 1851, very considerable remissions and reductions of duty have been effected during the ten years ended with 1862; and two of the greatest commercial reforms, the repeal of corn laws and the abolition of the navigation laws, although adopted shortly before 1851, have influenced very considerably the commerce and condition of the country in the period under consideration. Less importance is generally attached to the opening of our trade to foreign vessels, than to the repeal or reduction of a duty upon some important article of consumption. But an unrestricted command of tonnage is an essential element of an extensive foreign trade, and the abundant and cheap supply of the national markets is greatly dependent upon free navigation.

The practical benefits resulting from the abolition of the navigation laws, are well stated in one of the reports from the Commissioners of Her Majesty's Customs. After mentioning the trouble incurred in preventing the violation or evasion of the restrictions upon navigation, and the inconvenience and loss of time they occasioned to merchants, the Commissioners observe "the whole of these vexatious and complicated restrictions are at length happily abolished, and it is difficult to say whether the expansion of trade, the interests of shipowners, or the comforts of customs' officers have been most effectually promoted by the change." The navigation laws have now been abolished for fully ten years, and in that period the British mercantile marine has been largely increased, and shows a continued advance in the tonnage employed. In 1851, the tonnage of vessels which belonged to the United Kingdom, and



were actually employed in the coasting and foreign trades was 3,360,935 tons; and in 1861 it amounted to 4,359,695. The total amount of British tonnage entered and cleared at ports in the United Kingdom, with cargoes only, from and to foreign countries, was 8,535,252 tons in 1851, and 13,149,545 tons in 1861. The foreign tonnage shows a considerable increase between 1851 and 1861, and the necessity of it is apparent when we find that our imports and exports required 13,471,377 tons of shipping in 1851, and 21,924,983 tons in 1861.

The repeal of the corn laws is undoubtedly the most important of all our tariff alterations. Whether in its direct operation in augmenting the supply of the chief article of food, or in its indirect effect upon the extension of manufactures and trade, no change of duty can bear comparison with it. The large importation of wheat and flour in every year since the repeal of the sliding scale of duties, is a proof that the demand is not altogether dependent upon the supply of home-grown corn, which is well known to have been much increased of late years. The variations in the quantity grown at home, affects the demand for foreign corn; but it is, nevertheless, a question whether the consumption of foreign corn does not, as a rule, depend more upon the power of the people to purchase, rather than upon the fluctuation in the yield of home-grown corn. Large supplies of foreign corn are sometimes looked upon as a drain upon our resources, but they are frequently an evidence of the soundness and largeness of the means of the people. Large importations of foreign corn are generally coincident with large exports of British productions.

The very considerable increase in the consumption of foreign wheat and flour since the repeal of the corn laws, and the very large annual value of that comparatively new article of foreign supply, are important proofs of the increased prosperity of the country. From 1831 to 1840, the average annual consumption of foreign wheat and flour was 900,000 quarters, and the value, at the average price of British wheat, was 2,520,000*l.* From 1841 to 1850, the average consumption was 2,600,000 quarters, and the value 6,890,000*l.* From 1851 to 1860, 5,000,000 quarters were consumed of the value of 13,500,000*l.* The real value of imports was not ascertained at the Custom House before 1854. In the eight years from 1854 to 1861, the total real value of foreign wheat and flour retained for consumption in the United Kingdom amounted to 122,000,000*l.*, or about 15½ millions upon an annual average.

The alterations effected in the British tariff since 1851, have been chiefly the removal or reduction of duties upon other important articles of food.

In 1851, the duties upon coffee, sugar, and timber were lowered,

involving an estimated reduction of revenue to the extent of 800,000*l.* In 1853, customs' duties were reduced, and one million and a-half of revenue given up; nearly one million upon tea, and half a million upon butter and cheese, sugar, raisins, and other articles. In 1854, the duty upon tea was again diminished, and nearly another million of revenue abandoned. But the alteration of the sugar duties in the same year, were calculated to produce an additional revenue of 420,000*l.* The Russian war necessitated a different policy in the next year 1855, when the tea, sugar, and coffee duties were raised to obtain an estimated additional revenue of two millions and a-quarter. These increased duties were lowered in 1857, entailing a diminution of revenue to the extent of 1,600,000*l.* In 1860, the modifications of customs' duties were very considerable, more so, as regards the number of articles dealt with, than in any previous year. The estimated loss of revenue, by the repeal and reduction of customs' duties in 1860, was 2,840,931*l.*; an amount only surpassed since 1840, in 1842, when 3,617,306*l.* of revenue were given up, but of that sum the reduction upon sugar alone amounted to 2,309,857*l.* In 1861, the duties upon wine were further reduced, causing, with some other unimportant changes, a loss to the revenue of 279,558*l.* To such an extent have articles of import been relieved of customs' duty in England, that in the British tariff free goods are now the rule, and those subject to duty the exception. In 1841, as many as 1,052 articles, and their subdivisions, were subject to duty, and, in 1853, duties were levied upon 466 articles. But at the present time only 137 articles, and their subdivisions, are charged with duty upon importation into the United Kingdom.

In the eleven years, from 1851 to 1861, after deducting the additions, chiefly on account of war, customs' duties have been repealed or reduced, estimated to lower the revenue by very nearly five millions. The actual result to the revenue was, however, very different, as the total net amount produced by the customs' duties was 20,615,000*l.* in 1851, and 22,765,338*l.* in 1861. There was, therefore, a positive gain to the revenue of two millions, and a recovery of customs' revenue, after deducting the estimated loss from reductions, of rather more than seven millions, or 46 per cent. Of course these results were not solely occasioned by the tariff reforms, but the consuming power of the country was largely augmented both directly and indirectly by the increased freedom of trade.

Upon the four articles, sugar, tea, tobacco, and foreign and colonial spirits, the net amount of duty received in 1861, was no less than 19,849,000*l.* against 16,857,000*l.* in 1851, and 15,048,000*l.* in 1841. The increase in 1861 was about three millions over 1851, and nearly five millions over 1841. The increase in 1851 over 1841, was rather less than two millions. Only three of the four articles, how-



ever, yielded a larger revenue in 1861 as compared with 1851, as tea, under a reduced duty, was not quite so productive. In 1861, these four articles produced 84 per cent. of the total amount received from customs' duties; sugar contributing 26 per cent., tea 23 per cent., tobacco 24 per cent., and foreign and colonial spirits 11 per cent. The revenue from sugar has largely increased since the great reductions of duty effected previously to 1851.

The consumption of sugar, tea, and tobacco, which had increased considerably between 1841 and 1851, was upon a still larger scale between 1851 and 1861. In 1861, 9,181,000 cwt. of sugar, unrefined and refined, were consumed against 6,572,000 cwt. in 1851, and 4,058,000 cwt. in 1841. The average consumption per individual of the population amounted to 35½ lbs. in 1861, 26¾ lbs. in 1851, and 17 lbs. in 1841. The quantity of tea retained for home consumption was 77,927,000 lbs. in 1861, 53,949,000 lbs. in 1851, and 36,675,000 lbs. in 1841, giving an average per individual of 2·67 lbs. in 1861, 1·96 lb. in 1851, and 1·37 lb. in 1841. Whilst tea has been used in much larger quantities, the consumption of coffee has only kept pace with the increase of the population. 1·18 lb. was consumed per head in 1851, and 1·21 lb. in 1861. The average consumption is now rather below that of tea in 1841, and, in round numbers, is about one-half the average consumption of tea. The consumption of tobacco amounted to 34,828,000 lbs. in 1861, 27,915,000 lbs. in 1851, and 22,085,000 lbs. in 1841, which gives per individual 1·19 lb. in 1861, 1·01 lb. in 1851, and 0·83 lb. in 1841. As tobacco is not so generally used as sugar and tea, the average consumption by the smoking portion of the population must be much in excess of the average for the whole population. The reduction of duty upon foreign and colonial spirits is too recent to have influenced the consumption to any extent; 4,766,000 gallons were retained for consumption in 1851, and 5,151,000 in 1861, being about one-fifth and one-fourth the quantity of home-made spirits consumed in the respective years. To show still further the great increase in the consuming power of the population, it may be stated that the aggregate value of the chief imported articles of food (including wheat and flour, sugar, tea, coffee, spirits, butter, cheese, rice, and eggs), together with tobacco, was 36,923,000*l.* in 1854, and 53,292,000*l.* in 1861, showing an increase in eight years of 16,369,000*l.* or 44 per cent. The average expenditure for these articles, per head of the population of the United Kingdom, was 16*s.* in 1854, and 37*s.* in 1861.

As regards the aggregate trade of the United Kingdom, between 1851 and 1860, very favourable results are exhibited, in comparison with the preceding period, from 1841 to 1850. The average annual value of imports, at the old official fixed rates, an indication of 'quantity rather than of value, was 82,741,000*l.* from 1841 to 1850,

and 130,134,000*l.* from 1851 to 1860. The percentage increase in the period from 1841 to 1850, over the preceding ten years, was 53 per cent., and from 1851 to 1860 over 1841 to 1850, it was 57 per cent. The real value of the total imports, when first ascertained in 1854, was 152,389,000*l.*, and in 1861, it was 217,351,000*l.*, showing a percentage increase in the eight years of 43 per cent.

A comparison of the total declared real value of British produce exported, exhibits still more favourable results. The average annual value of the exports, between 1841 and 1850, was 57,443,000*l.*, and 106,513,000*l.* between 1851 and 1860. In the period from 1841 to 1850, as compared with the preceding ten years, the increase of British exports was 12,206,000*l.*, or 27 per cent.; and from 1851 to 1860, the increase, upon 1841 to 1850, was as much as 49,070,000*l.*, or 85 per cent., which is more than three times as great a rate of increase as in the preceding decennial period. This is an important fact, and it may be urged as strong evidence in support of the principle that the exports of a country cannot be increased to any considerable extent, if the imports are restricted by high rates of duty. The commercial policy pursued in England, of increasing imports by repealing and reducing customs' duties, has certainly been followed by a surprising extension in the exports of British productions.

The modifications effected in the tariffs of foreign countries, can only be indicated so far as they are enumerated in the returns relating to foreign tariffs published by the Board of Trade. It is not probable that notices of any important changes have failed to reach that department. But only a cursory glance at the commercial policy of foreign countries can be attempted within the limits of the present paper.

Grouping the countries of Europe, according to the nature of the alterations effected in their tariffs within the period, as nearly as can be stated, from 1851 to 1861, it appears that the duties levied upon imports have been considerably modified in France, Sweden, Russia, Italy, Holland, Austria, and Portugal.

The modifications are for the most part, however, of comparatively recent date, and the protective principle has still been maintained; the policy being, in almost all cases, to lower the duties upon raw materials and articles manufactured to a small extent in the countries themselves, but to afford to the leading national industries a considerable amount of protection against foreign competition.

Upon the modifications of the Portuguese tariff in 1860, Her Majesty's Secretary of Legation at Lisbon reports, "that they embrace a large number of raw materials, some manufactured articles which are not produced in the country, and many others which are manufactured in Portugal. In dealing with the latter,

"great caution is of course exhibited from regard for the large capital invested in the manufactories which were artificially called into life by the protective tariff of 1837, in defiance of all sound economical principles."

A few reductions have been made in the tariffs of Norway, Denmark, and Spain, with an increase of some duties, however, in Spain. The general tariff of the Zollverein appears to have been without any changes of consequence during the last ten years. But for a considerable portion of that period a special treaty has existed with Austria, by which the Zollverein duties are largely abated in favour of Austrian produce. The new commercial treaty between Prussia and France would, if adopted by the States of the Zollverein generally, afford ground for hope that France and other countries would be admitted to share the advantages accorded to Austria. The Prussian Minister President is reported to have stated at the recent opening of the Diet, "that the progress of national economy and science required that the tariff of the Zollverein should be modified in the full sense of free trade, and that the apprehensions aroused at the prospect of such a modification, were already beginning to yield to a more correct appreciation of the advantages offered by a more extended market." But few countries of Europe have actually raised their import duties; Belgium appears to have made some alterations in her tariff in this direction about ten years since, but she has recently made a treaty with France for reciprocal reductions of duty; and after a rather protracted negotiation, she has accorded nearly the same modifications to the productions of the United Kingdom.

The chief opposition to the admission of English goods at the same rates of duty as French goods, appears to have emanated from the cotton interest at Ghent, which now enjoys protective duties. The effect of this protection, according to an article in the "*Economiste Belge*," has been to check the development of the cotton industry. And it is stated, that, while in Switzerland, the cotton manufacture, under a system of free trade, advanced from 300,000 to 1,200,000 spindles, between 1830 and 1855, in Belgium its progress, in the same interval, was only from 300,000 to 400,000 spindles. The Secretary, to the Verviers Chamber of Commerce, reminded a recent public meeting at Brussels, of the protectionist agitation at Verviers against the French treaty of 1845, and contrasted the annihilation then predicted, with the actual fourfold increase in the production of woollen yarn.

Although France, Sweden, Russia, Italy, Holland and Austria have been named as the countries of Europe which have effected the largest reductions in their tariff duties, it is to be observed that the rates of duty vary greatly in these countries, and but few of

them can even now be considered as having really liberal tariffs. But when it is remembered how many articles were formerly prohibited from importation, the alterations in the tariffs of these countries must be regarded as important steps towards the extension of international trade.

There is one feature in the tariffs of France and Russia deserving of remark—the exemption from duty of some raw materials when imported for the purposes of manufacture for exportation. If the home manufacturers with their raw material, free of duty, can successfully compete in foreign markets, they ought surely to be able to do the same in the home markets; and it is hard upon the home consumers that they are not permitted to obtain supplies at as cheap a rate as the home manufacturers can sell in foreign markets.

With respect to changes in the tariffs of countries out of Europe, those effected in the tariff of the United States deserve the first notice. Unfortunately all the good that was in them is now a thing of the past. Although, previously to 1857, duties were not high enough to be prohibitive to trade, yet by the new tariff adopted in that year, very general and considerable reductions of duty were made. The tariff of 1857 continued in force until the beginning of 1861, when very heavily increased duties were imposed by the Morrill tariff. Since the outbreak of the civil war, many of the duties have been still further augmented by the Federal Government.

Of the countries in South America, only Brazil and Chili appear to have liberalized their tariffs. New Granada, Venezuela, the Argentine Confederation, Buenos Ayres, and Peru, have more or less increased their rates of duties. Last, but not least, the reduced rates of duty adopted in China by the Commercial Treaty of June, 1858, deserve to be mentioned, as an increase of trade may be the result, if the country be not seriously disturbed by the progress of the rebellion.

It is not easy to show the effect produced upon the customs' revenue of foreign countries, by the reduction of import duties. Generally speaking, the duties have not been lowered sufficiently to encourage a large increase in the consumption of imports. And in particular instances, such as France, the alterations are too recent, and the subsequent state of trade too unfavourable for a rapid recovery in the customs' receipts. It appears, however, from a recent report by Mr. Grey, Her Majesty's Secretary of Embassy, at Paris, that the actual loss upon the customs' revenue of France, is not greater than was expected. The French Government had estimated the deficit, consequent upon the alterations in the tariff, at 60 million francs at the least; and was prepared to submit to a loss of 80 million francs. But the diminution in 1861, compared with 1859, was not

greater than 63 million francs. A report by Mr. Corbett, Her Majesty's Secretary of Legation, at Stockholm, furnishes evidence of the financial success of a free trade policy in Sweden. The receipts from customs' duties are stated to have been nearly doubled since the reduction of duties by successive tariffs. Manufactures, it is also said, have at the same time greatly increased.

The foreign commerce of the principal countries of Europe has largely increased since 1850, much more so than could have been expected from the general character of the tariffs in force in many of those countries. But other well known causes have arisen to stimulate trade, not the least of which has certainly been the much larger demand for foreign produce in the English markets, in consequence of the repeal and reduction of our import duties. The increase in the import trade of the continental countries, has been chiefly in articles required for manufacturing industries, and admitted either free of duty or at moderate rates. The advance in articles which indicate the consuming power of the people has not been nearly so great.

Comparing the total value of merchandize imported into and exported from the principal countries of Europe in 1851 and 1859 or 1860, according as the particulars can be ascertained, it appears that the imports of Russia have increased from 13,783,000*l.* to 21,838,000*l.*, and the exports from 13,311,000*l.* to 24,172,000*l.* The imports of Sweden rose from 2,291,000*l.* to 4,108,000*l.*, and the exports from 2,232,000*l.* to 4,138,000*l.* Denmark's imports advanced from 5,264,000*l.* to 6,675,000*l.*, and her exports from 3,870,000*l.* to 4,469,000*l.* For Hamburg only the value of the imports is stated for the two periods; it was 24,708,000*l.* in 1851, and 35,360,000*l.* in 1861. Bremen received imports to the value of 6,257,000*l.* in 1851, and 11,913,000*l.* in 1861. The exports amounted to 5,478,000*l.* and 11,676,000*l.* The imports of Holland increased from 23,541,000*l.* to 32,134,000*l.*; and the exports from 19,794,000*l.* to 28,411,000*l.* Belgium exhibits an advance of from 16,742,000*l.* to 36,972,000*l.* for imports, and from 16,047,000*l.* to 35,182,000*l.* for exports. France, whose foreign trade is next in importance to that of the United Kingdom, increased her imports from 46,309,000*l.* to 106,280,000*l.*, and her exports from 65,186,000*l.* to 125,920,000*l.* For Portugal no more recent returns than for the year 1856 are available; they show an increase of both imports and exports as compared with 1851, and a much greater improvement will doubtless be shown under the operation of the tariff of 1860. The trade of Spain has grown considerably; the imports were of the value of 6,751,000*l.* in 1851, and 14,439,000*l.* in 1861. The exports were of the value of 4,907,000*l.* and 10,654,000*l.* Austria has increased her foreign trade, but not to the same extent as some of the countries already

mentioned. Her imports amounted to 14,834,000*l.* in 1851, and to 21,178,000*l.* in 1859. Her exports to 13,002,000*l.* in 1851, and to 21,752,000*l.* in 1859. For Prussia and the other countries comprised in the Zollverein, no value of imports and exports is recorded. The amount of the trade of the countries now constituting the kingdom of Italy, cannot be stated for want of information, but judging from the recent increase of trade between Italy and the United Kingdom, Italian commerce is doubtless of an extent second to but few countries of Europe. It is important to notice that the value of imports and exports just stated, generally includes foreign merchandise in transit, which adds considerably to the amount of the trade of Holland, Belgium, and France. The improvement in the trade of many countries in Europe between 1851 and 1860, as compared with the corresponding period from 1841 to 1850, is very marked. In France the value of the imports for home consumption was actually lower in 1851 than in 1841; whereas in 1860 it was 143 per cent. higher than in 1851. The value of the exports of French produce was 63 per cent. higher in 1851 than in 1841, and 84 per cent. higher in 1860 than in 1851. In Belgium the imports for home consumption in 1851 were but very little higher in value than in 1841, whereas in 1860 they were 138 per cent. higher than in 1851. And as regards Belgian produce, the value exported was but 30 per cent. more in 1851 than in 1841, but in 1860 it was 135 per cent. more than in 1851. In none of the principal countries of Europe do the imports exceed the exports in value to the same extent as in England. In France and Russia the exports exceed the imports. In Belgium there is but little difference between the imports and exports. In Holland and Spain the imports are in excess.

It is curious to observe for how small a proportion of the national productions, the burden of protective duties is imposed in many foreign countries upon the whole body of consumers. Judging by the percentage proportion of yarns, textile fabrics, and iron to the total exports of domestic produce, the importance of such productions, in a national point of view, is comparatively small even in France and Belgium. Whilst in the United Kingdom yarns, textile fabrics, and iron constitute about 70 per cent. of the domestic exports, they amount to but 37 per cent. in France; and omitting silks, which are no longer protected in that country by import duties upon the like fabrics from foreign countries, the percentage would be only 17 per cent. In Belgium the percentage proportion of yarns and textile fabrics of all kinds and iron, to the total exports of domestic produce, is not more than 30 per cent.

A review of the commercial policy and trade of the last ten years, shows that much progress has been made during the period,



and there are good grounds to expect greater progress in subsequent years. But it is vain to expect that commerce can be one-sided, or in other words, that there can be large exports without corresponding imports. The progressive wealth of a country is often supposed to depend upon progressive exports. To foster national productions for the supply of both home and foreign markets, has been the great aim of statesmen in many countries, and is still, unfortunately, so in some countries. The commercial policy has been to send any and everything abroad, but to receive nothing in return that can be produced at home, however indifferently, or at whatever cost. How can exports increase if such a policy prevails with regard to imports? If countries are to be generally adverse to receiving foreign imports, where are markets to be found for exports? It is astonishing that a whole population, as consumers, receives little or no consideration in comparison with the small classes of producers. Without open markets the consumers are of course at the mercy of the producers, and the latter prefer high prices and a limited consumption to low prices and a large demand. But what chance have the poorer, but great class of consumers, under high prices? They must be always on the verge of pauperism, and with what result to the country? There can be no extensive and growing industries without large bodies of consumers, and it is upon the means of the consuming classes that the commercial and financial prosperity of a country depends. It may be said that production, or, in other words, employment must precede consumption. Undoubtedly, but it is the development of the natural and not the artificial productions that is essential to the increase of national wealth. Enable the large masses, engaged in occupations the most suitable to a country's capabilities, to produce at the smallest cost, and to obtain, whether for private consumption or for reproduction, the cheapest supplies, irrespective of the consideration whether they are produced at home or abroad, and there will be no lack of means to extend domestic and foreign trade, and to meet the requirements of the state.

If reasonable facilities are only given to commerce, its future extension in all countries must be very great. How comparatively small a number of the world's population can, as yet, be reckoned as average consumers of the commonest necessities of life. An anti-commercial policy, imperfect means of communication, and generally low rates of wages have, in almost all countries, restricted the power of consumption of the people to the most moderate scale. Each of these serious obstructions to the welfare and progress of nations is happily disappearing. Restriction of trade and difficulty of transport, conduce to a state of isolation which is inconsistent with the due advancement of national power and influence. The improvements in means of communication are contributing to a great increase in the

productiveness of countries, and are affording extraordinary facilities for the extension of international trade. But how comparatively useless would be the great lines of railway connecting state with state, and traversing Europe from end to end; and the rapid intercourse by steamers upon every sea, if the interchange of merchandize continued to be paralyzed by the exaction of exorbitant duties? Modern enterprise necessitates, however, a wiser and more liberal policy.

It is not only by affording such improved means of communication that railways are contributing to an extension of trade, but their construction has been one of the great causes of the rise in the value of labour. Wages in almost all occupations have been advanced, directly or indirectly, by the large amount of well paid employment afforded by railways. In India the effect upon the general rate of wages, and the consequent increase in the people's power of consumption have been very remarkable. The advance of wages in all countries cannot but give an immense impulse to trade, if consumers are permitted to enjoy all the advantages of cheapness that improved means of communication and freedom of trade can confer.

Of late years the commercial policy of England, as a general rule, has been based simply upon the interests of her own people, and without having recourse to commercial treaties. This is no doubt the best principle, but, as there are admitted exceptions to all rules, if the Governments of foreign countries prefer, or are obliged, to proceed upon a different system, we must hope that they will, at all events, make good progress towards greater freedom of trade. England, having relaxed her tariff for the produce of all countries, is supposed to be in an unfavourable position as regards countries which do not grant to English produce the same advantages as to the produce of some other countries. But true principles of policy will prevail in the end, and public opinion will overcome the obstacles raised by special interests.

Although corresponding reductions of duty cannot now be offered by our Government, our commercial interests may be greatly aided by the special distinctions of many British productions being pointed out to foreign Governments, and representations being made in order to secure for imports from this country, the most favourable treatment consistent with the spirit and provisions of the tariffs of the respective countries.



RECENT FINANCIAL and TAXATION STATISTICS of the UNITED STATES. By CORNELIUS WALFORD, Barrister-at-Law, and Member of the Council of the Statistical Society.

[Read before the Statistical Society, 17th March, 1863.]

PART THE FIRST.

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For eighty years the progress of the United States has resembled the course of a mighty river. Taking its rise from sources now almost overlooked in the grandeur of its later proportions, it has gone on gaining breadth, depth, and power until those who have dwelt upon its borders have come to believe, as well they might, that its force was irresistible, and the current of its progress could never be either stemmed or seriously diverted.

American finance has resembled a barque upon this same stream; it has sailed, at first gently, but after a time more gaily, with the current; and so safe and certain seemed its progress that compass and chart were thrown aside—the pilot or helmsman had discarded all thoughts of danger—and the vessel was fairly left to navigate its own course.

A sudden disruption occurs. The stream is divided into two courses, and even a third seems threatening; rocks and breakers (or more appropriately “snags” and “sawyers”) are ahead, and the once quiet barque of finance seems destined, if not to entire wreck, at least to such extensive derangement as to require complete overhauling and reconstruction; and lo! in place of its once light draught and pleasure-going aspect, it has become transformed into a dark and dangerous craft, bristling with an armament of enormous calibre, and, it is whispered, not unlikely to wage offensive warfare even against a sister vessel—I mean the vessel of State.

Well, I propose to take you for a little cruise upon this stream. We need not travel back to its source. It will be sufficient for our present purposes, to take it at the point where its original thirteen

tributaries combined, and so gave it an independent national character.

The War of Independence terminated in 1783,—and it is the course of the eighty years, since intervening, down which we propose to travel. I confess, I can think of no period in the world's history which has produced more wonderful results.

I.—Population.

Eighty years ago, the entire population of the United States was less than *three millions*. Here are the figures for progressive decennial periods up to the present time:—

| Decennial Periods. | Population. |
|--------------------|-------------|
| 1790 .....         | 3,929,827   |
| 1800 .....         | 5,305,925   |
| '10 .....          | 7,239,814   |
| '20 .....          | 9,638,131   |
| '30 .....          | 12,866,920  |
| '40 .....          | 17,062,566  |
| '50 .....          | 23,191,876  |
| '60 .....          | 31,429,891  |

Note. — The earlier figures are taken from the “United States' National Register,” 1862.

The total increase being about 28 *millions*. But as all progress is comparative, I may note that the population of Great Britain has increased during the same period about 12 *millions*,—the enumeration of 1861, giving the total of 20,223,746.

The increase in each country, at successive decades, is as follows:—

| GREAT BRITAIN. |               |           | UNITED STATES. |           |
|----------------|---------------|-----------|----------------|-----------|
|                | First census. | Increase. |                | Increase. |
| 1801           | First census. | —         | 1790-1800..... | 1,376,098 |
| '01-11 .....   |               | 1,298,358 | 1800-10.....   | 1,933,889 |
| '11-21 .....   |               | 1,718,135 | '10-20.....    | 2,398,317 |
| '21-31 .....   |               | 1,879,322 | '20-30.....    | 3,228,789 |
| '31-41 .....   |               | 1,983,212 | '30-40.....    | 4,195,646 |
| '41-51 .....   |               | 2,018,972 | '40-50.....    | 6,129,310 |
| '51-61 .....   |               | 2,169,576 | '50-60.....    | 8,238,015 |

The increase in the States during the last three decades is as marvellous as it is unparalleled.

It will naturally occur to the mind of every one that the secret of this enormous increase lies in the long continued and, until lately, increasing immigration. The results, however, are not so much affected by this cause, as may be shown by a very slight digression.

The American Government does not appear to have kept any accurate record of the annual migration to its shores, until the year 1820. From that date very elaborate and important records have been furnished. The following abstract will give the number of immigrants arriving in each decennial period, and also the total numbers during each progressive decade:—

| Decennial Period.                           | Number of Immigrants arriving in each Decennial Period. | Total Arrivals during the Decade. |
|---|---|-----------------------------------|
| 1820 .....                                  | 8,385   | —                                 |
| '30 .....                                   | 23,322  | 128,502                           |
| '40 .....                                   | 84,066  | 530,878                           |
| '50 .....                                   | 369,980   | 1,427,337                         |
| '59 .....                                   | 121,282   | 2,811,604                         |
| Giving a grand total in 40 years of .....   |   | 4,908,321                         |
| Or an annual average of 125,208 immigrants. |   |                                   |

The highest number reached in any one year was in 1854, when no less than 427,883 sought the United States as their adopted home. Since then the numbers have been very rapidly declining, and in 1859 were only 121,282, or less than the annual average for 40 years.\*

## II.—Manufactures.

Eighty years ago the annual value of United States' manufactures was less than *one million* sterling. I have not the figures in regular decennial order from that date, but as far as I possess them, these are the results:—

| Decennial Periods. | Annual Value of Manufactures. £ |
|--------------------|---------------------------------|
| 1791 .....         | 1,120,000                       |
| * * * * *          | *                               |
| 1820 .....         | 12,553,277                      |
| '30 .....          | 22,329,093                      |
| '40 .....          | 96,655,641                      |
| '50 .....          | 211,119,179                     |
| '60† .....         | 400,000,000                     |

I have no means of comparing the progress of the United States' manufactures with our own, as no system has yet been devised in this country by which accurate returns could be obtained,—and it

\* *Vide* "National Almanack," Philadelphia, 1863, and "Eighty Years' Progress," New York, 1861.

† "Eighty Years' Progress," vol. i, pp. 144—157.

is certain that the continued publication of such returns not having an authentic basis would do much harm.

Mr. Porter in his "Progress of the Nation," and Mr. McCulloch in his "British Empire," have pointed out the difficulty, if not the impossibility, of ensuring accuracy in such statements.

## III.—Tonnage—Shipping.

Eighty years ago the entire tonnage of the United States' mercantile marine was less than 200,000 tons; who can fail to be struck with its subsequent development? I give the figures decennially:—

| Decennial Period. | Registered Tonnage. | Increase Decennially. | Decrease Decennially. |
|-------------------|---------------------|-----------------------|-----------------------|
| 1790.....         | 274,377             | —                     | —                     |
| 1800.....         | 972,492             | 698,115               | —                     |
| '10.....          | 1,424,784           | 452,292               | —                     |
| '20.....          | 1,280,167           | —                     | 144,617               |
| '30.....          | 1,191,776           | —                     | 88,391                |
| '40.....          | 2,180,764           | 988,988               | —                     |
| '50.....          | 3,535,454           | 1,354,690             | —                     |
| '60.....          | 5,353,868           | 1,818,414             | —                     |

*Note.*—The statistics in this table are taken from the "Finance Report" for 1861, issued under the authority of the Secretary of the Treasury of the United States.

It may be stated in explanation of the retrograde movement shown in this table between the years 1810 and 1830, that during the period of the European Wars nearly the whole of the carrying trade of Europe fell to the owners of American vessels, and when Europe resumed her carrying trade, a corresponding depression came upon American shipping.

The first entry of steam tonnage in the American tables is in 1823, and commenced then with 24,879 tons. By 1830, it had reached 63,053 tons, and has since progressed decennially, as follows,—1840, 198,184 tons; 1850, 481,005 tons; 1860, 770,641 tons.

The progress of British shipping is only shown in the published returns since 1803, and its increase has been decennially as follows:—

| Decennial Period. | Number of Ships. | Registered Tonnage. | Increase Decennially. | Decrease Decennially. |
|-------------------|------------------|---------------------|-----------------------|-----------------------|
| 1803 .....        | 18,068           | 1,986,076           | —                     | —                     |
| '10 .....         | 20,253           | 2,210,661           | 224,585               | —                     |
| '20 .....         | 21,969           | 2,439,029           | 228,368               | —                     |
| '30 .....         | 19,174           | 2,201,592           | —                     | 237,437               |
| '40 .....         | 22,654           | 2,768,262           | 566,670               | —                     |
| '50 .....         | 25,977           | 3,565,133           | 796,871               | —                     |
| '60 .....         | 20,285           | 4,251,739           | 686,606               | —                     |

*Note.*—The figures in the last decade are taken from the "Statistical Abstract," published under the authority of Government. Those in the previous decades down to, and including 1850, are from Mr. Darton's Tables in Mr. McCulloch's "British Empire." It is difficult to account for the discrepancy in the number of vessels; the "Statistical Abstract" gives for 1850 (instead of the above) "number of vessels, 17,892;" and "tonnage, 3,137,212." It may be that Mr. Darton's Returns include the shipping of the British Colonies, while the "Statistical Abstract" does not include these.

Both the totals and the decennial increase during the last thirty years are decidedly in favour of the United States.

#### IV.—Imports and Exports.

Eighty years ago the annual value of United States' exports was less than *four millions sterling*, and the amount of imports was only a few thousands greater. Now these have each assumed dimensions so vast that the uneducated mind (I mean in a statistical sense only) does not readily grapple with them. Again we present the figures decennially:—

| Decennial Period. | Imports.      |                      | Exports.      |                      |
|-------------------|---------------|----------------------|---------------|----------------------|
|                   | Annual Value. | Total for Ten Years. | Annual Value. | Total for Ten Years. |
|                   | £             | £                    | £             | £                    |
| 1790 .....        | 4,600,000     | —                    | 4,041,031     | —                    |
| 1800 .....        | 18,250,553    | 118,369,090          | 14,194,356    | 96,993,737           |
| '10 .....         | 17,080,000    | 185,532,700          | 13,331,594    | 151,187,474          |
| '20 .....         | 14,890,000    | 137,624,069          | 13,938,333    | 117,978,400          |
| '30 .....         | 14,175,384    | 159,726,685          | 14,769,901    | 153,149,750          |
| '40 .....         | 21,428,303    | 260,495,216          | 26,417,187    | 218,468,380          |
| '50 .....         | 35,627,663    | 253,556,756          | 30,379,744    | 252,112,916          |
| '60 .....         | 72,432,788    | 600,918,255          | 80,024,459    | 598,749,983          |

*Note.*—"United States' Finance Report," 1861.

There are several considerable fluctuations in the annual table of imports and exports; thus, in 1807, the imports were 27,700,000*l.*, and the exports were 21,668,610*l.*, while three years afterwards they

had fallen to the dimensions given above,—and again in 1806, the imports reached 29,420,600*l.*, while four years afterwards they were only half that amount. To overcome this difficulty, I have given along with the annual figures the totals of each decade,—and so the effects of the fluctuation are overcome, and the full force of the progress shown. Over an entire period of 72 years (1790-1861), the total imports were 1,795,265,442*l.*, and the total exports were 1,638,012,398*l.*, leaving the imports in excess of the exports by no less a sum than 157,253,049*l.*

The following are the imports and exports of Great Britain during the present century, arranged on the same plan of the annual values at decennial periods, and also of the total values of each decade. The fluctuations, year by year, have been much less than in the case of the United States.

| Decennial period. | Great Britain. |                      |               |                      |
|-------------------|----------------|----------------------|---------------|----------------------|
|                   | Imports.       |                      | Exports.      |                      |
|                   | Annual Value.  | Total for Ten Years. | Annual Value. | Total for Ten Years. |
|                   | £              | £                    | £             | £                    |
| 1801 .....        | 31,786,262     | —                    | 39,730,659    | —                    |
| '10 .....         | 39,301,612     | 288,097,772          | 48,438,680    | 407,379,701          |
| '20 .....         | 32,438,650     | 307,741,689          | 36,424,652    | 416,965,741          |
| '30 .....         | 46,245,241     | 366,610,228          | 38,271,597    | 366,005,364          |
| '40 .....         | 65,873,411     | 525,872,757          | 51,406,430    | 451,444,169          |
| '50 .....         | 100,460,433    | 797,136,408          | 71,367,885    | 573,812,626          |
| '60 .....         | 210,530,873    | —                    | 164,521,351   | —                    |

*Note.*—The imports in the above table are based upon the official values, while the exports are based upon the real or declared values, a very material point to observe; for in the year 1850 for instance, while the real or declared values show the sum stated in the table 71,367,885*l.*, the official value is put at 175,437,098*l.*—(See Darton's Tables, McCulloch's "British Empire," vol. i, p. 20.)

Now although the figures in this table are all the way through much larger than in the preceding table, the rate of progress bears no comparison with that of the United States, and it is observable that the annual values of the United States' returns are very rapidly approximating to our own.

The three great articles of United States' export are bread-stuffs, cotton, and tobacco. No accurate record of the values exported, appears to have been kept until 1821. Their interest is so great that we purpose giving in the Appendix complete tables from that date down to the present time. We therefore content ourselves with a brief abstract here. The sums represent simply the gross value, irrespective of quantity, but we add the price of cotton per



pound at each decennial period, and refer to the complete tables for extended information :—

| Decennial Period. | Bread Stuffs. | Cotton.    |                | Tobacco.  |
|-------------------|---------------|------------|----------------|-----------|
|                   | £             | £          | Per lb. Cents. | £         |
| 1821 .....        | 2,168,380     | 4,031,496  | 16'2           | 1,129,792 |
| '30 .....         | 2,115,086     | 5,934,976  | 9'9            | 1,117,273 |
| '40 .....         | 3,813,507     | 12,774,061 | 8'5            | 1,976,791 |
| '50 .....         | 5,210,274     | 14,396,923 | 11'3           | 1,990,201 |
| '60 .....         | 9,054,370     | 38,361,311 | 10'85          | 3,181,309 |
| '61 .....         | 18,973,347    | 6,810,296  | 11'07          | 2,756,942 |

We add the figures for 1861, in which year the bread-stuffs exceeded by nearly 4,000,000*l.* sterling, the exports of any previous year—the nearest approach being in 1856. The export of cotton in 1860 exceeded by nearly 6,000,000*l.* sterling, and by nearly 2,000,000 pounds weight that of any previous year,—the year 1859 being the nearest approach; and the export of tobacco was less in 1861 by nearly 2,000,000*l.* sterling than it had been in 1859.

#### V.—Banks, Coinage, and Currency.

Eighty years ago, the capital employed by the several banking establishments in the United States amounted to less than 600,000*l.* sterling. By 1820, it had increased to 27,422,122*l.*; and in 1861, the aggregate paid-up capital of the 1601 banks and branches then existing was 85,918,540*l.*, and their aggregate resources reached the enormous total of 203,172,003*l.*

In 1851, the paid-up capital of 879 banks and branches was 45,561,510*l.*, and their aggregate resources 119,445,385*l.*,—so that in ten years the increase of banks and branches is 722, the increase of paid-up capital is 40,357,030*l.*, and the increase of their aggregate resources is 83,726,618*l.*

The note circulation of the entire banks of the United States at the dates nearest to 1st January, 1861, was 40,401,155*l.* The note circulation of the United Kingdom at the same date was 38,861,426*l.*\*

Sixty years ago, the gold and silver coinage at the United States' Mint and its branches was, on an average, something less than 100,000*l.* sterling per annum. In the year ending 30th June, 1861, the gold and silver coinage produced at the Mint gave a total of 16,718,421*l.*

The following figures give the decennial progress distinguishing the gold from the silver :—

\* Vide "Statistical Abstract," 1862.

| Decennial Period. | Annual Value and Total for Ten Years. | Gold.      | Silver. | Total.      |
|-------------------|---------------------------------------|------------|---------|-------------|
|                   |                                       | £          | £       | £           |
| 1800              | Annual .....                          | 63,552     | 44,859  | 108,411     |
| 1810              | Annual .....                          | 100,287    | 127,754 | 228,041     |
| —                 | Ten years .....                       | —          | —       | 1,244,350   |
| 1820              | Annual .....                          | 263,806    | 100,136 | 363,942     |
| —                 | Ten years .....                       | —          | —       | 1,691,363   |
| 1830              | Annual .....                          | 128,621    | 499,080 | 627,701     |
| —                 | Ten years .....                       | —          | —       | 3,473,268   |
| 1840              | Annual .....                          | 338,160    | 342,435 | 680,595     |
| —                 | Ten years .....                       | —          | —       | 9,145,373   |
| 1850              | Annual .....                          | 6,396,347  | 373,220 | 6,769,567   |
| —                 | Ten years .....                       | —          | —       | 16,245,040  |
| 1860              | Annual .....                          | 4,689,456  | 650,127 | 5,339,583   |
| —                 | Ten years .....                       | —          | —       | 105,118,422 |
| 1861              | Annual .....                          | 16,141,680 | 576,741 | 16,718,421  |

Note.—The increase between 1840 and 1850 is simply explained by the discovery of gold in California, in 1849-50. Vide "United States' Finance Report."

Total amount coined at the United States' Mint in 79 years,—in gold 133,730,987*l.*,—silver, 25,627,436*l.*,—together, 159,358,424*l.* sterling.

The amount of gold and silver coined at the Mint of the United Kingdom, since the commencement of the present century, is over 173,000,000*l.*

The following table gives the annual amount at each decennial period, and also the total of each decade :—

| Decennial Period. | Annual Value and Total for Ten Years. | Great Britain. |           |             |
|-------------------|---------------------------------------|----------------|-----------|-------------|
|                   |                                       | Gold.          | Silver.   | Total.      |
|                   |                                       | £              | £         | £           |
| 1801              | Annual .....                          | —              | —         | 450,242     |
| 1810              | Annual .....                          | —              | —         | 316,936     |
| —                 | Ten years .....                       | —              | —         | *3,249,463  |
| 1820              | Annual .....                          | —              | —         | 1,797,233   |
| —                 | Ten years .....                       | —              | —         | *15,915,573 |
| 1830              | Annual .....                          | —              | —         | 2,388,032   |
| —                 | Ten years .....                       | —              | —         | 40,751,596  |
| 1840              | Annual .....                          | —              | —         | 216,414     |
| —                 | Ten years .....                       | —              | —         | 14,987,944  |
| 1850              | Annual .....                          | 1,491,836      | 129,096   | 1,620,932   |
| —                 | Ten years .....                       | —              | —         | 39,296,201  |
| 1860              | Annual .....                          | 3,121,709      | 218,403   | 3,339,112   |
| —                 | Ten years .....                       | 56,120,133     | 3,462,119 | 59,583,252  |

\* These returns are defective. Vide "Statistical Abstract."

The annual figures in this table fluctuate so considerably, that for all purposes of comparison the totals of the decades should be used. As an instance, the amount of gold and silver coinage from the British Mint in 1841 was 474,640*l.*,—in 1842 it was 6,269,888*l.*, or more than twelve times as much.

#### VI.—*Real and Personal Property.*

Seventy years ago the valuation of real property in the United States gave as a result 95,858,652*l.*; and the number of acres of taxable land was 163,746,686. By 1850, or in sixty years, the real property valuation had increased to 939,806,341*l.*, or as nearly as possible tenfold; and the State valuations, at the nearest date to 1860, show a total of 1,863,538,052*l.*, or a twofold increase in less than ten years.

The personal property of the inhabitants of the United States was estimated by the Secretary of the Treasury, at the close of 1861, as being of the value of 700,000,000*l.* sterling.

The number of acres of taxable land had in 1820, *i.e.*, in thirty years, increased to 188,286,480; and as far as I am able to estimate from the published returns,\* the area is, at the present time, 409,769,633 acres.

At the census of 1850, and again at that of 1860, actual returns were obtained of the real and personal property of the entire population, but the real property valuation is not separated from the personal property valuation. From these returns for 1850 and 1860, and from estimates for former periods, made on the most reliable authority, the following table has been obtained.

| Years.    | Valuation<br>of Real and Personal<br>Estate. | Population. | Property<br>to<br>Each Person. |
|-----------|--|-------------|--------------------------------|
|           | £  |             | £                              |
| 1810..... | 376,440,000                                  | 7,239,814   | 52                             |
| '30.....  | 752,800,000                                  | 12,866,020  | 58                             |
| '50.....  | 1,234,869,965                                | 23,191,876  | 53                             |
| '60.....  | 2,825,304,735                                | 31,429,891  | 89                             |

The increase in the last 50 years is no less than 2,448,904,735*l.*, being at the rate of 650 per cent., while the population during the same period has only increased 334 per cent.

The following subdivision of the figures, given above for 1860, will not be without interest at the present day:—

\* "National Almanack," p. 321.

| United States in 1860.       | Valuation<br>of Real and Personal<br>Estate. | Population. | Property<br>per Head. |
|------------------------------|--|-------------|-----------------------|
|                              | £  |             | £                     |
| Northern or Free States..... | 1,865,189,076                                | 19,239,851  | 96                    |
| Border States .....          | 266,694,525                                  | 2,605,602   | 86                    |
| Southern States .....        | 693,421,133                                  | 5,631,637   | 76                    |

In the above tables, the 482,680 slaves of the Border States, and the 3,470,121 slaves of the Southern States are not included in the property valuation. If this were done, an addition of this sort would have to be made: 3,952,801 slaves at 100*l.* (500 dollars) per head, giving a total cash value of 395,280,100*l.*, raising the property value, *per capita*, of the whole population considerably, and giving the South, or Slave States, very materially the advantage.

Of the value of real property in Great Britain there are no absolutely reliable statistics, but various estimates have been made from time to time, which cannot be very wide of the mark.

In 1798, Dr. Beck's valuation of England and Scotland amounted to 995,000,000*l.* Mr. Pitt, in that same year, on bringing forward his proposal for an income tax, estimated the annual value of real property at 45,000,000*l.*, which, at 25 years' purchase, gives a valuation of 1,125,000,000*l.*, or one hundred and thirty millions more than Dr. Becks. The assessments actually made on real property under the Income Tax Act give a valuation, on the theory of a 25 years' purchase, of 2,382,112,425*l.*,\* being an increase of more than cent. per cent. on the highest of the former estimates.

A valuation of *personal property* must also be more or less problematical. Mr. Porter ("Progress of the Nation," Ed. 1847, p. 608), after careful consideration of the many points involved, gives an estimate of the probable value of personalty in Great Britain in 1814, just prior to the close of the European wars, as 1,200,000,000*l.*; and considered that by 1846, or during thirty years' peace, it had increased by a thousand millions—making the value in that year 2,200,000,000*l.*

Mr. Joseph Lowe, in his "Present State of England," estimated the value of the entire private property of Great Britain and Ireland, in 1823, to be 2,139,720,000*l.*; and Mr. Pablo Pebrer, in his "Taxation, Revenue, Expenditure, &c.," published in 1833, gives the figures at 3,437,891,680*l.*, which, being tabulated on the plan just adopted, come out as follows:—

\* In 1860, the *annual* value of real property assessed to the property tax in Great Britain was 126,056,829*l.* = 3,151,420,725*l.* at 25 years' purchase.—Ed. S. J.

| Years.    | Valuation,<br>Real and Personal<br>Property. | Population<br>of the<br>United Kingdom. | Property<br>per Head. |
|-----------|--|---|-----------------------|
| 1823..... | £<br>2,139,720,000                           | 21,193,488                              | £<br>100              |
| '33.....  | 3,437,891,680                                | 24,304,799                              | 141                   |

Of course the increase in both real and personal property in Great Britain has been very considerable since these dates, but the materials at hand are not sufficiently trustworthy to enable the table to be extended.

*Note.*—For the statistics in this section I am much indebted to the "National Almanack, 1863."

#### VII.—Agricultural Progress.

Of late years, or since 1840, the United States' Government has taken much pains to collect and collate statistics of agricultural produce. The first result in the year just named showed the annual value—

|                              |             |
|------------------------------|-------------|
|                              | £           |
| To be.....                   | 124,232,795 |
| By 1850 it had reached ..... | 198,818,768 |
| And in 1860 .....            | 382,000,000 |

Showing almost a twofold progress in the last decennial period.  
In 1850, the lands in cultivation were:—

|                  |             |
|------------------|-------------|
|                  | Acres.      |
| Improved .....   | 113,032,614 |
| Unimproved ..... | 180,528,000 |
| Total .....      | 293,560,614 |

In 1860:—

|                            |             |
|----------------------------|-------------|
|                            | Acres.      |
| Improved .....             | 163,261,389 |
| Unimproved .....           | 246,508,244 |
| Total .....                | 409,769,633 |
| Increase in ten years..... | 116,209,019 |

The cash value of the farms was—

|               |               |
|---------------|---------------|
|               | £             |
| In 1850 ..... | 654,315,085   |
| „ '60 .....   | 1,330,176,501 |

The value of farming implements and machinery was—

|               |               |
|---------------|---------------|
|               | £             |
| In 1850 ..... | 30,117,727    |
| „ '60 .....   | 1,330,174,501 |

The value of the live stock was—

|               |             |
|---------------|-------------|
|               | £           |
| In 1850 ..... | 108,836,103 |
| „ '60 .....   | 221,498,043 |

The entire surface of the United Kingdom capable of cultivation does not exceed 77,000,000 of acres, and therefore admits of no comparison with the acreage of the United States.

A careful estimate made by Mr. McCulloch, in 1846, gave the annual value of the agricultural products of the United Kingdom at 217,551,977*l*. Nearly twenty years of improved farming under the spirited teaching of Mr. Alderman Mechi, Mr. Caird, and other agriculturalists, will not have failed very materially to increase the annual value of the produce since that date.

#### VIII.—Post Offices.

Returning to our former starting-point:—

Eighty years ago, the number of post offices in the United States was less than seventy, and the postal receipts hardly 7,000*l*. per annum. There are now nearly thirty thousand post offices; the annual receipt from them is approaching 2,000,000*l*. sterling, while the cost of the service approaches very nearly four millions, and the number of miles over which the mails are carried in the course of the year is approaching *ninety millions*,—the extent of the daily routes being close upon a quarter of a million of miles.

In this one section of our subject, the growth of the United States, and the policy of the Government in opening up the country by such means as postal facilities, comes out very forcibly, and deserves consideration.

Commencing our table in 1790, as we have no authentic data earlier, see what has been done.

| Year.      | Number<br>of<br>Post Offices. | Expenditure. | Revenue.   | Extent<br>of Post Routes<br>in Miles. |
|------------|-------------------------------|--------------|------------|---------------------------------------|
| 1790 ..... | 75                            | £<br>6,428   | £<br>7,587 | 1,875                                 |
| 1800 ..... | 903                           | 42,798       | 56,160     | 20,817                                |
| '10 .....  | 2,300                         | 99,193       | 110,336    | 36,406                                |
| '20 .....  | 4,500                         | 232,185      | 222,385    | 72,492                                |
| '30 .....  | 8,450                         | 386,541      | 370,116    | 115,176                               |
| '40 .....  | 13,468                        | 943,647      | 908,704    | 155,739                               |
| '50 .....  | 18,417                        | 1,042,590    | 1,110,594  | 178,672                               |
| '60 .....  | 28,498                        | 3,834,121    | 1,703,613  | 240,594                               |

In this country we have been accustomed to look upon the post office as a source of considerable revenue. In 1860, while the United States' mail service involved an expenditure of more than



two millions sterling over and beyond the receipts, in Great Britain the surplus, after paying all expenses, was nearly a million and a half.

I may add one or two statistical facts:—

Of the distance traversed by the United States' mails in 1859, the railways accomplished 27,268,384 miles, or nearly a third; steamboats 4,569,562; and the rest was accomplished by stages, "sulkies," and "pony expresses," in the usual manner. The number of "dead letters" in the United States' post offices for the year 1861 was 2,550,000.

#### IX.—Facilities of Communication.

Eighty years ago, there were less than 2,000 miles of post roads in all the vast territory of the United States. In 1791, indeed, only 1,905 are enumerated. By 1811, the mileage had increased to 37,031; in 1833, there were 115,176 miles; and in 1859, 260,052 miles.

In addition to this quarter of a million of miles of post roads, we may now enumerate 28,270 miles of railway completed and in operation—with some 16,000 miles projected and in course of construction.

The progress of railways in America has been so rapid as to deserve especial record:—

|                                      |                     |
|--------------------------------------|---------------------|
| In 1828 there were but .....         | 3 miles of railway. |
| „ '30 this had been extended to..... | 43 „                |
| „ '40 „ „ .....                      | 2,369 „             |
| „ '50 „ „ .....                      | 7,777 „             |
| „ '60 „ „ .....                      | 28,270 „            |

The cost of constructing this 28,270 miles of railroad has been 201,834,400*l.*, and the Government has granted 25,403,993 acres of land, by way of aid and encouragement. The system of Government grants of land for railway purposes was inaugurated in the case of the Illinois Central, in 1850.

We have only to add, to make this part of the paper complete, that there are now some 15,000 miles of canals, and 50,000 miles of electric telegraphs completed and in operation in the United States.

*Note.*—In connection with this 50,000 miles of electric telegraph there are 1,400 stations for receiving and dispatching messages, and 10,000 clerks and operators are employed. The messages are estimated at 5,000,000 per annum, paying 400,000*l.*; in addition to which the Press pays about 40,000*l.* per annum for special despatches. ("Eighty Years' Progress," vol. i, p. 312.)

#### Plan of the Paper.

The plan which I have marked out for the present paper is a threefold one:—

First, to show the progress of the United States from the termination of the war of independence down to the commencement of the present struggle, which is hardly less a war of independence, in all its material aspects;

Secondly, to trace its financial history during the same period; and—

Thirdly, to examine critically the present and impending financial legislation and policy with regard to their effects upon the future destinies of this Great Republic.

In order to aid in the development of my plan, I have, whenever the circumstances appeared to admit of it, selected as the standpoint of comparison the incidents connected with our own progress. I know the Americans have never had, and have never sought for a higher standard of ambition than to equal,—aye, to eclipse,—this mighty though diminutive England of ours. And if they now snarl at us in the moment of their tribulation, we must look upon it as but a temporary ebullition of meanness, unworthy of a great people—expressive, perhaps, of a despair to which I still believe they have no right to abandon themselves.

I must here explain a point that I have thought it best, as well for the purposes of the comparison just referred to, as from the fact that the English public are not generally familiar with values rendered in United States' currency, to adopt throughout this paper,—and that is to render all the values given into English sterling. In order to simplify the process, I have invariably taken five dollars as equal to the English pound sterling,—but as the United States' dollar is really equal to 4*s.* 2*d.* of English money, it is clear that all the United States' values given in this paper are 4 per cent. below the actual values if rendered more exactly.

*On the PAY and INCOME of the BRITISH SOLDIER, as compared with the RATE of AGRICULTURAL WAGES. By MAJOR-GENERAL SIR ALEXANDER MURRAY TULLOCH, K.C.B.*

[Read before the Statistical Society, 19th May, 1863.]

NEARLY three years ago, the Royal Commission appointed to inquire into the system of recruiting in the army, of which I was a Member, concluded its recommendations by a suggestion that, in order to prevent any misrepresentation on the part of those who were employed to procure recruits, a fair and full statement of the conditions and advantages attaching to service in the army should be drawn up and published by authority in the shape of a small pamphlet for general circulation throughout the country.

This suggestion originated in the belief that when due consideration was given to the advantages enjoyed by soldiers over persons of the same age among the agricultural population, they would be found sufficient to induce a larger proportion of that class to embrace the profession of arms. The idea was not altogether a new one, for Lord Herbert had about a year before, at an agricultural meeting over which he presided, expressed a similar expectation, and few men of his rank had better opportunities of contrasting the relative position of both classes.

Deeply, indeed, is it to be regretted that the premature death of this statesman prevented him from putting upon record, as Secretary of State for War, the facts illustrative of his views on the subject, in an official form, that the British peasant in determining upon a step of such importance as enlistment, might have some more trustworthy assurance of the advantage to be expected from it than is likely to be obtained through the interested medium of a recruiting serjeant, and might be induced to enter the army—not by those vague expectations which too readily present themselves to an untutored mind, and generally end in disappointment,—but from a firm conviction that men, who devote themselves to the service of their country, are not likely to be less liberally dealt with in the end, than those who continue to earn their livelihood by the more toilsome, though less hazardous occupation of agricultural labour.

Owing to repeated reductions in the army since the date of that Report, there has been so little pressure for recruits that no official statement, such as was then suggested, has been put forward; nor am I aware whether it is ever likely to be so. As however much infor-

mation, extending over a series of years, has been collected by the Poor Law Board respecting the Wages and Expenditure of Agricultural Labourers,\* I am induced, from that source, assisted by my personal recollection of the advantages usually enjoyed by our troops, to institute the present inquiry, in the hope that it may at least prove useful in correcting a prevailing impression, that the British soldier is inadequately paid as compared with the mass of the population from which he is selected.

If the remuneration of the soldier consisted of pay alone, the proposed comparison would not have involved much difficulty; but the advantages enjoyed by him are derived from so many sources, and it is so difficult to assign its precise value to each, that the utmost to be hoped for is an approximation to the truth,—sufficiently accurate, however, to warrant the conclusion that, even on the very lowest scale, the income of the soldier is not below the usual average of agricultural wages.

With the exception of those who have perused the valuable analysis by Mr. Purdy on the subject, few, I believe, are aware how very low the average of the daily wages really is, or that it does not exceed the following sums per week in each of the three kingdoms:—

|                            | s. | d.  |
|----------------------------|----|-----|
| In England and Wales ..... | 11 | 6½  |
| „ Scotland .....           | 12 | 11½ |
| „ Ireland .....            | 7  | 1½  |

Had the number of Agricultural labourers in each of the three kingdoms been equal, the average of the whole would have amounted to 10s. 6½d., but as the highest rates prevail in Scotland, where the agricultural population does not exceed 200,000, while about thrice that number in Ireland earn no more than the lowest rate, the necessary correction for the proportion in receipt of each of the three rates, after adding the extra harvest pay, reduces the average throughout the kingdom to 10s. per week, as the wages of each agriculturist fully employed, out of which he has to provide food, lodging, clothing, medicines, and medical aid, as well as those contributions to benefit societies, which must be maintained if he is to be kept independent of parish support, during sickness or want of employment.

The marked difference in these averages, in the three kingdoms respectively, will serve in some measure to explain the superior facility with which soldiers can be raised in Ireland as compared with England; for the average wages of the day labourer in the former, being considerably lower than the pay of the soldier, the prospect of

\* See the interesting summaries by Mr. Purdy, read at the meetings of this Society, on 21st May, 1861, and 15th April, 1862.

improving his condition is likely to afford a sufficient inducement to enlist. On the other hand, the higher rate of wages in Scotland, indicated by the above average, at once accounts for the difficulty experienced of late years in keeping up those Scotch and Highland corps, which in the times of the old American and Peninsula wars could sometimes be raised in a day. I am aware that by such conclusions, I am perhaps dispelling some of the illusions, in which non-military writers are prone to indulge, as to the popularity of a war having an influence in filling our ranks, but it is better perhaps to do so, than to trust too much to the effect of enthusiasm, when it is borne in mind that, popular as was the Russian war at its commencement, the army was 47,000 men under establishment when it was brought to a conclusion, even though very high bounties were offered to induce recruits to come forward.

One of the chief difficulties in bringing the wages of the agricultural labourer into comparison with the income of a soldier, is that the latter varies materially, according to the arm to which he belongs, and the length of his service coupled with the good conduct pay to which he may be entitled; the extent to which his income may be increased by promotion will for the present be left entirely out of view, and the comparison restricted to the case of a common agricultural labourer enlisting in any of the following arms of the service, for which no special qualifications beyond a certain height and an average physical development are required.

Such a recruit would receive weekly, including one penny per day of beer money, which may in fact be considered as part of the pay:—

|                                   | Per Week. | Daily. |
|-----------------------------------|-----------|--------|
|                                   | s. d.     | s. d.  |
| If in infantry of the line .....  | 7 7       | 1 1    |
| „ foot guards.....                | 8 2       | 1 2    |
| „ cavalry and military train .... | 9 4       | 1 4    |
| „ artillery .....                 | 9 5½      | 1 4½   |
| „ horse artillery .....           | 10 7½     | 1 6½   |
| Average of the whole.....         | 8 2       | 1 2    |

This average is founded on the numbers in receipt of each of these rates of pay as shown by the army estimates for the year 1862-3, adjusted on the same principle as the average of agricultural wages; but lest any question should arise as to the admission of that principle, owing to some of the higher rates of pay being partly intended to cover slight additional outlay for equipments, I shall be content to adopt the very lowest rate, viz., that of infantry only, for my comparison, being satisfied that when the other advantages of

the soldier are taken into consideration, it will be sufficient to warrant the conclusion I propose to draw from it.

Among the first of these advantages is that of being entitled to add to the above rates of pay the following additional amounts for length of service combined with good conduct, viz.:—

|                              |  | d.         |
|------------------------------|--|------------|
| After 3 years' service ..... |  | 1 per day. |
| „ 8 „ .....                  |  | 2 „        |
| „ 13 „ .....                 |  | 3 „        |
| „ 18 „ .....                 |  | 4 „        |
| „ 23 „ .....                 |  | 5 „        |
| „ 28 „ .....                 |  | 6 „        |

Though the terms upon which the soldier becomes entitled to this good-conduct pay, are merely, that no offence, involving more than a week's confinement to barracks, shall have been recorded against him in the course of the year. I am aware of the possibility of some failing to fulfil even that moderate condition; and shall, therefore, assume the number who attain this additional pay, and the amount actually drawn by them, as the criterion for estimating its additional value instead of the nominal rate. On this principle I find that for a total of 126,909 rank and file, exclusive of those serving in India, the total good-conduct pay drawn according to the last estimates, was 126,835*l.*, or as nearly as possible 1*l.* a-year by each soldier; thus showing an average addition under this head of 4½*l.* per week, and raising the income under the several heads of pay, beer money, and good-conduct allowance, to within a fraction of 8*s.* a-week, for the lowest class of infantry.

But, besides this, the soldier is provided gratuitously with clothing, lodging, fuel, light, medical aid, and also with food at a rate greatly below its cost to the public, of which items it is necessary to estimate the full value before bringing his pay into comparison with the wages of an agriculturist, who has no such advantages.

In regard to the clothing there is little difficulty, because he receives either the following supplies, which are sufficient for all his wants, or their equivalent in money, viz.:—

|   | £ | s.    | d. |
|---|---|-------|----|
| One tunic, or .....   | - | 18    | 6  |
| „ pair of cloth trousers, annually .....  | - | 9     | 6  |
| Two „ boots „ .....   | - | 17    | -  |
| One „ serge trousers, biennially, 7 <i>s.</i> .....   | } | 5     | 6  |
| „ chaco „ 4 <i>s.</i> .....   |   |       |    |
| And quadrennially a grey great coat, value 23 <i>s.</i> 6 <i>d.</i> ,<br>being for one year ..... | - |       |    |
|   |   | <hr/> |    |
|   | 2 | 16    | 4½ |



The soldier has no longer to pay for alteration of clothing; and the supply has of late years been on so ample a scale, and of such excellent quality, that he has nothing to provide except small repairs occasionally, and to keep up his stock of under-clothing.

According to this estimate, then, the value of what the soldier receives in clothing is equal to about 1s. 1d. per week. In comparing his income with that of the agriculturist, however, I am aware that this item may be liable to some exception, in so far as the dress of the latter may be of a coarser and less expensive material, and the nature of his occupation does not prevent an extent of repairs which would be quite inadmissible in a regiment; but even supposing that one half of the amount, which the soldier's clothing actually costs the Government, be assumed as the proper equivalent in the proposed comparison, that will be found quite sufficient to turn the scale in his favour; and is certainly the lowest expense which the agriculturist is likely to incur in providing himself with the secondary description of clothing he generally uses.

The value of the soldier's lodging, including fuel and light, straw for bedding, tear and wear of furniture, and use of cooking utensils, it is more difficult to estimate. If taken according to the actual cost of barracks, and of the supplies in kind issued by the barrack-master, the charge would be very heavy indeed; but, as the number in each barrack is constantly varying, any calculation founded upon that basis might prove erroneous; the amount which Government pays when the accommodation and supplies are provided by publicans or private individuals under the Billeting Act, would probably be much nearer the mark, viz., 4d. per night; but even supposing half that rate only to be assumed as the fair charge (and this corresponds very nearly to what Mr. Purdy has stated such accommodation to cost for single men), I should be warranted in assuming 1s. 2d. per week as the equivalent for lodging and barrack supplies, which the soldier does not pay for, but which the agricultural labourer has to provide out of his wages.

To the privilege of being provided with medicines, medical comforts, and attendance when sick, without reference to the expense which may be incurred, it is also difficult to assign a specific value, when the soldier's treatment takes place through the medium of medical officers (staff or regimental), seeing that much of the expense which it involves may arise less from the actual extent of sickness than from the circumstance that a large medical establishment has to be kept up at all times in every regiment to provide for the contingencies of warfare, or the prevalence of epidemic disease, and it is impossible to decide how much of the general charge incurred for these objects would be fairly applicable to such treatment as an agricultural labourer might only require occasionally;

but an approximation may readily be found in the rate at which Government contracts with medical practitioners for attendance on military detachments stationed beyond the distance at which they would be treated by the medical officers of their regiment, viz., 1½d. or 2d. per man per week, which will accordingly be assumed as the value of the privilege referred to.

The soldier has also a considerable advantage over the agricultural labourer by the greater part of his food being provided for him at a price below its market value; but before attempting to estimate how much this privilege may be worth, it appears necessary to indicate the reasons for such a mode of provisioning him, instead of the simpler one of allowing what would be a sufficient amount of pay, and permitting him to expend it on such supplies as he thought proper. Experience has shown that, were the soldier left entirely to his own will in such matters, more might be expended on drink than on food, and that the latter might not always be of the quality best adapted to maintain him in health and efficiency. To prevent this, it is the practice in the army that, whatever the pay may be, a certain proportion must be devoted to the purchase of three-fourths of a lb. of meat at home, or 1lb. abroad (bone included), and 1lb. of bread at all stations daily; but as these items of diet vary considerably in price in different parts of the kingdom, and on some foreign stations cost even more than all his pay, it has been necessary, in order to leave a sufficient surplus for the other expenditure of the soldier, that the stoppage for bread and meat should never exceed 4½d. at home, or 3½d. per day abroad, the difference being in all cases made good by the Government. The lesser amount charged abroad is, however, more apparent than real, in so far as in consequence of the soldier receiving no beer money there, the surplus of his income, after defraying the cost of bread and meat, is precisely the same as at home.

So far as regards the cost of bread and meat on foreign stations, or in the field, it does not appear necessary to enter into any minute calculations of value, because, on the average of all, it is much above the stoppage made from the soldier, and, even were it otherwise, the difference could scarcely be considered an advantage to him, seeing that he could only have it when resident at a station where many of what he has been accustomed to consider the necessaries of life are proportionately dear. In regard to the bread and meat at home, there is no such difficulty however; what he may have then to pay for it below the market price is clearly so much gain, and the extent of the benefit to him may be inferred from the circumstance that, even for the year 1862-63, though one in which these articles of diet have been lower than usual, the Army Estimates show that the total expenditure upon the supplies by the Government has been 770,239l., while the

stoppages for them have only realized 607,921*l.*; the difference of 162,315*l.*, divided among about 80,000 soldiers serving in the United Kingdom, clearly indicates that, exclusive of any advantage which they may derive by having their bread and meat contracted for in large quantities, instead of having to pay the shop price, each soldier gains absolutely to the extent of 2*l.* a year, or about 1½*d.* per day. Nor can this ever be balanced by the price in some years being lower than the stoppage, because, in that case, the soldier's interests would be protected by the excess being placed to his credit.

The soldier has also the benefit of receiving a quarter of a pound of bread daily at the contract price, which is usually one farthing a pound below that paid by agricultural labourers. This is to improve his morning and evening meal, and the cost of the tea, coffee, and sugar required for the same purpose is not only reduced by being purchased for him in large quantities, but, as it is under official inspection, the quality is much superior to what can usually be had elsewhere at such rates.

Passing over these minor advantages, the value of which it may be difficult to estimate, I shall at least be justified in assuming the reduced cost of the ration of bread and meat alone at 9½*d.* per week, making the total income of the soldier, as contrasted with the 10*s.* per week of agricultural wages, to be as follows:—

|   | s.        | d.         |
|---|-----------|------------|
| Pay and beer money .....                  | 7         | 7 per week |
| Good-conduct pay .....                    | —         | 4½ "       |
| Clothing, say even at half its cost ..... | —         | 6½ "       |
| Barracks, fuel, and light .....           | 1         | 2 "        |
| Medical aid .....                         | —         | 2 "        |
| Excess of rations beyond stoppage .....   | —         | 9½ "       |
| <b>Total .....</b>                        | <b>10</b> | <b>7½</b>  |

Thus, it seems clearly established, that even an infantry soldier receives either in money or in money's worth about 7½*d.* per week in excess of an agricultural labourer; and if this superiority holds good in regard to the worst paid arm of the service, and the lowest rank of that arm, it must necessarily extend to all others; therefore any calculations with respect to them would be superfluous.

This total of 10*s.* 7½*d.* includes only what the soldier receives when serving at home, but at some foreign stations additional allowances are granted by the local legislatures to the following extent in addition to pay, viz.:—

|   | d.   |
|---|--|
| At Victoria, New South Wales, and South Australia .....       | 6 a-day.   |
| „ Van Dieman's Land, Western Australia, and New Zealand ..... | 3½ per day.                                      |
| „ the Cape and Natal .....                                    | 1½ "   |
| In the East Indies and China .....                            | { 1½ " at a half, or 2½ at a full batta station. |

Arrangements are also made by the Indian Government, by which the soldier is enabled to obtain about a pint of English beer daily, for a sum not exceeding its price in this country, the cost of the difference being made good out of the local revenues.

According to the last estimates, the proportion in receipt of one or other of these local allowances, is about one-half of the whole army, but owing to their varying amounts I shall not attempt to add any of them to the general average of pay, more especially as some are intended to cover expenses incidental to the stations where they are granted, and cannot, therefore, be considered in every case as a virtual addition.

In comparing the aggregate pay and advantages of the soldier with the wages of the agricultural labourer, it must not be forgotten that the pay of the former is continuous, and that he is equally sure of it whether sick or well, whether present or absent, whether labour is in demand or the reverse, while the wages of the latter are liable to frequent fluctuations from all these contingencies, and he has no chance, without a total cessation of his income, of enjoying two or three months' leave of absence in every year, as the soldier does, retaining his full pay during the whole time.

It requires equally to be kept in view, that whenever the soldier has to exercise any trade or calling for the public service, he is entitled to an allowance under the head of "working pay," proportioned to the extent and importance of his labour, and the time it occupies. For instance, carpenters, masons, bricklayers, and blacksmiths are in frequent demand for the Engineer Department, bakers and butchers for the Commissariat Corps, carters, wheelwrights, drivers, and harness-makers for the Military Train, saddlers and farriers for the Cavalry and Artillery, most of whom receive on such occasions a working pay, according to their rating as artificers or labourers, of from 1*s.* 3*d.* to 9*d.* a-day, thus raising their income, in many cases, to double the ordinary pay of an infantry soldier; in the Sappers and Miners it is often much more, even for a private, if an intelligent workman. Those employed in altering or repairing the clothing or boots of a regiment, in making or repairing the roads beyond the limits of the barracks or cantonments, or on fortifications (elsewhere than in the field), all earn working pay in addition, and the same principle applies, though in a minor degree, to those engaged as officers' servants, or employed in the instruction, civil or professional, of other members of the corps. Indeed it must never be lost sight of, that the duties which may be exacted in return for the pay of a soldier at the rates before quoted, are those only which relate to drill and discipline; and that for all involving extra labour, with the exception of what are termed fatigue duties, he receives additional remuneration.

This is one reason why I have not attempted to bring the pay of soldiers into comparison with the wages of ordinary mechanics, because, to do so effectually, I must in justice have included, not the mere amount of military pay, but what some may be receiving for the extra services just referred to, the exact amount of which I have no means of ascertaining. Any extension of the comparison to the wages of persons engaged in trade or manufactures would have been equally open to objection, as these are so liable to be affected by over-production at one time, and stagnation of employment at another, of which we have so remarkable an instance at present in the cotton trade, but by carefully restricting my results to those deduced from the wages of agricultural labourers, the class generally most certain of finding employment when capable for and disposed to seek it, I trust I have avoided all such objections, besides confining myself to a class who unquestionably afford the best raw material for soldiers. Indeed, if a sufficient supply of them could at all times be obtained, we should probably seek for none other, as constant exposure has, in most cases, hardened their constitutions against every vicissitude of the weather, and labour at the spade and the plough produced that muscular development which renders the weight of a musket or knapsack no very serious burden in a long march.

Supposing, however, that it had been considered necessary to extend the comparison to the mechanic and manufacturing classes, there is an advantage which the soldier enjoys over them as well as over the mass of the population engaged in daily labour that would, I apprehend, fully counterbalance any temporary superiority in their income, viz., that of being entitled, after 21 or 24 years, according to the arm of the service to which he belongs, to a pension for life, averaging about 9*d.* per day, even if he have attained no higher rank than that of private; indeed, in the case of a non-commissioned officer, it is often of double that amount. How valuable is this expectancy, may be inferred from the fact that the estimates for the year 1862-63 show the total number on the pension list, for all causes and at all rates, to be 59,405, to whom there is paid yearly 1,081,956*l.* Many of these men, too, who have suffered from wounds or disabilities contracted on service have been pensioned much below 21 years' service, so that the average age on leaving the army is not usually above 39 or 40. The annuity value of such a pension, even of 9*d.* a-day only, cannot be less than 180*l.*, which I estimate as equivalent to an additional payment of 4*d.* for every day the soldier has served in the army. I am aware that by taking as the basis of this comparison the very lowest rate of pay which a soldier is likely to receive, I lay myself open to the objection of understating his advantages, as there is no doubt that an agricultural labourer might, by

enlisting in the Cavalry, Artillery, or Military Train, receive about 1*s.* 4*d.* a-day of pay and beer money, with ultimately from 3*d.* to 4*d.* of good-conduct pay, making, with 4*d.* a-day as the prospective value of his pension, a total of 2*s.* per day; but I am so strongly impressed with the necessity for avoiding any appearance of exaggeration in a question of this kind, that I would rather incur the objection alluded to, than induce men to enlist by holding out prospects which might never be fully realized.

Though I have thus given in detail the principal advantages enjoyed by the soldier himself, the comparison would be incomplete if I did not briefly advert to those which his wife and family enjoy by the custom of the service, provided his marriage has taken place with the commanding officer's consent, and in a proportion not exceeding 8 for every 100 soldiers serving at home or in the colonies, or 12 for every 100 serving in the East Indies. In that case the wife, if abroad, is entitled to two-thirds of a man's ration, and his children to a third or half a ration, according to age; being equivalent to a money allowance of about 4*d.* per day for a wife, and from 2*d.* to 3*d.* for each child. This boon, however, does not extend to home stations; the allowance there is restricted to 2*d.* per day for each family, to provide lodgings, when suitable and separate accommodation cannot be had in barracks. These allowances are entirely gratuitous on the part of the Government, no service whatever being exacted in return. Medical aid is also afforded, and the children are educated at the regimental schools at a mere nominal charge, being only 2*d.* per month for one child, 1½*d.* for two, and 1*d.* each, for three. These allowances and advantages may be considered of trifling moment, but as, in no other profession, are the wives and children paid as well as the husband, unless for work performed, it is a feature requiring notice in any comparison of this kind, more especially as, when the family is large, the expense attending their support and conveyance from place to place, is quite as great as that of the soldier himself, so that the public has to pay double—a sufficient reason for the restriction on the numbers permitted to marry in the army.

When all these extra allowances are taken into consideration, as well as those for educational and religious purposes, marching money, &c., which involve details of too extensive a character to be discussed within our present limits, it will not perhaps excite surprise that, though the nominal pay of an infantry soldier is only 1*s.* a-day, there is expended on his behalf nearly double that amount.

In working out this comparison, no one ought to be more sensible than myself how very different in some respects is the life of the British soldier, exposed to all the risks of warfare and of service in



foreign climates, compared with that of one who has seldom to move beyond the limits of his parish; but if these risks will admit of an equivalent, I think it may be found in the soldier's exemption from daily toil, and from the harrassing cares which the constant struggle for subsistence for himself and family usually involve, coupled with the pension he is almost certain of attaining if he continue in the service beyond the ten or twelve years of his first engagement; and I trust that no apology, therefore, is required for comparing military pay with agricultural wages, though the former involves so many risks which do not in any way attend the latter.

The result of Mr. Purdy's investigation, however, having shown that within the last quarter of a century very considerable improvement has taken place in the rates of agricultural wages, it may prove an interesting feature of our inquiry to ascertain whether the improvement in the pay and condition of the soldier has fairly kept pace with this, and that he is not likely to be left behind in the progress which the agricultural labourer seems at length making towards a more comfortable livelihood. For this purpose it is only necessary to refer to the numerous warrants which have been passed since 1836 for the benefit of the army.

In that year the pay and beer money were, as now, 1s. 1d. per day, but the soldier was then subject to a stoppage of 6d. at home, and 5d. on foreign stations, for the same quantity of bread and meat as he now obtains for 4½d. or 3½d. respectively; thus virtually creating an addition of 1½d. per day to his income. In those times, too, he had to provide a complete equipment of necessaries out of his bounty on enlistment, whereas now he is entitled to them free of cost, and has only to keep up the supply out of his pay. Recently he has also been allowed an additional pair of trousers and boots, and been relieved from all expense attending the first alteration of his clothing; a grant of 1d. per day has also been made to the ten best marksmen in every company, and 2d. to the ten best in every regiment. The right to good-conduct pay now commences after three years, and increases by a penny a-day at the end of every fifth year; whereas, prior to 1836, the soldier received no increase till after 14 years' service, and then it was limited to 2d. per day. The soldier's pension, too, which in 1833 had, for service alone, been reduced to 6d. per day, was raised to 8d. for the same period, with the further privilege of adding a portion of his good-conduct pay to pension, so as to make the amount usually received by a private about 9d. a-day on an average. The pay of the serjeants and other non-commissioned officers above that rank has also been raised about 2d. per day, and a sum of 4,400*l.* a-year distributed among them in annuities of from 10*l.* to 20*l.* a-year each, in addition to the ordinary pension, also about 650*l.* a-year in annuities to men of any

rank, who have received the Victoria Cross. Three gratuities of 15*l.*, 10*l.*, and 5*l.* each a-year are also granted to the most deserving men of every corps annually, with a medal for long service and good conduct.

The effect of all these improvements, present and prospective, cannot be estimated at less than an increase of 25 per cent. in the pay or other advantages of the soldier, as compared with his position in the year 1835 or 1836, which appears to present a fair contrast to the rise in agricultural wages, as given by Mr. Purdy, for the same period, viz:—

|                                     | Interval in Years. | Weekly Increase. | Increase per Cent. in the interval. |
|-------------------------------------|--------------------|------------------|-------------------------------------|
| For England and Wales, 1837-60..... | 23                 | s. d.<br>1 3     | 12·1                                |
| „ Scotland, { 1835 } 1860.....      | 20                 | 3 9½             | 49·5                                |
| „ Ireland, 1844-60 .....            | 16                 | 2 7              | 57·4                                |

Thus, the increase to the soldier has been, so far as regards England and Wales, nearly double what has fallen to the lot of the agricultural labourer; and though it is considerably below that remarkable increase which has taken place in wages, both in Scotland and Ireland during the same period, yet if the proper correction be made for the much more limited number of the population in these two countries, compared with England and Wales, as must be done to obtain a general average for the whole kingdom, that average will be found below 25 per cent. It may, therefore, be assumed that the soldier's income and advantages have, on the whole, kept pace with the general improvement in wages. Indeed, ever since Lord Howick became Secretary at War, in 1835, there has been a gradual improvement in the pay, the prospects, and the comfort of the soldier, presenting a striking contrast to the state of depression under which he previously laboured, and which must ever induce a grateful recollection of the measures originated by his lordship, and since so ably followed by his successors, particularly the late Lord Herbert.

However, it is not merely pay or wages which have to be considered respectively in such a comparison as this, but the necessaries of life which these will purchase, and the balance which will in either case remain over for other expenditure, and here the soldier, from the facility of buying in the cheapest market and usually in large quantities, has a still further advantage as may be seen from the following scale of the usual diet and cost in an infantry regiment stationed at Aldershot:—

| Daily.   | d.           | Actual Cost.<br>d. | Reduced Cost<br>to Soldiers.<br>d. |    |
|--|--------------|--------------------|------------------------------------|----|
| 1 lb. of bread .....                             | 5½ per lb. = | 1½                 | 4½                                 |    |
| ¾ lb. of meat .....                              |              | 4½                 |                                    |    |
| ⅓ of an oz. of tea.....                          |              | 1½                 |                                    |    |
| 2 oz. of sugar .....                             |              | .....              |                                    | 1½ |
| ⅓ „ coffee .....                                 |              |                    |                                    |    |
| ⅓ „ pepper .....                                 |              |                    |                                    |    |
| ⅓ „ salt .....                                   | .....        | .....              | .....                              |    |
| ¾ lb. of bread extra .....                       |              |                    |                                    |    |
| Vegetables, potatoes, and milk, actual cost..... | .....        |                    | 1½                                 |    |

This, with one half-penny a-day for washing, and about one penny for repairs and keeping up his supply of under clothing, makes a total expenditure of 9*d.* per day for the infantry soldier, and leaves about 4*d.* a-day to save or expend as he may think proper, after all his necessary wants have been provided.

The expenditure for similar items by an adult agricultural labourer, is not given in any of Mr. Purdy's tables; the statements there are usually framed on the expenditure for a man, his wife, and several children, but from these it would appear that so far at least as regards the more expensive items of animal food, tea, coffee, sugar, &c., the soldier gets more for himself alone than the agriculturist for himself, his wife, and three or four children, and that the outlay of the latter has to be confined to the cheaper supplies of bread, cheese, milk, and potatoes, or oatmeal. Even with that restriction, little or nothing appears to remain over to contrast with the soldier's surplus of nearly half a crown per week, and which increases 7*d.* per week every five years, provided his conduct is satisfactory.\*

In this comparison I have left out of view the opportunities which the soldier has of advancing himself in his profession by superior intelligence, steadiness, and training, which, supposing even that they gain for him no higher rank than that of a non-commissioned officer, may double both pay and pension. Opportunities of bettering his condition may no doubt also present themselves occasionally to the agricultural labourer; but I apprehend that these are likely to be much more rare than in the army, owing to the obstacle which constant occupation in agricultural life presents to further improvement so soon as boys can by daily labour contribute even in the smallest degree to their subsistence. The large portion of the soldier's time, however, which it is difficult to occupy in pursuits purely professional, not only affords ample leisure to qualify himself for promotion, but often induces him to study merely as a resource against the dull routine of his life in quarters. To soldiers thus

\* The large sums paid into the regimental savings banks, as reported annually to Parliament, afford sufficient evidence that this surplus is, in many instances, accumulated by the soldier. How rarely has the agricultural labourer any similar balance at his bankers!

disposed the schoolroom is always available, with instructors competent to advance them in any branch of common elementary knowledge they may wish to cultivate; suitable libraries also are provided, affording facilities for attainments either professional or otherwise, which no agricultural labourers can possibly look forward to.

To afford some idea of the prizes thus brought within the reach of any industrious or intelligent soldier, however great may have been the defects of his education originally, it is only necessary to refer to the following summary, showing, according to the estimates of the year 1862-63, the numbers below the rank of commissioned officer who are in receipt of pay considerably beyond that of private.

| Total<br>Number in<br>the<br>Army. | Ranks.   | Total<br>Annual Pay<br>to<br>this Class. | Average<br>Annual Pay<br>to each. | Range<br>of<br>Daily Pay. |        |
|------------------------------------|--|--|-----------------------------------|---------------------------|--------|
|                                    |  | £  | £                                 | s. d.                     | s. d.  |
| 582                                | Regimental serjeant-major....<br>Troop or company „ ....<br>Quartermaster serjeants.....                                 | 34,847                                   | 60                                | 2 8                       | to 5 - |
| 1,182                              | Colour and company serjeants   | 54,569                                   | 46                                | 2 6                       | „ 3 4  |
| 1,387                              | Staff serjeants, orderly room<br>clerks, serjeant instructors<br>of musquetry, bandmasters,<br>&c., master gunners ..... | 73,963                                   | 53½                               | 2 2                       | „ 3 11 |
| 6,006                              | Serjeants .....  | 246,972                                  | 40                                | 2 -                       | „ 3 -  |
| 147                                | Trumpet, drum, and bugle<br>major .....  | 5,877                                    | 40                                | 2 -                       | „ 3 -  |
| 7,659                              | Corporals and bombardiers ....   | 218,071                                  | 28½                               | 1 4                       | „ 2 4  |
| about<br>4,000                     | Serjeant-majors and quarter-<br>master serjeants of militia<br>and yeomanry, &c., on per-<br>manent pay .....            | 150,000                                  | 37½                               | 2 -                       | —      |
| 20,963                             |  |  |                                   |                           |        |

As the number of privates in the army from whom these superior ranks are selected was in the same year 116,492, it follows that between 1 in 5 and 1 in 6 of the whole must attain one or other of these rates of pay, the lowest of which is from 1*s.* 4*d.* to 2*s.* 4*d.* per day, with beer money of 1*d.* a-day, superior clothing, lodging, and other advantages, besides nearly double the pension of a private.

These chances of promotion do not include those which occur in that portion of the army in the East Indies, amounting to about one-third of the whole, but as the proportion of the higher grades to privates is much the same in that country as in the colonies and at home, it would not have materially affected the results had the calculation been extended to them.

I have also left out of consideration the chance of ultimate pro-

motion to the rank of a commissioned officer, because though that is by no means uncommon, particularly during a period of active warfare, or when large augmentations to the army take place, it may be doubtful whether the change does not deteriorate rather than advance the pecuniary interests of the person promoted, as may be seen by the following summary of the relative position of a serjeant-major before and after such promotion:—

|   | s. | d. | s. | d. |
|---|----|----|----|----|
| His pay as serjeant-major of infantry, including beer money, per day is   | —  | 3  | 3  |    |
| All his clothing and equipments are provided free.  |    |    |    |    |
| His diet, consisting of breakfast, dinner, and tea, costs.....  | —  | 10 | ½  |    |
| Remains for personal expenditure as serjeant-major ....   | 2  | 4  | ½  |    |
|   |    |    | 3  | 3  |
| But when promoted, his pay is raised to 5s. 3d. per day, less about 2d. for mess and band fees, leaving only..... |    |    |    |    |
|   | —  | 5  | 1  |    |
| And he has to keep up his equipments and clothing, costing at the very least 20l. a-year, or daily .....          | 1  | 1  |    |    |
| And the cheapest rate of officer's messing known in the army would cost for breakfast and dinner.....             | 2  | 6  |    |    |
|   |    |    | 3  | 7  |
| Leaves for personal expenditure as ensign .....   | 1  | 6  |    |    |
|   |    |    | 5  | 1  |

Thus, even supposing that he never drank wine or joined in any of the other expenses of a mess, he would be considerably out of pocket by his promotion, besides having to support the rank of a gentleman in the new position to which he had attained.

Unless, therefore, when an appointment as adjutant, quartermaster, or musketry instructor, can be combined with his rank of ensign, which does not often happen, the promotion tends rather to deteriorate than improve the income of a serjeant, a reason which will sufficiently account for the numbers who decline such promotion, and for my not founding upon the prospect of it as any advantage which will admit of calculation. In fact the position of the non-commissioned officer has been so much improved of late years as to render the attainment of the commissioned ranks less an object than it once was.

These prospects of promotion, however, would be of little avail if ample opportunities were not afforded to all ranks to qualify themselves for attaining it; perhaps, therefore, with the view of showing how much is done by the Government in this respect, it may be useful to submit the following summary of the staff employed and yearly expenses incurred for educational purposes, irrespective altogether of what may be considered professional or scientific:—

|  | £      | s. | d. |
|--|--------|----|----|
| 3 Assistant Inspectors of schools in Great Britain and Ireland } at 500l. a-year each .....                        | 1,500  | —  | —  |
| 3 Local Inspectors on the Mediterranean, at 3s. a-day .....  | 164    | 5  | —  |
| 266 trained schoolmasters, each averaging 80l. a-year .....  | 21,097 | —  | —  |
| 33 acting „ at from 1s. to 1s. 6d. a-day.....  | 684    | —  | —  |
| For detachment „ and soldier assistants .....  | 576    | 2  | 6  |
| 71 pupil teachers, at from 4l. to 17l. 10s. a-year each.....   | 388    | —  | —  |
| 154 permanent orderlies, at 1s. a-week each .....  | 404    | 6  | —  |
| 170 pensioners acting as librarians .....  | 2,500  | —  | —  |
| Travelling and contingent expenses of assistant inspectors and others  | 800    | —  | —  |
| Apparatus for illustrating lectures .....  | 400    | —  | —  |
| Repairs of school books 200l., of library books 500l. ....   | 700    | —  | —  |
| For regimental libraries and reading rooms of royal artillery and } royal engineers .....                          | 540    | —  | —  |
| Expense of schools for royal artillery and royal engineers.....  | 3,000  | —  | —  |
| „ normal and model schools at Chelsea .....  | 4,000  | —  | —  |
| Proportionate cost of education for the forces in India, not } included in the army estimates supposed about ..... | 18,000 | —  | —  |
|  | 54,753 | —  | —  |
| Add for barrack allowances, clothing, rations, and pensions to } those employed, say .....                         | 15,000 | —  | —  |
| Total .....  | 69,753 | —  | —  |

Or in round numbers 70,000l. a-year.

This is a large sum to be provided by the State, even if all the soldiers in the army availed themselves of the opportunities of education which it affords, but as the average number in daily attendance was, according to the Report of the Council of Education for 1862, only 17,633 together with 6,131 grown boys and girls, it follows that the average cost of each person instructed cannot be less than 3l. per annum, which is exactly double the cost of the education of each pupil in inspected schools in civil life, and treble the cost in uninspected schools, as shown in a paper read before this Society by Mr. Horace Mann, on 4th March, 1862. The education even of the girls is not forgotten in the army, as will be seen by the following summary of the expenses incurred in their account.

|   | £      |
|---|--------|
| For 226 trained schoolmistresses .....  | 5,980  |
| „ 57 acting „ .....   | 946    |
| „ charge for training „ .....   | 400    |
| „ the purchase of industrial materials .....  | 1,500  |
|   | 8,826  |
| Add about one-third more for similar expenses on account of the } regiments in India, not appearing in the army estimates, say..... | 2,942  |
| Total .....   | 11,768 |

This being for the education of 2,691 grown and 3,005 infant girls, as shown by the Report of the Council of Military Education,



would make the rate for each about 2*l.* per annum, or considerably beyond the usual cost for the education of female children not in the army.

Perhaps I may be excused this little digression about the education of the soldier, at a time when so much attention is being paid to the subject in civil life, were it only to show that if a large proportion of our army remain in a state of ignorance which completely precludes their sharing in the extra pay and advantages derived from promotion, it is entirely their own fault. According to the latest returns from the Adjutant-General, published by the Council of Education, it appears, that notwithstanding the pains taken of late to train a class of schoolmasters very superior to those who could be procured some years ago for that appointment 18·9 per cent. of the privates are still unable to read or write, and 19·7 can read but not write, being a total of 38 per cent. who are quite precluded from rising in their profession, though Government has afforded them sufficient means of improvement to do so without any expense on their part. According to the returns of 1860, too, this state of matters is not improving, the numbers reported as uneducated being greater than three years before, except in the Artillery and Foot Guards.

If any reason can be given for this, I apprehend it may be sought for in the circumstance that when an increase of pay could only be attained by promotion or service for the long period of 14 years, the private soldier was disposed to take more trouble to qualify himself for a higher position; in order thereby to add to his comforts, but now when his good-conduct pay may begin after three years, and go on increasing to 5*d.* or 6*d.* a-day, he finds his income sufficient for the most pressing of his wants, and is not disposed to add to the amount, if it involves a necessity for going to school again. If that explanation can be accepted, it would appear worthy of consideration whether the increase of 1*d.* per day at the end of three years, should be made contingent—not on good conduct merely, but on the soldier having acquired within that time the first principles of reading, writing, and arithmetic, and that before every successive addition of 1*d.* per day for good conduct, it should be ascertained that he has at least retained his original acquirements. In the progress of time the beneficial influence of a large proportion of the good conduct men in the discipline of a regiment, must otherwise be in a great measure lost, so few of them being qualified for promotion beyond the rank of private.

It might have proved interesting here to contrast military pay with the rate of agricultural wages in other countries, but even had time admitted of this, there is a peculiarity in the constitution of the armies of nearly every State on the Continent, which must have

affected the results too deeply for much reliance to have been placed on them. Happily in our country military service is entirely voluntary, none need engage in it except from the conviction that it is likely in some way or other to improve his position, so that the rate of pay has to be regulated accordingly, but in other countries the conscription determines who must become soldiers, and the Government has to expend such an amount only as will clothe, feed, and lodge them, and provide a surplus of about a half-penny per day of pocket money to each. From this obligation of service the recruit has no escape, however high may be the wages in civil life, except by providing a substitute at a cost which even now, when France is at peace, amounts to 2,300 francs, or 92*l.* sterling.

It is true that this amount is not paid by every conscript, the proportion able to provide substitutes rarely exceeding one-fourth, but as in France none can be had under that rate, it must be held to represent the difference between the average value of the conscript's labour at his own calling and his pay as a soldier, and that difference extended over the 100,000 conscripts required annually, would amount to about 9,200,000*l.*, which the French nation thus obviously pays either in money or money's-worth for its army, beyond what appears in the estimates of that nation. In other words, 13*l.* is thus abstracted from every conscript during each of the seven years he has to serve, in the value of his forced labour.

The greater share of the military expenditure of that country is thus made to fall—not on the rich, who are best able to afford it, and are generally most interested in the issue of any contest warranting an appeal to arms,—but on the poor, whose labour is the sole capital for the support of themselves and their families, and who take comparatively little interest in the objects at stake. In Britain we have the pleasing contrast, not only that it falls chiefly on those who are best able to bear the burden, but that in the present day none have to serve in the army except those who voluntarily enlist; and I trust the facts submitted this evening to the Society will be sufficient to show that when they do so their position and prospects are decidedly superior to what they are likely to have been had they continued to earn their livelihood by agricultural pursuits.

## MISCELLANEA.

I.—*A PROPOSAL for an ACT to authorize the ISSUE of LAND DEBENTURES in connection with SALES made by the LANDED ESTATES COURT.* By MOUNTFORT LONGFIELD, LL.D.

"If a gentleman in possession of a good landed estate is desirous of borrowing money upon the security of his land, he often finds it a matter attended with delay, expense, and inconvenience. He must, in the first place, find a person willing to lend him the required sum, on sufficient security. This is a matter of more or less difficulty inherent in the nature of the transaction. He cannot borrow unless some other person is willing to lend. But when this necessary step has been surmounted, he has still to struggle with the artificial difficulties interposed by the present state of the law. The lender must be satisfied with the title of the estate, and its value; and this is generally a source of great delay and expense. If any circumstance should break off the negotiation, the borrower must begin again with some other lender; and the expense already incurred, or the greater part of it, becomes useless. The legal difficulties, and delays, and expenses, in the process of procuring a loan, are so great, that the borrower frequently pays a considerable sum in the form of agency or procuration fees, in order to obtain some reduction of those inconveniences. In the meantime, the lender suffers the inconvenience of uncertainty in the investment of his capital. When the loan has been contracted, the money paid, and the security given, both parties are still liable to the inconvenience caused by the law. If the lender has taken good security, the borrower is deprived of the possession of his title deeds, and is exposed to some difficulties in dealing with the tenantry on his estate. If the lender wishes to sell or transfer his claim, he has to incur the delays and expenses already noticed, and to satisfy the new lender of the value and the title to the estate. This expense, falling upon the owner of the estate, or of the mortgage, must be incurred upon every occasion of a transfer; and if the borrower pays off the loan, the effect of the Irish Registry Act is, that the mortgage, with all its subsequent transfers, and its ultimate repayment and reconveyance, become part of his title, adding to the complexity and expense of the abstract which he must produce when dealing with his estate. It will evidently be a great advantage to the owners of land, if they are enabled to borrow money by a cheap and expeditious process, without complicating their titles, or interfering, unnecessarily, with their legal powers over their estates; while the capitalist, at the same time, may be provided with a secure and ready investment for his money. This double advantage may, I conceive, be obtained by a system of land debentures, in

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connection with sales and declarations of title, in the Landed Estates Court.

"Let us suppose that an estate, worth 2,000*l.* a-year, is sold by the Court for 40,000*l.*, and that the purchaser desires to have the power of raising money by debentures. He takes the conveyance accordingly, subject to twenty debentures for 1,000*l.* each, which should be expressly mentioned in the conveyance. Those debentures should be drawn in a form to be settled by the Court, and should include a copy of the conveyance of the lands on which they are charged; so that the holder of a debenture should know, accurately, the nature and value of the security. Those debentures are handed to the purchaser together with his conveyance, and are to be considered as real property, descendible with the estate, but not merging in it, as long as they belong to the owner of the land. An account of them and of every sale and transfer should be kept in the Court book. Every debenture entitles the holder to interest at the rate therein mentioned, and also to repayment of the principal money at a time therein specified. This, of course, does not lead to any payment as long as the same person owns both the estate and the debenture. But the debenture may be assigned, at any time, by a short deed, to be registered in the books of the Landed Estates Court. At the same time, the Court will cause a note of this assignment to be endorsed on the debenture; and the title of the new holder will then be perfect in law and equity, as if he had so much Government stock transferred in the books of the Bank of England. It will be the duty of the Court to make proper rules and forms to prevent forgeries or frauds in the assignments. An equitable assignment may be made by a written instrument, accompanied by a deposit of the debenture, and this equitable assignment should entitle the assignee to demand a legal assignment to be registered in the books of the Court. In case of the loss or destruction of any debenture, the Court is to have power, after proper proof and inquiries, to issue a new debenture in its place. The holder is armed with ample power to enforce the contract expressed in the debenture; but no proceeding shall be taken to recover more than two years' arrears of interest on a debenture. An assignment may be made to any number of persons, not more than four, with a condition that no smaller number shall be permitted to assign. When an assignment is made to trustees on this condition, on the death of one trustee the survivors cannot assign until a new trustee is appointed, either according to the provisions of the deed, or by an order of the Court; but a purchaser is not bound by the trust, provided he obtains a legal assignment on the books of the Court from the proper parties. Any holder of a debenture may, by a proper instrument, registered in the books of the Court, release and extinguish it altogether. We have put the case of a purchaser of an estate for 40,000*l.* who takes, at the same time, twenty debentures of 1,000*l.* each from the Court. (No inspection of the Registry can take place without the permission of the Court.) If he wants, at any time, a temporary loan of money, he will have no difficulty in procuring it from his banker, on a deposit of a suitable number of debentures. This, without any legal expenses, will be a sufficient

equitable security, and a proof that his estate is still unincumbered. If he pays off the debt, he gets back his debentures, and is replaced in his original position, without anything appearing on the record to complicate his title. If he wishes to settle his estate, he assigns to trustees as many debentures as are necessary to raise the charges for younger children, &c., and extinguishes the rest. The estate is then settled, subject to the debentures, and the settlement is relieved from all those clauses relating to the charges which add so much to its length and complexity. When the proper time comes for raising the charges, the trustees raise the necessary sums by selling the debentures, or assigning them to the parties entitled, according to their equitable rights. If the owner of an estate and debenture, or of a debenture only, desires to contract a permanent loan, he may hand the debenture to a stockbroker, who will dispose of it in the market for its fair price, like so much railway stock, and in this manner obtains the money without any legal expense or unnecessary delay. The person, on the other hand, who wishes to procure an investment for his money, applies to his broker to procure him debentures of such a nature as he requires. The purchaser of a debenture has secured to him, by law, a perfect title to a first encumbrance, without the possibility of deception on this point; and he has also the advantage that the value of the land has been carefully investigated by a disinterested and competent tribunal. It is not too much to say, that no ordinary mortgage can be compared to such a security. Admitting even that the Court may make a mistake as to the value of an estate, it is most unlikely that such error will be so great as to prevent the debenture from being recovered; and it is certain that such cases will bear a very small proportion to the number of cases in which persons now lose money, which they imagine they have lent upon good security. At present there is no regular market or market price for such securities as mortgages, charges on land, &c. The person who wants money does not know how long he may have to wait, or how much he may be compelled to pay for it. On the other hand, the person who has money to lend does not know what terms he may be able to obtain, or how long he may be obliged to keep his money idle. One man may be for some months unable to procure a good investment at  $4\frac{1}{2}$  per cent., while during the same period another man has succeeded in obtaining 5 per cent. for his money, on unexceptionable security. Each case is a separate transaction, affording no indication to enable any one to conjecture what may be the result in a different instance. But with the proposed plan of debentures, each will be able to borrow or lend at the market rate, which of course may be subject to fluctuations.

"Every new system, when it is proposed, is likely to meet with considerable opposition. To many minds its novelty is of itself a sufficient objection. This feeling is, perhaps, useful to the public when it is not indulged in to an extravagant degree. It opposes a check to rash innovations, and requires that every new proposal shall be subjected to a rigorous examination. The result is, that many mischievous proposals are crushed, and some useful ones are improved, and if a few good measures are rejected, that rejection only

causes a certain delay. Men's minds become accustomed to a useful proposal by much discussion; the frightful novelty wears away; converts to reason are made from time to time; the measure finally is carried, and after a short time men look back with wonder, and are unable adequately to conceive the feelings which led themselves or their ancestors to oppose an improvement which they now feel to be a thing of absolute necessity.

"I shall not, therefore, feel discouraged at any amount of opposition that may be offered at first to the proposed system of land debentures. I shall examine every argument with perfect impartiality. If they appear valid, I am ready to yield to them. If they are invalid, I shall endeavour to answer them; and, as far as I am able, I shall notice every objection that occurs either to myself or that has been suggested by others.

"This proposal of land debentures at the present time has not the merit or the demerit of novelty. It was proposed not very long after the introduction of the Incumbered Estates Court into Ireland, and it was opposed by the enemies of that Court, who looked upon it as designed merely to keep alive the Court which they vainly hoped was on the point of failing from want of purchasers to buy the land then in the market. That hope has not been realized. The Court has been placed on a permanent foundation, the system of parliamentary title is established in Ireland too firmly to be shaken, and all parties ought now to unite in endeavours to make the system as beneficial as possible to the owners of land and of capital, and to the public at large.

"The first objection which is made by many to this and every other similar proposal is, that even if the details were perfect, so as most successfully to accomplish its object, still that the object itself is mischievous, and that, therefore, the proposal ought to be rejected. It would, they say, increase the extravagance of Irish owners of land by furnishing them with increased facilities for running into debt. To the few who have even a slight acquaintance with the first principles of political economy such an objection will seem unworthy of an answer. They will not feel it necessary in each discussion to prove the elements of the science. To tell them that two and two are seven would scarcely appear more absurd than to say that it can be for the welfare of the nation to restrict the liberty of the subject in matters merely prudential. In money matters enforce contracts, punish robbery, theft, and fraud, but do not restrict in any manner the liberty of any individual, under the vain idea of substituting the guardianship of the State for his own prudence. As a general rule, each man has more regard for his own interest, and more knowledge of its true direction, than the State or the legislator can possibly possess.

"But let the objection be examined, without relying on its opposition to well established general rules. It is founded on the supposition, that it is necessary or usual to borrow money on mortgage in order to spend it. This is by no means the common course of affairs. There is not so much method in the madness of the prodigal. He does not borrow to spend, but he borrows to pay. The facility given by shopkeepers and retail dealers are so great that



no man feels the slightest difficulty in spending considerably more than his income without contracting a loan.

"The excess of expenditure over income may proceed for a longer or shorter period, according to the greater or less degree of skill with which the prodigal contracts his debts, only paying when he must and getting credit when he can. But he cannot secure an indefinite extension of his debts to tradesmen. After some time it becomes necessary to raise money on mortgage; he puts the affair into the hands of his attorney, he gets the required sum on good terms or bad terms, as the case may be; but get it he must, no matter what may be the expense, or the rate of interest. This revives his credit with his tradesmen, and he continues in the same course until he is utterly ruined.

"During the same period he generally also borrows on bonds or mortgages any small sums that are offered to him by such of his neighbours as prefer high interest to good security. In all this road to ruin the spendthrift never seriously reflects on the consequences. If he did, he would not follow it. No one can believe that a man who would be so prudent as to live within his income, if the rate of interest was 6 per cent., would run into extravagance because the rate was reduced to three or four.

"Another class of charges which sometimes press heavily on Irish estates is, the provision made by will and marriage settlements for younger children. In such cases the rate of interest is fixed by the instrument enacting them, and according to the will of the party who imposes the charge, and it is plain that any improvement in the law of land charges will have no effect upon their number or magnitude.

"But there is another class of charges for money borrowed by an owner who requires it in order to improve or enlarge his estate, or for any other useful purpose. Here the decision is made by prudence, not by vice or folly; and there is room for very nice calculation. An improvement which might pay well, and enable the owner of the land to replace his money with a fair profit if he could raise the required amount by debentures, might be a rash speculation if he were forced to raise it by the expensive process of a mortgage with all its inconvenient consequences. Thus the present system, while it cannot restrain the extravagance of the prodigal, does impose a mischievous impediment upon the application of capital for useful purposes.

"Although I disclaim any intention of putting the landlords of Ireland under tutelage, or of forcing them to be prudent by placing any restrictions on their lawful liberty, I may say that the system of debentures would be more likely than the present system of mortgages to awaken the prodigal to a sense of his folly. He will see his debentures melting away before his eyes, and when they are all gone, his landed credit will be so reduced that he must either discontinue his extravagance or sell his estate. The probable effect of the debenture system will be, that most men will be disinclined to lend money upon a mortgage puisne to the debentures. It will draw a marked line between good and bad securities, which at present approach each other by imperceptible degrees. The man who offers

a debenture presents a security which the Court has pronounced to be sufficient; the man who offers a mortgage puisne to the debentures, shows that he is about to encumber his estate beyond the value which the Court considered it safe to authorize, and he, therefore, offers a security which has already been condemned as unsatisfactory by the Court.

"I shall, therefore, in the following remarks, assume as a proposition sufficiently proved, that it is expedient that the landed proprietor who is able to offer sufficient security should not, when he desires to borrow money, be put to unnecessary expense and trouble in order to make him more prudent. If the certainty of inevitable ruin will not deter a man from habitually exceeding his income, he will not be driven into prudence by the dread of his attorney's bill of costs. The question still remains, will the proposed end be attained by the system of debentures? Will debentures sanctioned by the Landed Estates Court be received by the public without further inquiry, or will they be made the subject of an investigation as troublesome, as expensive, and as tedious, as that to which a mortgage is exposed on its first creation, and on every succeeding transfer. Now, in order to compare the two cases, let us examine what are the inquiries to be made by a capitalist when he is about to invest his money on a mortgage. He must—1st, examine the title of the mortgagor to make the mortgage; 2ndly, he must ascertain that the estate is not unduly depreciated by tenants' leases at undervalue, or by prior incumbrances; 3rdly, if he is taking a transfer of an existing mortgage, he must examine the title of the mortgage, to make the transfer to him; 4thly, in this latter case he must also examine the state of accounts between the mortgagor and mortgagee, as if any payments have been made on account of the mortgage, the assignee will be bound by them; and 5thly, he must ascertain that the land pledged is of sufficient value.

"Now, in the case of a debenture, the first four of those five points are settled without the necessity of inquiry or the possibility of a mistake. The debenture gives—1st, a parliamentary title to a charge upon the lands; 2ndly, unaffected by any prior charges or tenants' leases, except those mentioned in the debentures; 3rdly, the title to the debenture is completed by the transfer of the debenture on the registry of the Court, just as the title to Government stock is made by a transfer in the books of the Bank of England; and 4thly, the assignee is not affected by any payments made to prior holders unless such payments are endorsed on the debenture itself.

"There remains, therefore, no matter of inquiry except the value of the land, and therefore, in every possible view of the case, the inquiries made by the purchaser of a debenture will be simpler and cheaper than those made by the purchaser of a mortgage, since the former extend to one only of the five subjects which must be examined by the mortgagee. There is in effect only the value of the land to be considered, and this is not in practice found to be the chief source of delay or expense. Any one who has examined the bill of costs incurred on the assignment, or even on the first creation of a mortgage in Ireland, will not fail to see how small a part of the delay and trouble (which is in fact measured by the costs) has been

caused by an investigation of the value of the land. In the vast majority of cases the value of the land is taken upon repute, and in perhaps a few cases there may be an improved and unvouched rental; but scarcely in one case in a thousand is the mortgagee furnished with sufficient evidence to show that no tenant has a greater interest in the land than that which the rental discloses; and yet every debenture holder will have this conclusive evidence on the face of his debenture.

"It is not too much to say that the mere inspection of a debenture will give a greater knowledge of the value of the land than a mortgagee possesses in ordinary cases; and when it is considered that in addition to this the Landed Estates Court will have in each case approved of the security, it may fairly be expected that they will be accepted by the public without further inquiry. Even if this should not turn out to be the case, still the most rigorous investigation that can be required in the case of a debenture will be only a part, and that the smallest and least expensive part, of the investigation that must be made in the case of every mortgagee.

"After some time the credit of debentures in general must chiefly depend upon the results of experience. If the security turns out in fact to be always sufficient, the public will accept them without further inquiry; but if any notorious cases occur in which the money lent, or any part of it, is lost, in consequence of the deficiency of the security, the public will then generally make some slight examination before a debenture is accepted.

"I think that the former alternative is by far the more probable one, and that the examination made by the judges, and the large margin allowed, will almost preclude the possibility of any debenture failing to realize the required amount. But even if such an unlikely event should happen as that a debenture holder should incur a partial loss (for a total loss in any case is obviously out of the question), the effect would be, not a general discredit of debentures (as mortgages do not fall into general discredit notwithstanding a few cases of total failure), but only this, that before being purchased they will be subject to an examination far less tedious and expensive than ought to take place in every case of an ordinary mortgage.

"Perhaps some person may apprehend that frauds may be committed by an over issue of debentures, similar to what has been charged against certain corporations or improvement commissioners, and that this may lead to a depreciation of the security. It is not difficult to prove the impossibility of such an event. No land debenture can be issued without the sanction of a judge, who is free from the slightest motive to permit an over-issue, but is under the strongest inducement to prevent it. I shall proceed to show in how simple a manner the debentures may be registered and kept within the control of the Court, at the same time that fraud and forgery are made almost impossible.

"Let us suppose the case of a person purchasing an estate worth 2,000*l.* a year for 40,000*l.*, and wishing to get together with his conveyance twenty debentures for 1,000*l.* each. This issue of debentures is recited in the conveyance of his estate, which also describes the land conveyed, and gives a list of the tenantry with their

rents and the terms of their leases. This is, by the Act of Parliament, conclusive as against all the world. The debentures are then purchased, each debenture containing a copy of the conveyances. Each debenture is distinguished by a letter and number. The letter shows the book in which the counterfoil is to be found, and the number shows the position of the counterfoil in that book. The debentures in each estate are numbered in succession, say from B 21 to B 40, inclusive. The counterfoils follow in the order in Book B. Each counterfoil is of exactly the same shape and size as its corresponding debenture, and is a *fac simile* in every respect, except some slight difference to show that it is a copy and not an original. Every part of the counterfoil is made of the same skin of parchment as the corresponding part of the debenture. On every transfer of the debenture, the registrar makes an endorsement thereof on the debenture, and an exact copy of the same on the corresponding place on the counterfoil.

"The following process takes place when the purchaser of a debenture requires to have the transfer to himself registered in the books of the Court. He hands into the registrar his debenture, his deed of transfer, and an affidavit or declaration of the due execution of the transfer deed by the lawful owner of the debenture. The registrar then compares the debenture carefully with his counterfoil in his books; and if he finds that they correspond, and that the deed of transfer has been duly executed by the proper party, he makes an endorsement thereof on the debenture, and a corresponding endorsement in the same place on the counterfoil, and then returns the debenture to the new owner thereof. He then files the transfer-deed and affidavit, and sends a letter by post to the late owner of the debenture, to inform him that the transfer has been made. With such precautions it seems almost impossible that any attempt at fraud or forgery could meet with even a temporary success. The counterfoil in the possession of the Court, which the public is never permitted to see, is a perfect check not only to the forgery of a transfer, but also to the issue of a false or excessive debenture. The debenture in excess could never be transferred, since no counterfoil could be found to correspond with it. To make such a debenture would be the same absurdity as if a coiner were to make false money with the intention of hoarding it. The act would be without motive, and, moreover, it would not do any injury to any person.

"Several questions may be asked respecting the manner in which the owner may deal with an estate subject to debentures, either in his own hands or already issued to the public. One general answer will be, to some extent, applicable to all such questions. The first existence of a debenture, and its subsequent continuance, are entirely at the option of the owner of the land. When he buys an estate in the Court, he need not make his conveyance subject to any debenture, if he thinks that its existence would interfere injuriously with the management or disposal of his estate. Again, if subsequent events occur, which were not originally in his contemplation, but which make it probable that his powers of issuing debentures would be inconvenient, he may bring them into Court to have them cancelled, and then he will be in the same condition as if the act authorizing

the issue of debentures had never been passed. Thus, if a man is of opinion that the descent of his estate to his heir, together with the power of raising money by debentures, might entice him to prodigality, he may either cancel the debentures or put his estate in settlement.

"One of the first questions naturally asked is, how is a man to act who has bought an estate with the power of issuing debentures, and who wishes to set or sell a part of it? With regard to the lease, there is obviously no difficulty, for as the debentures are only half the value of the land, they do not interfere with any lease which does not reduce the lessor's interest in the land to less than half its former value; a tenant obtaining such an interest is in fact a purchaser, and should examine the title like any other purchaser.

"What then is the owner to do, who wants to sell a portion of his land? This resolves itself into two cases, according as he has already disposed of his debentures, or has them still in his possession. In the former case he is in the position of any other man who has incumbered his estate to the amount of half its value, and who therefore, of course, cannot make a perfect title to the purchaser. But he can make a far better title than if he had raised the same amount of money by a mortgage, for the debenture holders will not have possession of the title-deeds, nor any estate in the land, nor any right, except merely to recover the amount of the debentures by a sale. The purchaser protects himself in the same way as if he was buying a portion of an estate which had been encumbered by a previous mortgage. He takes an indemnity deed making the portion of the estate which is not sold bound to discharge all the debentures except such proportion as he undertakes to pay, and in respect of which he therefore gets an allowance out of his purchase money. Thus, suppose the entire estate is worth 40,000*l.*, and that the owner had raised 20,000*l.* by the issue of debentures, he wished to sell a part worth 4,000*l.*; he either covenants that the rest of the estate, which is worth 36,000*l.*, shall bear the entire charge of the debentures, in exoneration of the part which he sells, or that it shall bear a part only, say 18,000*l.*, and that the portion which he is selling shall bear the remaining 2,000*l.*, which therefore must be deducted from the purchase-money. I do not find by experience that an incumbrance, against which a sufficient indemnity is provided, operates with much prejudice to the price of an estate. It is true that an unwilling purchaser will rely upon a charge, in order to obtain a release from a contract with which he is discontented; but when it is made a condition of sale, I generally find that its existence has no perceptible influence upon the price. And that this is the result of general experience I infer from this circumstance, that the owners of estates subject to charges which cannot be paid off, or confined to particular portions, are anxious to sell them in small lots, with mutual cross indemnities, which do not prevent each lot from being liable to the whole charge in the last resort.

"The second case is when the person who desires to sell a part of his estate has not issued any debentures. In this case he has two courses open, which he will adopt according to the value of the part of the estate which he is selling. If the value of the part which he

sells is very great in proportion to the value of the part which he retains, he will probably cancel all the debentures, and give the purchaser a perfect title. If he sells the entire of his estate, he will probably give the purchaser the option of having the debentures cancelled or transferred to him. If he sells only a small portion of the estate, he will assign to the purchaser's trustee some of the debentures upon trusts to be executed by the Court under the 11th section. Those trusts will be to indemnify the purchaser against all the debentures which affect the land.

"The indemnity that can be given against a debenture is far more complete than any indemnity that can be given against a mortgage, and the purchaser has this advantage, that when the time for payment of a debenture comes, his estate will be relieved from the charge, as a renewed debenture affecting his land will not be granted by the Court without his consent. Thus if he buys land with an indemnity against debentures which fall due in the year 1870; when that year comes, the owner of the rest of the land must either pay off the debentures, or obtain a renewal of them on such terms as not to affect the land which he has sold. The advantage of this may be appreciated from the following fact. I know a case in which a gentleman in the last century purchased a portion of an estate subject to some charges. He obtained an indemnity on the rest of the estate which appeared of ample value. More than fifty years passed, during which neither the purchaser nor his assigns were called upon to pay one penny on foot of those charges. At the end of that period, the indemnity lands had been so wasted by bad management, covered with insolvent tenants, and the charges had so much increased by large arrears of interest and costs, that it became necessary to resort to the purchased lands, which were sold by the Court, and the produce of the sale was entirely devoured by the encumbrances. A similar catastrophe could not happen to the purchaser of land indemnified against debentures.

"For the purpose of facilitating future dealings with his property, it will be prudent for the purchaser of land under the Court to take separate conveyances of separate portions, subject to separate debentures, rather than take one conveyance of all, subject to all the debentures. He should take care that the lands which are included in the same conveyance, and are subject to the same set of debentures, should lie within a ring fence, so that they would probably be afterwards sold or settled, or otherwise disposed of in the same manner. He can readily accomplish this by means of the Ordnance maps. If he afterwards finds it necessary to raise money by debentures, he ought in the first place to issue such as are charged upon such part of his property as he is least likely to desire to sell; and he ought to issue all the debentures charged upon one part before he issues any charged upon a second part of his estate.

"Some will probably say, 'Why do you make the debentures payable only at certain periods? It would be frequently convenient for the owner of an estate to have the power of paying off the debentures when he liked, or of paying them off by gradual instalments if he preferred it.' To this the obvious answer is, that as the debentures are all in equal priority, it is necessary that they should all be



made payable at the same time. The right of redeeming and of demanding payment ought to be reciprocal, and the utility of the power of charging by debentures would be much diminished if the owner of an estate was liable, at any moment, to have the amount of all the debentures levied from his estate. But it may be said, 'Give the owner of the land a right to pay the debt at any time, but do not give the owner of the debenture a right to demand payment until the appointed time.' This is possible. However, it is found that money is seldom borrowed on such terms on mortgages. I take the following passage from Lord St. Leonards' 'Handy Book on Property Law,' p. 112:—

"In case you do not pay the interest regularly, the mortgagee may compel payment of the principal and interest. You will always be in danger of the mortgagee calling in the money, and thus putting you to the expense of obtaining money elsewhere to pay him off, and of making a transfer of the mortgage to the new lender. You should inquire whether the lender is likely to want his money, or is in the habit of changing his securities. To avoid this danger, it is sometimes stipulated that the lender shall not call in the money for a given number of years, provided the interest is regularly paid; but in that case the lender will probably require an obligation from the borrower not to pay the mortgage off within that period."

"The terms of every loan are a matter for stipulation between the borrower and the lender, and if the former requires any terms for his own convenience, which may cause loss or inconvenience to the lender, he must surely pay for them by an increased rate of interest. The fixing of a time for payment, however, has not this effect, as it is mutually convenient to both parties."

"It is probable that the time fixed for the redemption of a debenture will generally be about twenty years from the day of its first issue by the Court, in cases when the purchaser has no immediate necessity to borrow money. However, when he is obliged to borrow part of the purchase-money of the estate, he will make his arrangements beforehand, and appoint such time for the redemption of the debenture as shall be mutually agreed upon between the borrower and the lender. When the owner of an estate and debentures wants to borrow money, which he may wish to repay within a shorter period, he will find no difficulty in obtaining it from a bank, on depositing his debentures with it."

"The rate of interest will depend on the wishes of the person whose estate is to be subject to the debenture. If he has made arrangements for a loan before the debenture is issued by the Court, the rate of interest will be settled according to agreement with the lender. In other cases it is probable that 5 per cent. will be the rate generally adopted. If a higher rate be adopted, the amount to be raised by debentures should be reduced, as all the interest must not exceed one-half the net income of the estate. If too low a rate be adopted, the owner might find it difficult to raise money on an emergency, except by selling his debentures for less than their nominal value. The rate of interest actually paid, will, however, seldom exceed  $4\frac{1}{2}$  per cent., on condition of punctual payment. An indorsement to this effect may be made on the debenture:—

'Interest is reduced to 4 per cent., provided it is paid within a month after it falls due.' When the funds are high, it is probable that the owner of an estate will be able to raise money by means of debentures at a lower rate than even 4 per cent."

"It has been suggested that the debentures should be made transferable by mere delivery, without any entry in the books of the Court. I think such a state of the law would be inconvenient. It would be very difficult to prevent forgery or over-issue of debentures. If the owner of an estate made a good imitation of a Court debenture, and passed it, and paid the interest regularly, the fraud would remain undetected until he sold the estate, or put it into settlement, when great confusion would arise, and great injustice be done. In many cases the estate would be found deficient, and debentures generally would fall into disrepute. Moreover, in case of robbery or theft the loss of a debenture would be irretrievable. For this reason it has been found by experience, that a permanent security for money transferable by mere delivery is not a safe or eligible kind of property. But on the system now proposed, as long as the owner keeps possession of his debenture, no fraud can be committed, and even if it should be stolen from him, the thief can only make use of it by a forgery which shall be successful in baffling all the precautions of the Court. The person who is robbed may effectually prevent this loss, and recover his debenture, by giving immediate notice of his loss to the registrar."

"It may be useful to give a short sketch of the proceedings likely to take place when the time fixed for payment of the debentures arrives. The owner of the land should, two or three months beforehand, enter into correspondence with the debenture holders, to ascertain whether they will require payment or accept a renewal of their debentures. If all are willing to accept renewals, they lodge their debentures in Court and get new ones instead. If, however, some holders require payment, then the owner of the estate must take steps to raise the money, or have parties ready to accept the new debentures, and pay the necessary sums to those who require payment of the old debentures. If the owner of the land has the means he may pay off as many of the debentures as he thinks proper, and retain them for his own use, to be issued if he should afterwards find it necessary or convenient. If the owner of the land finds himself in possession of money any considerable time before his own debentures fall due, he will probably deem it prudent to invest this money in the purchase of debentures falling due as nearly as possible at the same time as his own. Thus he will not lose any intermediate interest, and when the time arrives for redeeming his own debentures, he will have no difficulty in obtaining the required sum from his bankers on an assignment of the debentures which he had purchased, and a deposit of the debentures which he redeems, and which will be held by the bankers until the purchased debentures are paid off."

"Such are the steps that will usually be taken when the owner remains in possession of the entire estate. They will slightly vary according to circumstances, if he has sold any portion of it. He may have sold Blackacre to John Doe for 4,000*l.*, and assigned

2,000*l.* or 3,000*l.* of debentures to trustees as an indemnity. The judge inquires into the relative value of the lands, and decides that a certain sum—say 2,000*l.*—is the proportion which Blackacre ought to bear. The trust debentures to that amount are accordingly cancelled, and the owner of Blackacre gets a certificate that it is no longer liable to the old debentures. The residue of the trust debentures will be disposed of according to the provisions of the trust deed, and the owner of the estate will get a certificate under the seal of the Court that his estate is liable to 18,000*l.* instead of 20,000*l.*, and that no part of those debentures is chargeable on Blackacre. This certificate will state the particulars of the new debentures, and will form part of his title. No purchaser ought to buy an estate after the arrival of the time for payment of the debentures without examining the last certificate, which will tell him what new arrangement has been made.

"It may sometimes happen that the purchaser has not obtained any assignment of debentures as an indemnity, but has agreed to bear a certain sum—say 2,000*l.*—of the debentures; of course obtaining a reduction in his purchase-money to that amount. In this case it will be his duty (in order to prevent a sale of his estate) to procure persons to accept debentures to the amount of 2,000*l.*, to be charged on his estate alone, or else to pay off 2,000*l.* The unsold property will be made exclusively liable to 18,000*l.*, and certificates will be given to show the liabilities of each estate. In all cases the Court will decide the proportions to be borne by each estate, so that neither shall be charged with debentures beyond half its value. If this cannot be done consistently with the equities created by contract between the owners, then the owner of the estate, who has contracted to pay more than it can bear, must pay the difference. This occurs when the owner of an estate who has parted with all his debentures sells a portion of it, and stipulates that the part which he retains shall bear all the debentures. When the time for redemption comes he must pay in cash or raise by sale or mortgage so much as the amount of the debentures is in excess of half the value of the property which he retains.

"The short period of limitation for payment of the interest will have several good effects. It will facilitate dealing with a purchaser who will know that there is a very small limit to the utmost amount of interest that can be due on outstanding debentures. I have known cases in which the interest due on charges has been more than twice the amount of the principal, the arrears having been kept alive either by a pending suit, or a receiver at suit of a prior creditor or the possession of a prior creditor, or the effects of a trust term in preventing the operation of the Statute of Limitations. The short term of two years will lead to habits of punctuality. The readiness with which a debenture may be assigned will also lead to punctuality. I have known cases, in which the owner of good charges sustained great loss and inconvenience from non-payment, and who were reluctant to take proceedings against a friend or relative, and who would have found it utterly impossible to procure a stranger to take an assignment of their charges, as it would have been out of their power to show either the title or value of the land on which their

charges are secured. With debentures nothing of this kind can occur. If the interest is not punctually paid, it will quickly be assigned to some one who will be able and determined to enforce punctual payment.

"The books kept for the registry of debentures would probably not be numerous. It might be thought expedient not to give any debenture to a purchaser of land until his purchase deed was duly registered, and the memorial should state the number and value of the debentures. Thus, all parties dealing with the estate would be made aware of its liabilities. Each debenture would, by its endorsements, tell its own history. It would be convenient, however, that an account should be kept in the form of a ledger, with an index of names and a page opened for the account of each debenture holder. Every transfer would be entered to the credit of the person to whom, and the debit of the person by whom, it was made. It would be sufficient to describe the debenture in this account by its letter and number. This book should be kept strictly private. But when any information was required, in case, for instance, of the death, bankruptcy, or lunacy of any person, the Court would order a certificate to be given to show what debentures were standing in his name."

The draft of an Act to authorize the issue of debentures chargeable on land in Ireland, will be found in the Appendix to the original paper.

## II.—American Trade in 1860-1-2.

From the *Manchester Guardian*, 7th March, 1863.

"None of the consequences of the civil war in America concern this country more intimately than those which affect our great transatlantic trade. The war inflicts a double injury upon us. It deprives us of the raw material of our chief manufacturing industry, and it reduces the purchasing power of our greatest foreign customers. Its effect upon our commerce can be measured in its broader features by comparing the trade returns of two years of war with the year that preceded the secession of the South. The data which we have to offer relate to the import and export trades of the United Kingdom with the American States. The figures will for the most part express *quantities*; but where the returns fail in that respect, the *declared value* will be substituted.

"Let us take the exports first. The declared value of British and Irish produce and manufactures exported to America was for—

|            | £          |
|------------|------------|
| 1860 ..... | 21,667,065 |
| '61 .....  | 9,064,504  |
| '62 .....  | 14,398,801 |

"The exports of this class fell off more than *one-half* in the first year of the war; they recovered considerably in the second, being then but *one-third* less than in 1860; taking the ratios more exactly, 1861 was 58 per cent. and 1862, 34 per cent. lower than 1860. The business of the two last years together did not very much exceed that of the first. It will be serviceable to compare the relation of these values to the total exports of this branch of merchandise:—

|            | £           | Exports to America. |
|------------|-------------|---------------------|
| 1860 ..... | 135,891,227 | 16.9 per cent.      |
| '61 .....  | 125,102,814 | 7.2 "               |
| '62 .....  | 124,137,812 | 11.6 "              |

"Neglecting fractions, we can say, in regard to our home produce and manufactures, that America in 1860 took *one-sixth*; in 1861, *one-fourteenth*; and in 1862, *one-ninth* of the value.

"When we analyse the tables as far as possible, we find that the exports fall into three classes (1), those that have *increased* since the war; (2) those that have *decreased*, but show a tendency to recover; (3) those that have *decreased* without any tendency to recover.

"In the first class there are six articles, viz:—

|                                 | 1860.      | 1861.      | 1862.      |
|---------------------------------|------------|------------|------------|
| Wool, British and foreign ..... | 2,841,200  | 10,039,947 | 11,623,226 |
| Coals, &c. ....                 | 309,869    | 371,882    | 321,459    |
| Linen manufactures .....        | 59,988,394 | 21,169,077 | 65,642,017 |
| " thread .....                  | 1,784,243  | 872,536    | 2,117,645  |
| Lead .....                      | 4,157      | 767        | 12,687     |
| Woollen manufactures .....      | 127,834    | 74,727     | 185,909    |

"The enormous increase in the wool shipped to the United States since the war is one of the most remarkable features in the returns issued from the Board of Trade. It must be observed, however, that 1860 was rather a low year. The exports in 1859 were 5,966,677 lbs., but this was double the quantity of 1857 and 1858. This large trade has not been attended with any diminution in that of woollen fabrics. There was, it is true, a large falling off in 1861; but the expansion of the following year brought that business for the two years up to the average of 1860. Linen manufactures and linen thread both suffered a great diminution in 1861, but both articles so far recovered themselves that last year they stood at a higher figure than that of 1860. Compared with that year the first named goods were in excess by 5,651,600 yards, and the second by 333,000 lbs. The export of lead, which in 1861 had fallen to about *one-fifth* of the average shipments, rose, in 1862 to *three times* the average of the peace period. How much of this was required for the destructive agents of war?

"The second class comprises nine articles, namely:—

|                                   | 1860.       | 1861.      | 1862.      |
|-----------------------------------|-------------|------------|------------|
| Soda .....                        | 1,080,398   | 431,380    | 1,046,164  |
| Cotton manufactures .....         | 226,776,939 | 74,630,537 | 97,728,936 |
| " thread .....                    | 2,090,734   | 879,478    | 1,443,089  |
| Tin plates .....                  | £1,018,536  | 417,360    | 688,360    |
| Oil seeds .....                   | 662,751     | 15,438     | 114,680    |
| British spirits .....             | 425,050     | 113,224    | 211,955    |
| Carpets and druggets .....        | 2,806,546   | 968,799    | 1,607,179  |
| Shawls, rugs, and coverlets ..... | 545,488     | 153,628    | 272,677    |
| Earthenware and porcelain .....   | £654,263    | 216,998    | 321,756    |

"The characteristic of this class, as already indicated, is a violent fall in the first year of war, with marked signs of recovery in the second. In soda the recovery is decided. In cotton manufactures and thread the fall of 1861 is followed by a con-

siderable rebound in the next year, more especially noticeable in the thread. Carpets and druggets testify to a considerable revival latterly.

"Seven articles form the third and most depressed class, namely:—

|                                   | 1860.      | 1861.     | 1862.   |
|-----------------------------------|------------|-----------|---------|
| Beer and ale .....                | 21,905     | 7,390     | 7,790   |
| Haberdashery and millinery .....  | £1,347,268 | 628,383   | 623,878 |
| Hardwares and cutlery .....       | £1,054,908 | 651,456   | 461,616 |
| Iron, wrought and unwrought ..... | 380,724    | 110,242   | 128,617 |
| Salt .....                        | 268,077    | 172,306   | 147,302 |
| Worsted stuff .....               | 2,343,317  | 1,112,515 | 933,634 |
| Manufactures of silk .....        | £458,371   | 184,527   | 113,415 |

"Taking all the goods here enumerated, it will be found that the business done in 1861 and 1862 together, was less than that of 1860. As regards haberdashery and millinery exported in the two last years, the total value was 95,000*l.* less than the shipments of 1860 alone. Hardwares and cutlery have fallen off *one half* in each of the two last years. Under the head of iron comes 'railroad iron of all sorts.' It is grievous to note the power of civil strife to stop enterprises of such moment as the trade in this article reveals. In 1860, we exported to America 138,003 tons; in 1861, the quantity fell to 28,398; and last year to 16,276 tons—not *one-eighth* of the amount of 1860. Worsted manufactures have fallen off greatly. The aggregate of the two last years was 300,000 pieces below those of 1860. This fact must be read in connection with the large increase in the export of the raw material, and with the restrictive character of the Morrill tariff. The diminution in the silk manufactures is yet greater; in the *two years* last past we shipped 297,912*l.* worth against 458,371*l.* in 1860. The foregoing articles of merchandise, and a few separately returned for the first time in 1862, complete the list of all those goods which are discriminated in the monthly publications of the Board of Trade. The latter articles, for the purpose of completing the enumerations, we will give in the export 'declared value,' instead of quantity. They are—

|   | £       |
|---|---------|
| Knives, forks, scissors, &c. ....         | 75,065  |
| Manufactures of steel .....               | 63,797  |
| " silk, separately returned in 1862 ..... | 110,811 |

"Of the goods imported from the United States during the same period, we can only speak of two descriptions—but they are by far the most important in the list—cotton and corn. At the present time they are distinguished by a strange contrast of fortune—the one by its *scarcity*, the other by its *abundance*. The history of the American cotton famine is so familiarly known, that we need here only state the figures which record the imports, namely:—

|            | Cwt.      |
|------------|-----------|
| 1860 ..... | 9,963,309 |
| '61 .....  | 7,316,969 |
| '62 .....  | 120,752   |

"Whatever injury America has inflicted upon this country by the blockade, we must count the enormous supplies of grain which she has poured into our ports last year as some compensation. We received of wheat in—

|            | Quarters. |
|------------|-----------|
| 1860 ..... | 1,499,385 |
| '61 .....  | 2,507,744 |
| '62 .....  | 3,724,770 |



and of wheat meal and flour in

|            | Cwt.      |
|------------|-----------|
| 1860 ..... | 2,154,231 |
| '61 .....  | 3,794,865 |
| '62 .....  | 4,499,534 |

"While the imports of American wheat greatly increased in the second, they were more than doubled in the third year of the term under review, accompanied by a nearly equal increase in the flour. Upon this branch of the American trade, Messrs. Horne and Watney remark that—

"The cycle of high to low prices has been put out of gear by the overwhelming shipments from America; her Southern States not having drawn down their usual supplies; and France, since she made certain of a sufficient home growth, having retired from competition with ourselves in that market."

"A few remarks upon the trade with America in gold and silver must conclude our observations. If we place the imports and exports for each year on the same line, we shall perceive at a glance the most notable facts.

|           | Imports.   | Exports.  |
|-----------|------------|-----------|
|           | £          | £         |
| 1860..... | 4,792,582  | 1,727,220 |
| '61.....  | 66,683     | 7,381,953 |
| '62.....  | 10,064,162 | 37,528    |
|           | 14,923,427 | 9,146,701 |

"Nothing in trade can well be more extreme than the fluctuations of our monetary relations with America during this time. The balance of imports over exports in the precious metals is 5,776,726*l*. In 1860, the balance paid to *England* in gold and silver was 3,065,362*l*.; in 1861, paid to *America* was 7,315,270*l*.; and, in 1862, to *England*, 10,026,631*l*.; and this last sum, notwithstanding the large imports of grain—though, of course, the payment, in adjusting the various transactions of the two countries, was enormously swollen as against the United States by the stoppage of the cotton supply."

### III.—*The New Statistical Abstract for France.\**

[Continued from p. 90.]

EXTRACTED from the *Economist* of March 7th and 21st, 1863, with a few abbreviations in the remarks:—

#### "2. Commerce.

"In drawing an outline of the progress of trade in France during the period under notice (1817-61), it will be necessary to bear in mind two disturbing causes which happened within those years, viz., the revolution of 1818, and the commercial panic of 1857. Both of these events led to a considerable decline in trade, chiefly in the importations from abroad.

\* *Situation Economique et Commerciale de la France, 1817-61. Paris, 1862.*

"The duration of the effects of the revolution of 1818 upon the import trade of the country may be traced over a period of six years, as below:

|            | Imports.   |
|------------|------------|
|            | £          |
| 1847 ..... | 51,000,000 |
| '48 .....  | 28,000,000 |
| '49 .....  | 40,000,000 |
| '50 .....  | 44,000,000 |
| '51 .....  | 43,000,000 |
| '52 .....  | 55,000,000 |

"The effects of the commercial panic of 1857 were not so lasting, extending over a period of three years only.

"Notwithstanding these checks, the trade of France made great progress between 1847 and 1861; as will be seen by the quinquennial averages for the imports and exports:—

| Periods.      | Annual Average.  |                       |                  |                 |
|---------------|------------------|-----------------------|------------------|-----------------|
|               | Imports. (Mlrs.) |                       | Exports. (Mlrs.) |                 |
|               | Total.           | For Home Consumption. | Total.           | French Produce. |
| 1847-51 ..... | £ 41             | £ 29                  | £ 49             | £ 36            |
| '52-56 .....  | 78               | 56                    | 84               | 61              |
| '57-61 .....  | 103              | 75                    | 112              | 81              |

"These figures are exclusive of bullion and specie, which amounted in the same periods to:—

| Periods.      | Average Imports. | Average Exports. |
|---------------|------------------|------------------|
|               | £                | £                |
| 1847-51 ..... | 10,000,000       | 3,500,000        |
| '52-56 .....  | 19,000,000       | 14,000,000       |
| '57-61 .....  | 27,000,000       | 19,000,000       |

"The large increase of trade in the last period was partly owing to the operation of the commercial treaties with England and Belgium during 1860 and 1861; but making allowance for the trade under these treaties, the commerce of France steadily increased under the old *régime* up to 1860.

"Imports and Exports.—The following table shows the chief countries with which France traded, in 1847, 1859, and 1861. The column for 1859 is introduced to show the extent of trade in the year preceding the conclusion of the commercial treaties with England and Belgium. The amounts are given in millions sterling:—

|                        | VALUE OF IMPORTS. |       |        |                          |       |       |
|------------------------|-------------------|-------|--------|--------------------------|-------|-------|
|                        | 1847.             | 1859. | 1861.  | Entered for Consumption. |       |       |
|                        |                   |       |        | 1847.                    | 1859. | 1861. |
|                        | £                 | £     | £      | £                        | £     | £     |
| From United Kingdom    | 4.25              | 16.25 | 22.25  | 2.80                     | 11.00 | 17.50 |
| „ Russia .....         | 4.00              | 2.50  | 6.50   | 4.00                     | 2.25  | 6.25  |
| „ Zollverein .....     | 2.75              | 8.75  | 11.25  | 2.00                     | 4.25  | 6.80  |
| „ Belgium .....        | 6.00              | 8.00  | 11.00  | 4.50                     | 6.50  | 8.90  |
| „ Switzerland .....    | 4.00              | 10.50 | 8.00   | 1.00                     | 2.00  | 2.25  |
| „ Spain .....          | 2.00              | 3.00  | 3.50   | 1.50                     | 2.25  | 2.80  |
| „ Italy .....          | 5.50              | 6.75  | 8.00   | 4.50                     | 5.20  | 7.00  |
| „ Turkey .....         | 3.75              | 4.50  | 4.75   | 2.80                     | 3.25  | 4.50  |
| „ United States .....  | 5.50              | 8.75  | 15.75  | 4.50                     | 8.00  | 14.50 |
| „ French colonies..... | 4.25              | 5.75  | 7.75   | 3.25                     | 5.20  | 7.25  |
| Total .....            | 51.00             | 94.00 | 123.00 | 38.00                    | 65.50 | 97.50 |

  

|                        | VALUE OF EXPORTS. |        |        |                 |       |       |
|------------------------|-------------------|--------|--------|-----------------|-------|-------|
|                        | 1847.             | 1859.  | 1861.  | French Produce. |       |       |
|                        |                   |        |        | 1847.           | 1859. | 1861. |
|                        | £                 | £      | £      | £               | £     | £     |
| To United Kingdom .... | 6.25              | 31.00  | 24.75  | 4.50            | 23.50 | 18.25 |
| „ Russia .....         | .80               | 1.50   | 2.25   | .60             | 1.25  | 1.25  |
| „ Zollverein .....     | 2.25              | 7.00   | 7.50   | 1.75            | 5.75  | 6.50  |
| „ Belgium .....        | 2.50              | 7.50   | 6.75   | 2.00            | 6.75  | 6.25  |
| „ Switzerland .....    | 3.75              | 11.00  | 10.50  | 1.25            | 4.50  | 5.50  |
| „ Spain .....          | 2.50              | 5.50   | 8.00   | 2.00            | 4.00  | 5.25  |
| „ Italy .....          | 3.75              | 10.00  | 11.50  | 2.25            | 7.25  | 7.25  |
| „ Turkey .....         | .80               | 2.50   | 2.25   | .50             | 1.50  | 1.25  |
| „ United States .....  | 7.50              | 17.50  | 4.50   | 4.50            | 12.25 | 3.25  |
| „ French colonies..... | 5.25              | 9.80   | 9.50   | 4.25            | 9.25  | 8.75  |
| Total .....            | 42.00             | 122.25 | 106.50 | 28.75           | 90.50 | 77.00 |

“ Thus in 1847 Belgium stood first on the list, followed by Italy and the United States. In 1859 the United Kingdom occupied the first position both as regards general imports and entries for consumption. The United Kingdom also affords to France the largest market for the disposal of French produce, taking about one-fourth of the total exports.

“ Up to the year 1860 the imports consisted chiefly of raw materials and produce, manufactures of most kinds being either virtually or entirely prohibited. The value of raw silk imported in 1859 was 8½ millions sterling; of raw cotton, 6 millions; and of raw wool, 5 millions; these three articles are the most important in the list of imports.

“ The line of commercial policy pursued by the French Government best appears in the tariff changes made in past years. Between 1816 and 1859 the principal reductions of duty were made on colonial produce, skins, dyestuffs, chemicals, and raw products. The only exceptions, so far as British produce was concerned, were the reduction of the linen duties in 1836, which were raised again in 1845,—and the reduction of the duties in 1855 on pig and bar iron, steel, coal, and machinery.

The duties on the last named articles, however, although reduced, were in many cases prohibitive, and were of no benefit to English producers.

“ As the *protective* character of the French tariff before the treaty with this country was concluded is not generally known, it may be as well to state that by it the yarns of Manchester and Leeds—the textile fabrics of Manchester, Glasgow, Leeds, Huddersfield, Bradford, Leicester, and Coventry—the stoneware of Staffordshire, London, and Newcastle—the glassware of Birmingham, Newcastle, and London—the hardware of Birmingham and Wolverhampton—the cutlery of Sheffield, and many other large branches of our trade, were entirely excluded from the French markets.

“ The following are the principal articles of French produce exported from France in 1860:—

|                            | £          |
|----------------------------|------------|
| Silk manufactures .....    | 18,000,000 |
| Woollen „ .....            | 9,000,000  |
| Wine .....                 | 8,750,000  |
| Grain .....                | 4,750,000  |
| Ready-made linen.....      | 4,000,000  |
| Tanned leather .....       | 1,750,000  |
| Leather manufactures ..... | 3,500,000  |
| Smallwares .....           | 3,750,000  |

“ The value of silk manufactures forms about one-fifth of the total exports of French produce, and the silk industry in France occupies a corresponding position in that country to that of the cotton industry in England. Woollen manufactures and wine are the next in importance. The export of grain is very variable. The increase in the value of wine exported in the year 1860, as compared with the exports in 1847, was very large, being 8¼ millions sterling against two millions.

“ *Customs Duties.*—The revenue received from Customs duties in 1847, 1859, and 1861, was as follows:—

|           | On Imports. | On Exports. |
|-----------|-------------|-------------|
|           | £           | £           |
| 1847..... | 5,459,000   | 81,000      |
| '59.....  | 7,579,000   | 168,800     |
| '61.....  | 5,069,000   | 64,500      |

“ The articles which produced the largest proportion of duty in 1859 were sugar, coffee, raw cotton, and coal. The falling off in 1861 was partly due to the depression of trade during that year.

“ *Port Trade.*—The amount of trade at each of the principal ports in the year 1861 was as under:—

|                     | Per cent. |
|---------------------|-----------|
| At Marseilles ..... | 16        |
| „ Havre .....       | 12        |
| „ Nantes .....      | 12        |
| „ Paris .....       | 11        |
| „ Bordeaux .....    | 8         |
| „ Dunkirk .....     | 4         |
| „ Rouen.....        | 2.5       |
| „ Other ports ..... | 34.5      |
| Total .....         | 100       |

" *Transit Trade*.—The transit trade of France increased very largely between 1847 and 1860. In 1861 there was a decline caused by the falling off of the Swiss goods sent in transit to the United States. The value of merchandize exported from France in transit in each of the three years was:—

|               | £          |
|---------------|------------|
| In 1847 ..... | 7,000,000  |
| " '60 .....   | 24,000,000 |
| " '61 .....   | 19,000,000 |

" *Temporary Importations*.—Besides the general imports, certain articles are admitted duty free for the purpose of being manufactured and exported. The value of these imports in 1861 amounted to *two millions sterling*, and the value of goods manufactured from materials imported temporarily duty free was *five and a-half millions*."

### " 3. Navigation.

" With the view of fostering national shipping, by throwing the carrying-trade of the country into the hands of French ship owners, the French Government has from time to time fixed high deferential duties on goods imported from foreign countries under foreign flags, as well as on foreign ships themselves. At the same time the colonial and coasting trades of the country have been entirely reserved for national vessels.

" The table published on page 83 of the document before us exhibits how signally this protective legislation has failed to accomplish the object for which it was enacted. The table gives the total mercantile tonnage *belonging to France* on the 31st December in each year from 1827 to 1861, which amounted

|                  | Tons.     |
|------------------|-----------|
| In 1827 to ..... | 692,000   |
| " '30 .....      | 689,000   |
| " '40 .....      | 662,000   |
| " '47 .....      | 670,000   |
| " '57 .....      | 1,052,000 |
| " '58 .....      | 1,049,000 |
| " '59 .....      | 1,025,000 |
| " '60 .....      | 996,000   |
| " '61 .....      | 983,000   |

" Thus it appears that during the first twenty years the amount of tonnage belonging to the country remained stationary; that between 1847 and 1857 it increased by 57 per cent. in the ten years, and that since that date it has gradually declined, on the average by about 2 per cent. per annum.

*The Statistics of the Tonnage of French Sailing and Steam Vessels on the 31st December, 1861, are shown by the following data:—*

|                             |        | Tons.   |
|-----------------------------|--------|---------|
| Of 800 tons and above ..... | 31     | 36,006  |
| " 700—800 .....             | 31     | 22,835  |
| " 600—700 .....             | 48     | 31,094  |
| " 500—600 .....             | 118    | 64,328  |
| " 400—500 .....             | 243    | 108,624 |
| " 300—400 .....             | 294    | 103,408 |
| " 200—300 .....             | 654    | 158,288 |
| " 100—200 .....             | 1,364  | 193,152 |
| " 60—100 .....              | 1,640  | 125,695 |
| " 30—60 .....               | 1,551  | 66,008  |
| " 30 tons and under .....   | 9,091  | 74,558  |
| Total .....                 | 15,065 | 983,996 |

" Small fishing boats employed on the coast are not included in the above return.

" *Steam Tonnage*.—The number, tonnage, and horse-power of steam vessels belonging to France on the 31st December, 1861, was:—

|                   |        |
|-------------------|--------|
| Vessels .....     | 327    |
| Tonnage .....     | 73,267 |
| Horse-power ..... | 35,085 |

" We must now pass to the statistics of shipping, which are divided into—1, the trade reserved to French vessels; and 2, the trade open to foreign vessels.

" 1. The trades reserved to French vessels are those with the colonies (except in some cases to Algeria), the coasting trade, and the fisheries. The progress of French shipping engaged in these trades during the last fifteen years was:—

### *French Tonnage, with Cargoes, Entered or Cleared from, and to, French Colonies and Possessions.*

|               | Tons.   |
|---------------|---------|
| In 1847 ..... | 428,000 |
| " '61 .....   | 643,000 |

### *From and to the Fisheries.*

|                            | Tons.   |
|----------------------------|---------|
| With cargoes in 1847 ..... | 114,000 |
| " '61 .....                | 129,000 |

### *In the Coasting Trade.*

|                            | Tons.     |
|----------------------------|-----------|
| With cargoes in 1847 ..... | 2,919,000 |
| " '61 .....                | 3,103,000 |

" *Fisheries*.—The production of the whale fisheries exhibits a considerable decline of late years; the quantity of oil and whalefins produced in 1847 and 1861 were:—

|            | Oil.<br>Tonneaux Métriques.* |
|------------|------------------------------|
| 1847 ..... | 3,514                        |
| '61 .....  | 130                          |
|            | Whalefins.                   |
| 1847 ..... | 116                          |
| '61 .....  | 2                            |

" The quantity of cod fish exported from the fisheries and from French ports in 1847 was 16,108 tonneaux métriques, and in 1861, 13,395.

" The coast fisheries in France on the 31st December, 1861, numbered 8,041 boats, of 59,541 tons and 39,898 men.

" 2. *Foreign Trade*.—The following table shows the amount of tonnage of each nation trading with France in the years 1847 and 1861:—

\* 2,200 lbs. avoirdupois, = a ton nearly.



| Nationality of Vessels.   | Total Tonnage<br>Entered and Cleared at French Ports<br>with Cargoes only. |           |
|---|--|-----------|
|   | 1847.  | 1861.     |
| British.....  | 989,397  | 2,159,399 |
| Norwegian .....   | 217,833  | 271,686   |
| Swedish .....   | 43,754   | 42,735    |
| Danish.....   | 16,093   | 25,536    |
| Russian .....   | 85,768   | 109,969   |
| Prussian .....  | 55,258   | 95,720    |
| Hanoverian and Oldenburg .....                                      | 14,333   | 10,882    |
| Mecklenburg .....   | 17,648   | 14,170    |
| Hanseatic .....   | 22,379   | 17,988    |
| Dutch .....   | 46,410   | 86,679    |
| Belgian .....   | 1,867  | 11,553    |
| Spanish .....   | 99,098   | 224,647   |
| Portuguese .....  | 4,752  | 10,882    |
| Italian .....   | 413,823  | 557,700   |
| Austrian .....  | 139,773  | 172,442   |
| Greek .....   | 184,304  | 191,396   |
| Turkish .....   | 30,678   | 15,688    |
| Barbary States .....  | 156  | —         |
| American (U. S.) .....  | 317,978  | 577,807   |
| Brazilian .....   | 1,152  | 6,053     |
| Monte Videan .....  | 2,833  | 675       |
| Chilian.....  | 1,530  | 600       |
| Venezuelan .....  | 618  | —         |
| Mexican .....   | —  | 920       |
| Total foreign .....   | 2,707,457  | 4,605,127 |
| French including the trade with the<br>colonies and fisheries ..... | 1,589,351  | 3,013,684 |
| Total .....   | 4,296,808  | 7,618,811 |

"Thus we see that the French tonnage engaged in the foreign and colonial trades of the country only amounted to *thirty-seven per cent.* of the whole in 1847, and to *thirty-nine and a-half per cent.* in 1861; while in the United Kingdom, where foreign ships are admitted on equal terms with national vessels, the British tonnage enjoyed in 1861 *sixty per cent.* of the carrying trade of the country."

#### IV.—Fluctuations in the Value of Gold at New York.

FROM the *Economist* of the 28th March, 1863:—

"The following table shows the changes of the prices of commodities since last year:—

#### Prices of Fifty-five Articles in the New York Market.

|                                   | December 31,<br>1861. |          | December 31,<br>1862. |             | Rise<br>per Cent. |
|-----------------------------------|-----------------------|----------|-----------------------|-------------|-------------------|
|                                   | Dol. ct.              | Dol. ct. | Dol. ct.              | Dol. ct.    |                   |
| Copper, American lake... 100 lbs. | 23                    | — to 25  | —                     | 32 50 to 33 | 33                |
| Coal .....                        | 4 50                  | 5        | —                     | 8 —         | 75                |
| Iron, American pig..... ton       | 21                    | —        | 23                    | —           | 44                |
| Cordage, Manilla .....            | 9                     | —        | 10 75                 | —           | 25                |
| Lead, Galena .....                | 6 50                  | 6        | 75                    | 8 25        | 30                |
| Nails .....                       | 3 25                  | 3        | 75                    | 4 75        | 40                |
| Ashes, pot .....                  | 5 50                  | 5        | 75                    | 8 —         | 25                |
| Indigo .....                      | 1 50                  | 2        | —                     | 1 85        | 15                |
| Coffee, Brazils.....              | 20 50                 | 21       | 50                    | 28 —        | 40                |
| Cotton, mid. fair.....            | 29                    | —        | 29 50                 | 70 —        | 150               |
| Dry coal .....                    | 3 37                  | 4        | 25                    | 4 37        | 20                |
| Flour, Western .....              | 5 40                  | 5        | 60                    | 6 60        | 25                |
| India rubber .....                | — 50                  | —        | 52                    | — 87½       | 70                |
| Gunny cloth .....                 | 13                    | —        | 13 50                 | 14 75       | 12                |
| Corn, Western .....               | 58 50                 | 60       | —                     | 81 50       | 40                |
| Hay .....                         | — 80                  | —        | 85                    | — 95        | 18                |
| Wheat .....                       | 1 30                  | 1        | 45                    | 1 50        | 15                |
| Hemp, American, dressed, cut .... | 10 50                 | 11       | 25                    | 12 50       | 22                |
| Barley.....                       | — 85                  | —        | 1                     | 1 30        | 60                |
| Oats.....                         | — 37                  | —        | 39                    | — 67        | 72                |
| Hides, Rio..... 100 lbs.          | 24 50                 | 25       | —                     | 27 50       | 12                |
| Plaster of Paris .....            | 1 50                  | 1        | 75                    | 2 65        | 80                |
| Hops .....                        | 14                    | —        | 20                    | 18 —        | 26                |
| Clover seed .....                 | 7 50                  | 7        | 75                    | 10 50       | 34                |
| Leather, oak, mid. ....           | 28                    | —        | 30                    | 32 —        | 17                |
| Mahogany .....                    | 35                    | —        | 45                    | 45 —        | 20                |
| Lime .....                        | — 60                  | —        | 65                    | — 85        | 40                |
| Molasses .....                    | — 40                  | —        | 45                    | — 52        | 30                |
| Turpentine, spirits .....         | 1 5                   | 1        | 7                     | 2 50        | 150               |
| Rosin .....                       | 5 62                  | 5        | 75                    | 13 50       | 140               |
| Oil, whale .....                  | — 48                  | —        | 52                    | — 83        | 68                |
| Oil, coal, ref .....              | — 25                  | —        | 35                    | — 40        | 33                |
| Silk, raw .....                   | 5 25                  | 6        | —                     | 7 75        | 50                |
| Pork, mess .....                  | 13 25                 | 13       | 75                    | 14 25       | 10                |
| Beef, " .....                     | 5 50                  | 8        | —                     | 7 —         | 28                |
| Lard .....                        | 7 50                  | 8        | 25                    | 9 50        | 25                |
| Cassia .....                      | 35                    | —        | 36                    | 41 —        | 14                |
| Whisky .....                      | 25                    | —        | 25 50                 | 40 —        | 70                |
| Gin .....                         | 33                    | —        | 34                    | 47 —        | 42                |
| Sugar, Cuba .....                 | 6                     | —        | 6 75                  | 8 25        | 33                |
| Tallow, city.....                 | 8 75                  | 9        | —                     | 10 75       | 27                |
| Tin, Banca .....                  | 30                    | —        | 31                    | 43 50       | 40                |
| Spelter.....                      | 5 50                  | 5        | 75                    | 7 50        | 12                |
| Tobacco, Kentucky .....           | 7 50                  | 20       | —                     | 14 —        | 60                |
| Whalebone .....                   | 68                    | —        | 70                    | 150 —       | 120               |
| Wool, fleece .....                | 52                    | —        | 55                    | 63 —        | 20                |
| „ pulled .....                    | 44                    | —        | 45                    | 64 —        | 48                |
| Cotton, shirting..... 100 yards   | 8                     | —        | 10                    | 28 —        | 220               |
| „ sheetings .....                 | 10 50                 | 14       | —                     | 26 —        | 120               |
| „ drills .....                    | 12 50                 | 14       | 50                    | 28 —        | 110               |
| Satinets .....                    | 30                    | —        | 60                    | 50 —        | 58                |
| Flannels .....                    | 15                    | —        | 30                    | 40 —        | 90                |
| Prints .....                      | 8                     | —        | 11                    | 12 —        | 80                |
| Cloths .....                      | 5                     | —        | 7                     | 11 —        | 116               |
| Duck, ravens .....                | 12                    | —        | 12 50                 | 18 —        | 50                |

"In the face of evidence such as this, it is idle to believe that the apparent depreciations of the currency as against gold is wholly owing to speculations in gold, or that it can be removed by prohibitory and penal enactments."

#### V.—Some Statistics of Cheap Literature.

THE following remarks upon cheap periodical literature, by one of the originators of *Chambers's Edinburgh Journal*, will be read with interest as coming from a gentleman who is so eminently entitled to speak upon the subject as Mr. Chambers.

"Mr. William Chambers, of Glenmoriston, delivered a lecture on 'Cheap Popular Literature and its Influence on Society,' before the members of the Royal Society of Edinburgh. Lord Neaves was in the chair, and there was a large and distinguished attendance. Mr. Chambers began by noticing early printed literature, some of the earliest specimens of which were the antiquated and varied class of 'chap books' that were so much concerned in entertaining the firesides of our unfastidious ancestors—tracts which appealed to the popular love of the marvellous, the pathetic, and the humorous, and which, for the most part, were sold by chapmen or pedlars, who, with packs on their backs, traversed the whole country in quest of customers for their literary and other merchandise. Reprehensible in character as were the Scottish, and also many of the English chap books—miserable as they were in appearance and aim—they are to be taken as an exponent of popular intelligence and taste during the lengthened period in which they bore rule; and, as such, reflect a certain light on the social progress of Great Britain. Pervading town and country as a literature in request among all the humbler classes who could read, English and also Scottish chap books were extirpated by no edict, but disappeared slowly through the united effects of education, and a demand for something equally exhilarating and much more conformable to improved manners and feelings. Mr. Chambers then passed on to a review of the struggles of the cheap literature which superseded 'chap books,' and speaking of his own services said:—'With the assistance of my brother, I commenced *Chambers's Edinburgh Journal* on the 4th February, 1832. Two months later, on the 31st March, the *Penny Magazine* was begun; and immediately afterwards many other publications of this cheap class, mostly commendable in plan, were brought out, and gained a deservedly large circulation. The year 1832, therefore, disturbed as it was by political agitation, mingled with apprehensions of the cholera, is, I think, entitled to be looked on as definitely marking the development of that new and peculiar cheap literature, now giving promise of adaptations never contemplated in the best times of eighteenth-century journalism. Every variety of literature, but more particularly popular periodicals and newspapers, have received an immense impetus from the removal of fiscal burdens and restrictions. The advertisement duty was abolished in 1853; the compulsory stamp on newspapers was removed in 1855; and the excise duty on paper was repealed in 1861. Since the reign of Queen Anne the press is now for the first time perfectly free—its freedom and power of circulation being further promoted by the system of penny postage, and the world-wide organisation of steam-boat and railway transit. One of the standing reproaches of past literature—a thing mourned over, and even joked over,—was the wretched remuneration of authors. To the credit of our own day, all lamentations and witticisms on this score have vanished into the realms of tradition. The central part of the nineteenth century, through the liberal encouragement offered by a popular wide-spread literature, has become the paradise of authorcraft. A narration of the sums now given by publishers of magazines and the lesser periodicals for attractive fictions would excite the most lively surprise—a very considerably higher

price being now, in innumerable cases, offered by the proprietor of a penny, three-halfpenny, or two-penny weekly sheet for the use of a story to be drawn out in portions over half a year, than was paid to Gibbon for his *Decline and Fall of the Roman Empire*, to Blair for his celebrated *Sermons*, or to Samuel Johnson for his laborious *Dictionary*. Newspapers, cheapened to a penny, have increased so enormously in their impressions, that I cannot venture on any statement respecting them further than this:—In 1830 the whole circulation of newspapers in England was 31,158,741 sheets, and that number is now said to be issued in London alone in the space of seventeen weeks. Two hundred millions of newspapers per annum would now be a moderate calculation for Great Britain! As regards merely literary sheets, I am able to speak somewhat more definitely. Collecting some statistics on this point in 1859-60, I found that, altogether apart from newspapers, the cheap periodical literature of Great Britain and Ireland might be summed up as follows:—Works of a strictly improving tendency, circulation per month, 8,013,500; works of an exciting nature, but not positively immoral, circulation per month, 1,500,000; works immoral, and opposed to the general religious belief of the country, circulation per month, under 80,000. My computation, founded on an attentive consideration of the subject, is, that in the United Kingdom there are not fewer than 12,000,000 of popular sheets, varying from 1d. to 2d. each, disposed of every month, or 144,000,000 per annum.' Lord Neaves, remarking on Mr. Chambers's paper, said that he thought the old 'chap book' indicated a vein of human nature that ought not to be neglected. The people of the days of the chap book were delighted by them, and Scotland, strange to say, a country where one saw the strictest and highest religion, was also a country where one had a signal proof of the variety of human nature. Boston's *Fourfold State* and the chap book were generally to be found in the same cottage, if not on the same shelf; and while the old folk were reading the one, the young folk were reading the other. No literature would be popular and useful that did not look to the mirthful and humorous elements in human nature."

#### VI.—Trade Circulars.

THE following letter has been issued by the Honorary Secretaries to a large number of firms, who, for the most part, have readily assisted in the object for which it is circulated, by furnishing the Society with periodical statements of the current prices of various descriptions of merchandize:—

"The Council of the Statistical Society is desirous of forming a collection of the Trade Circulars periodically issued by the principal houses connected with the commerce and manufactures of the United Kingdom and its dependencies—a collection which, as the Council believes, does not exist in any public institution. Should the Council succeed in their present attempt, the series of Trade Circulars deposited in the library of the Society will hereafter constitute an authentic and special history of the state and fluctuations of the commerce of the kingdom, which may be found of the greatest service in aiding the researches both of the statistician and the economist.

"We are directed by the Council, in furtherance of this useful object, to request you to assist in this undertaking, by forwarding to the Society, from time to time, the trade Reports circulated by your firm, from the commencement of the present year.

"All current reports transmitted to the Society will be placed before the fellows at their usual monthly meetings. The documents annually collected will be classified, bound up, and deposited in the library of the Society, where they will be accessible to the Fellows at all times; and to the public, on personal or written application to the officers of the Society."

## MARRIAGES, BIRTHS, AND DEATHS IN GREAT BRITAIN.

## No. I.—ENGLAND AND WALES.

MARRIAGES IN THE QUARTER ENDED 31ST DECEMBER, 1862; AND

BIRTHS AND DEATHS IN THE QUARTER ENDED

31ST MARCH, 1863.

THE birth-rate was unusually well maintained last quarter; and it has been high during eight successive quarters. In respect to marriages, the general result is unfavourable: the returns now extend to the end of last year, and it is ascertained that during the whole of two years, 1861-2, the marriage-rate has been low. In the last quarterly report it was shown that the mortality was high; and the returns since obtained furnish equal evidence that in the first quarter of the present year the public health has not improved. The cold weather of November was fatal to many persons, and the effects of that month were probably not unfelt after the year had closed; and also causes that were proper to last quarter rendered it more unfavourable to health than many seasons that were less remarkable for their mildness.

MARRIAGES.—There were 48,659 marriages in the last quarter of 1862; a number nearly the same as that of the corresponding period in 1861, but less than in that of 1860, when it was 50,688. The circumstances that have operated to

ENGLAND:—MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1857-63, and in the QUARTERS of those Years.

Calendar YEARS, 1857-63:—Numbers.

| Years .....   | '63. | '62.    | '61.    | '60.    | '59.    | '58.    | '57.    |
|---------------|------|---------|---------|---------|---------|---------|---------|
| Marriages No. | —    | 163,991 | 163,706 | 170,156 | 167,723 | 156,070 | 159,097 |
| Births..... „ | —    | 711,691 | 695,406 | 684,048 | 689,881 | 655,481 | 663,071 |
| Deaths..... „ | —    | 436,514 | 435,114 | 422,721 | 440,781 | 449,656 | 419,815 |

QUARTERS of each Calendar Year, 1857-63.

(I.) MARRIAGES:—Numbers.

| Qrs. ended last day of | '63. | '62.   | '61.   | '60.   | '59.   | '58.   | '57.   |
|------------------------|------|--------|--------|--------|--------|--------|--------|
| March .....No.         | —    | 33,976 | 33,274 | 35,150 | 35,382 | 29,918 | 33,321 |
| June ..... „           | —    | 40,771 | 42,012 | 43,777 | 42,042 | 39,890 | 41,267 |
| Septmbr..... „         | —    | 40,585 | 39,884 | 40,541 | 39,803 | 38,599 | 38,669 |
| Decmbr. .... „         | —    | 48,659 | 48,536 | 50,688 | 50,496 | 47,663 | 45,840 |

QUARTERS of each Calendar Year, 1857-63.

(II.) BIRTHS:—Numbers.

| Qrs. ended last day of | '63.    | '62.    | '61.    | '60.    | '59.    | '58.    | '57.    |
|------------------------|---------|---------|---------|---------|---------|---------|---------|
| March .....No.         | 186,653 | 182,005 | 172,933 | 183,180 | 175,532 | 170,959 | 170,430 |
| June ..... „           | —       | 185,638 | 184,820 | 174,028 | 175,864 | 169,115 | 170,444 |
| Septmbr..... „         | —       | 172,237 | 172,033 | 164,121 | 168,394 | 157,445 | 161,181 |
| Decmbr. .... „         | —       | 171,811 | 166,620 | 162,719 | 170,091 | 157,962 | 161,016 |

(III.) DEATHS:—Numbers.

| Qrs. ended last day of | '63.    | '62.    | '61.    | '60.    | '59.    | '58.    | '57.    |
|------------------------|---------|---------|---------|---------|---------|---------|---------|
| March .....No.         | 128,524 | 122,192 | 121,215 | 122,617 | 121,580 | 125,819 | 108,665 |
| June ..... „           | —       | 107,555 | 107,558 | 110,869 | 105,631 | 107,142 | 100,046 |
| Septmbr..... „         | —       | 92,225  | 101,232 | 86,312  | 104,216 | 98,142  | 100,528 |
| Decmbr. .... „         | —       | 114,542 | 105,109 | 102,923 | 109,354 | 118,553 | 110,576 |

depress marriages in England have not prevented an increase of them in certain parts. In the three March quarters of 1860-2, the marriages in London were respectively 7,265, 7,333, and 7,821.

In five of the eleven divisions, an increase of marriages is found in comparing those of the December quarter of 1862 with the mean of the two previous corresponding quarters. Those five divisions are London, North Midland counties, Wales, South-eastern Counties, and Northern Counties. The increase in the Northern Counties is hardly appreciable. In the remaining six divisions there is a decrease which varies from about 1 per cent. in the South Midland and Eastern Counties to 4 and 5 per cent. in the West Midland Counties and Yorkshire, and to no less than 15 per cent. in the North-western Division, in which the cotton manufacturing industry has been so long in a state of prostration.

Lancashire, exclusive of Ulverstone, consists of twenty-five districts; and in

ENGLAND:—Annual Rates per Cent. of PERSONS MARRIED, BIRTHS, and DEATHS, during the YEARS 1857-63, and the QUARTERS of those Years.

Calendar YEARS, 1857-63:—General Percentage Results.

| YEARS .....   | '63.   | Mean '53-'62. | '62.   | '61.   | '60.   | '59.   | '58.   | '57.   |
|---|--------|---------------|--------|--------|--------|--------|--------|--------|
| Estmtd. Popln. of England in thousands in middle of each Year.... | 20,554 | —             | 20,337 | 20,119 | 19,903 | 19,687 | 19,471 | 19,257 |
| Persons Married Perct.  | —      | 1·670         | 1·612  | 1·628  | 1·710  | 1·704  | 1·604  | 1·652  |
| Births..... „   | —      | 3·427         | 3·500  | 3·461  | 3·437  | 3·504  | 3·366  | 3·443  |
| Deaths..... „   | —      | 2·211         | 2·146  | 2·163  | 2·124  | 2·239  | 2·309  | 2·180  |



## QUARTERS of each Calendar Year, 1857-63.

## (I.) PERSONS MARRIED:—Percentages.

| Qrs. ended last day of | '63. | Mean '53-'62. | '62.  | '61.  | '60.  | '59.  | '58.  | '57.  |
|------------------------|------|---------------|-------|-------|-------|-------|-------|-------|
| March....Per ct.       | —    | 1'394         | 1'360 | 1'346 | 1'422 | 1'464 | 1'252 | 1'410 |
| June..... "            | —    | 1'693         | 1'610 | 1'678 | 1'766 | 1'716 | 1'646 | 1'722 |
| Septmbr. "             | —    | 1'607         | 1'582 | 1'570 | 1'614 | 1'602 | 1'570 | 1'592 |
| Decmbr. "              | —    | 1'975         | 1'890 | 1'906 | 2'012 | 2'026 | 1'934 | 1'880 |

## (II.) BIRTHS:—Percentages.

| Qrs. ended last day of | '63.  | Mean '53-'62. | '62.  | '61.  | '60.  | '59.  | '58.  | '57.  |
|------------------------|-------|---------------|-------|-------|-------|-------|-------|-------|
| March....Per ct.       | 3'698 | 3'594         | 3'644 | 3'500 | 3'707 | 3'631 | 3'576 | 3'604 |
| June .... "            | —     | 3'587         | 3'666 | 3'690 | 3'512 | 3'588 | 3'498 | 3'555 |
| Septmbr. "             | —     | 3'292         | 3'356 | 3'388 | 3'267 | 3'389 | 3'204 | 3'316 |
| Decmbr. "              | —     | 3'236         | 3'338 | 3'272 | 3'230 | 3'414 | 3'205 | 3'304 |

## (III.) DEATHS:—Percentages.

| Qrs. ended last day of | '63.  | Mean '53-'62. | '62.  | '61.  | '60.  | '59.  | '58.  | '57.  |
|------------------------|-------|---------------|-------|-------|-------|-------|-------|-------|
| March....Per ct.       | 2'546 | 2'498         | 2'447 | 2'453 | 2'481 | 2'515 | 2'631 | 2'298 |
| June..... "            | —     | 2'191         | 2'124 | 2'147 | 2'237 | 2'155 | 2'210 | 2'087 |
| Septmbr. "             | —     | 1'982         | 1'797 | 1'994 | 1'718 | 2'097 | 1'997 | 2'068 |
| Decmbr. "              | —     | 2'178         | 2'226 | 2'064 | 2'043 | 2'195 | 2'406 | 2'269 |

fifteen of them there was a decrease of marriages in each of the December quarters of the last two years. The numbers in these districts were—

| December Quarter.        | 1860. | 1861. | 1862. |
|--------------------------|-------|-------|-------|
| Leigh .....              | 86    | 82    | 56    |
| Bolton .....             | 344   | 318   | 249   |
| Bury .....               | 244   | 223   | 150   |
| Barton-upon-Irwell ..... | 116   | 105   | 55    |
| Chorlton .....           | 166   | 149   | 101   |
| Manchester .....         | 1,285 | 1,150 | 1,046 |
| Ashton .....             | 342   | 271   | 235   |
| Oldham .....             | 240   | 215   | 170   |
| Rochdale .....           | 237   | 187   | 166   |
| Haslingden .....         | 189   | 169   | 138   |
| Burnley .....            | 229   | 202   | 131   |
| Blackburn .....          | 412   | 281   | 181   |
| Chorley .....            | 105   | 60    | 34    |
| Preston .....            | 355   | 254   | 197   |
| Lancaster .....          | 79    | 71    | 64    |

In Cheshire the marriages in the district of Stockport were 332, 218, and 198, in the three corresponding quarters.

In Blackburn the decrease of marriages in the quarter on those of two previous December quarters was equal to 48 per cent.; in the more extensive but less populous district of Chorley, the decrease exceeded that high proportion, and reached 59 per cent. In Burnley it was 39 per cent.; in Chorlton, Bury, Preston, about 36 per cent.; in Wigan and Leigh, 33 per cent.; in Stockport, 28 per cent.; in Bolton and Oldham, 25 per cent.; in Ashton and Haslingden, 23 per cent.; in Manchester it was only 14 per cent.

The annual marriage-rate in England (persons married to the population) in the quarter was 1'890 per cent. against an average of 1'975. In London it was 2'15; and in Lancashire it was 1'70 per cent.

BIRTHS.—The number of births in the quarter that ended 31st March, was 186,653. In the same period of 1861, it was about 173,000; in that of last year it was 182,000. The annual birth-rate of the quarter (births to population) was 3'698 per cent., being higher than the average, which is 3'594. It was higher than it had been in any quarter during the course of ten years, 1853-62, except the spring quarter of 1854, and the winter quarter of 1860.

If the last two winter quarters are compared in respect to births, it will be found that those of 1863 were more numerous than those of 1862, in all the eleven divisions, except that which is the seat of the cotton manufacture; unless the Northern Counties, where there was a trifling decrease, constitute another exception. Not only have marriages been comparatively few in Lancashire, but the removal of families from that county in quest of employment has been of sufficient importance to reduce the registration of births in the parts which they have forsaken.

INCREASE OF POPULATION.—The births of last quarter were in excess of the deaths in the same time by 58,129. The population would have received an accession amounting to 616 daily, if immigration and emigration had been equal to each other.

The total number of English, Scotch, Irish, and foreign emigrants who left ports where there are emigration officers, in the quarter ended 31st March, was 37,806.\* This emigration is superior in amount to that of any March quarter since 1854. The Australian colonies attracted an increased number of settlers; but the United States, to which 24,900 persons sailed, were the place of destination to a great majority. Upwards of 17,000 natives of Ireland went to the United States in the quarter.

The emigration to the United States was more than three times as great as it was in the same period of 1862.

The number of English emigrants to all parts was about 10,075.

PRICES, THE WEATHER, AND PAUPERISM.—Wheat was cheap. The average price was 46s. 7d. per quarter. In the corresponding period of 1861, it was 55s. 1d.; in that of last year it was 60s. 1d. Beef was near its usual price; the average, lowest, and highest prices of mutton at Leadenhall and Newgate, were 5d. and 7d. per lb. by the carcase. Potatoes were cheaper than they have recently been at this season, the best having been sold at the Waterside Market, Southwark, at about 125s. per ton.

Mr. Glaisher writes, that with the exception of eleven days in March, the weather at Greenwich was warm, and in the seventy-nine days the daily excess of temperature was on an average nearly five degrees. The period comprising December, January, and February was, as compared with corresponding periods, amongst the warmest on record. For those three months together there are only three instances of a higher mean temperature since 1771.

\* From a Return with which the Registrar-General has been favoured by the Emigration Commissioners: the number returned as of English origin was 8,773, while the birthplace of 4,884 emigrants was not distinguished; in the above statement a proportional number of these has been added to those returned as of English origin.

The mean temperature of last quarter was 42·6°; and as far as records that can be trusted extend, it has been exceeded in the same period of the year in only two instances.

In regard to the four months ending 31st March, the mean temperature may be considered to have been as high as any that has ever been experienced in a season extending through the same months.

In the quarter the humidity of the air was below the average in January and March, above it in February. The rainfall was rather above the average in January, below it in the subsequent two months. In the southern parts of England there was little rain at any time in the quarter; north of 53° latitude there was a great deal in January, but generally in February and March the weather was dry.

The returns of pauperism are expected to be heaviest in the first quarter of the year; but those obtained for that portion of the present year show an overgrowth, which much exceeds the product of an ordinary winter. In-door paupers were more last quarter than in the corresponding season of 1861, while they were nearly the same as in that of 1862; but the poor relieved out-door were far more numerous than in either, as the following statement of the average numbers relieved every Saturday will prove:—

|                           |                        |                   |
|---------------------------|------------------------|-------------------|
| First quarter, 1861 ..... | In-door, 131,501 ..... | Out-door, 758,441 |
| „ '62 .....               | „ 143,926 .....        | „ 804,272         |
| „ '63 .....               | „ 143,661 .....        | „ 948,212         |

**DEATHS, AND THE STATE OF THE PUBLIC HEALTH.**—A winter remarkably “mild” has also been remarkably unhealthy. The deaths in England in the three months that ended 31st March were 128,524, against 122,192 in the same period of last year, which supplies an example of average health in winter, and may be taken as a means of comparison. It will be an approximation to the truth, to state that people died in the quarter at the rate of 20,000 in a year, whose lives would have been saved if epidemics or atmospheric causes of a nature unfavourable to health had not been in greater force than usual. The rate of mortality was 2·546 per cent., the average being 2·498.

The mortality of small towns and rural districts was 2·313 per cent. (against an average of 2·287). That of the chief towns was 2·705 per cent. (against an average of 2·688). The country appears to have suffered from the effects of the winter more than the town.

In the south-eastern portion of England, the death-rate was lowest; in the north-western counties, Cheshire and Lancashire, it was highest, a distinction which the seat of the cotton manufacture has earned alike in its prosperity and adversity. But in comparing the returns of deaths in the eleven divisions, attention is immediately drawn to the fact, that in all the divisions, with one exception, the deaths were more numerous last quarter than in the March quarter of 1862; and the single exception is found in that division where the staple industry on which half a million of persons are dependent is overthrown, and for a twelve-month four-fifths of that number have subsisted, unless the pittance has been aided by previous earnings or sale of household stock, on less than 4d. a-day per head. Or if the deaths in last quarter are compared with the mean number of two corresponding quarters in 1861-62, the increase for England was nearly six per cent.; for London and the North Midland Counties, 2·5 per cent.; for the South-eastern and South Midland Counties, and Yorkshire, 7 per cent.; for the Eastern, South-western, and West Midland Counties, about 12 per cent., while for the North-western division the increase (0·3 per cent.) is hardly appreciable, and for Lancashire, which constitutes the most important part of it, is found an actual decrease of the mortality. If the sixteen most important cotton districts of Lancashire are taken, there was an increase of deaths in five, a decrease in the remaining eleven. The increase was greatest in Chorlton (16 per cent.) and Oldham (21 per cent.) The decrease was great in Wigan, Warrington, Leigh, and Bury, in which

places it was 17 and 18 per cent., greatest in Preston and Burnley, where it was 20 and 24 per cent. This is a brief statement of the facts, whatever may be the solution of the problem which it suggests.

ANNUAL RATE of MORTALITY per Cent. in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1863-61.

|  | Area in Statute Acres. | Population Enumerated. |            | Quarters ending | Annual Rate of Mortality per Cent. in each Quarter of the Years |              |       |       |
|--|------------------------|------------------------|------------|-----------------|---|--------------|-------|-------|
|  |                        | 1851.                  | 1861.      |                 | 1863.   | Mean '53-62. | 1862. | 1861. |
| In 142 Districts, and 56 Sub-districts, comprising the Chief Towns.....  | 3,287,151              | 9,155,964              | 10,930,841 | March           | 2·705   | 2·688        | 2·661 | 2·658 |
|  |                        |                        |            | June....        | —   | 2·336        | 2·265 | 2·271 |
|  |                        |                        |            | Sept. ..        | —   | 2·239        | 1·977 | 2·193 |
|  |                        |                        |            | Dec. ....       | —   | 2·454        | 2·512 | 2·291 |
|  |                        |                        |            | Year ....       | —   | 2·429        | 2·354 | 2·353 |
| In the remaining Districts and Sub-districts of England and Wales, comprising chiefly Small Towns and Country Parishes | 34,037,732             | 8,771,645              | 9,135,383  | Year ....       | —   | 1·970        | 1·894 | 1·938 |
|  |                        |                        |            | March           | 2·343   | 2·287        | 2·184 | 2·210 |
|  |                        |                        |            | June...         | —   | 2·031        | 1·949 | 1·999 |
|  |                        |                        |            | Sept. ...       | —   | 1·694        | 1·573 | 1·753 |
|  |                        |                        |            | Dec. ....       | —   | 1·866        | 1·870 | 1·790 |

*Note.*—The three months January, February, March, contain 90, in leap year 91 days; the three months, April, May, June, 91 days; each of the last two quarters of the year 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365·25 days, and 366 and 365·25 days in leap year.

It may be observed: 1. While England enjoyed at least its average amount of health in the two winter quarters of 1861-62, Lancashire was at those times more unhealthy than usual, and in the common fluctuations of epidemics and other disease more or less improvement of the public health was to be expected. 2. The emigration returns discover a remarkable increase of English emigrants since March, 1862; for whereas the number in each quarter of 1861 and till April 1862, was from 5,000 to 9,000, since that period it has been from 10,000 to 14,000. The Registrar of Witton (Blackburn) mentions that a great number of families had removed out of his sub-district from want of employment; and it is probable that the populations of other parts have been diminished, enough to affect the local registers, by similar movements to places in England and beyond the seas, where that market for labour may be found which has failed the industrious at their own homes. 3. It will be gratefully admitted that the legal provision for the distressed, and the spontaneous liberality of their countrymen, have hitherto sufficed to maintain the people in health. But if the supply has been enough, it has not been more than enough, and its inevitable tendency is to a fall; and though it could be sustained for an indefinite time, it does not follow that the health of a community living in forced inaction could also be indefinitely prolonged, while that which has been called “the real life” of the people must be ebbing fast. 4. The Registrar of Wigan reports, that not a single death had arisen in his district from the distress; and as other local officers are silent on the deaths of operatives from want, it must be assumed that happily they had none to report.

ENGLAND:—MARRIAGES Registered in Quarters ended 31st December, 1862-60; and BIRTHS and DEATHS in Quarters ended 31st March, 1863-61.

| 1<br>DIVISIONS.<br>(England and Wales.) | 2<br>AREA<br>in<br>Statute<br>Acres. | 3<br>POPULATION,<br>1861.<br>(Persons.) | 4 5 6<br>MARRIAGES in Quarters ended<br>31st December, |            |            |
|---|--------------------------------------|---|--|------------|------------|
|   |                                      |   | '62.   | '61.       | '60.       |
| ENGLD. & WALES.... Totals               | 37,324,883                           | 20,066,224                              | No. 48,659   | No. 48,536 | No. 50,688 |
| I. London .....                         | 77,997                               | 2,803,989                               | 7,821  | 7,333      | 7,265      |
| II. South-Eastern .....                 | 4,065,935                            | 1,847,661                               | 4,385  | 4,277      | 4,274      |
| III. South Midland .....                | 3,201,290                            | 1,295,497                               | 3,097  | 3,005      | 3,233      |
| IV. Eastern .....                       | 3,214,099                            | 1,142,580                               | 3,026  | 2,978      | 3,147      |
| V. South-Western .....                  | 4,993,660                            | 1,835,714                               | 3,830  | 3,893      | 4,022      |
| VI. West Midland .....                  | 3,865,332                            | 2,436,568                               | 6,075  | 6,186      | 6,488      |
| VII. North Midland .....                | 3,540,797                            | 1,288,928                               | 3,047  | 2,879      | 2,952      |
| VIII. North-Western .....               | 2,000,227                            | 2,935,540                               | 6,374  | 7,087      | 7,969      |
| IX. Yorkshire .....                     | 3,634,636                            | 2,015,541                               | 5,145  | 5,171      | 5,621      |
| X. Northern .....                       | 3,492,322                            | 1,151,372                               | 2,764  | 2,777      | 2,737      |
| XI. Monmthsh. & Wales                   | 5,218,588                            | 1,312,834                               | 3,095  | 2,950      | 2,980      |

  

| 7<br>DIVISIONS.<br>(England and Wales.) | 8 9 10<br>BIRTHS in Quarters ended<br>31st March, |             |             | 11 12 13<br>DEATHS in Quarters ended<br>31st March, |             |             |
|---|---|-------------|-------------|---|-------------|-------------|
|   | '63.  | '62.        | '61.        | '63.  | '62.        | '61.        |
| ENGLD. & WALES.... Totals               | No. 186,653                                       | No. 182,005 | No. 172,933 | No. 128,524   | No. 122,192 | No. 121,215 |
| I. London .....                         | 26,750  | 25,800      | 24,984      | 18,967  | 18,405      | 18,614      |
| II. South-Eastern .....                 | 16,260  | 15,385      | 14,920      | 10,112  | 9,533       | 9,423       |
| III. South Midland .....                | 11,532  | 10,980      | 10,553      | 7,481   | 7,003       | 6,950       |
| IV. Eastern .....                       | 10,055  | 9,439       | 9,322       | 6,891   | 6,193       | 6,225       |
| V. South-Western .....                  | 16,037  | 15,345      | 14,796      | 11,149  | 9,692       | 9,957       |
| VI. West Midland .....                  | 23,725  | 22,761      | 22,157      | 16,507  | 14,884      | 14,520      |
| VII. North Midland .....                | 11,679  | 11,347      | 10,893      | 7,354   | 7,075       | 7,278       |
| VIII. North-Western .....               | 28,734  | 29,404      | 26,772      | 20,999  | 21,610      | 20,271      |
| IX. Yorkshire .....                     | 19,088  | 18,885      | 17,660      | 13,554  | 12,539      | 12,845      |
| X. Northern .....                       | 11,435  | 11,508      | 10,395      | 7,409   | 7,180       | 7,129       |
| XI. Monmthsh. & Wales                   | 11,358  | 11,151      | 10,481      | 8,101   | 8,078       | 8,003       |

## REMARKS ON THE WEATHER

DURING THE QUARTER ENDING 31ST MARCH, 1863.

By JAMES GLAISHER, Esq., F.R.S., &amp;c., Sec. of the British Meteorological Society.

With the exception of the period between March 9th and 19th, when the daily temperature of the air was below the average to the amount of  $2\frac{1}{2}^{\circ}$  daily, the weather was warm throughout the quarter, averaging a daily excess of  $4\frac{3}{4}^{\circ}$  of temperature for the remaining 79 days. The temperature of the preceding month, viz., December, was in excess, and the mean temperature of the three winter months, viz., December, January, and February, was  $42^{\circ}5$ , and is distinguished by being one of the warmest on record. In the preceding 92 years the warmest winter of all was that of 1795, its mean temperature was  $43^{\circ}2$ ; this was closely approached in the years 1834 and 1846, in each of which this value was  $43^{\circ}1$ ; and these are the only instances of a higher temperature since the year 1771. In the year 1818 the temperature for the same period was  $42^{\circ}4$ , closely approximating to the present. The month of March this year was also warm, which was not the case in the year 1795.

The mean temperature of the months January, February, and March, this year, was  $42^{\circ}6$ ; in the year 1834 it was  $42^{\circ}9$ ; in 1846 it was  $43^{\circ}6$ ; and these are the only instances, so far as trustworthy records extend, of an excess over the temperature of the first three months of the present year.

The mean temperature of the four months ending March of this year, is  $42^{\circ}9$ ; in the year 1846 it was  $43^{\circ}1$ ; and in 1834 it was  $43^{\circ}3$ ; so that the temperature we have lately had may be considered as high as has ever been experienced at this season of the year.

The mean temperature of January was  $41^{\circ}3$ , being higher than any January since 1853.

The mean temperature of February was  $42^{\circ}1$ , being the same as in 1861; one degree lower than in 1859; but, with these exceptions, the highest since the year 1850.

The mean temperature of March was  $43^{\circ}9$ , with the exception of 1859, when it was  $46^{\circ}4$ , was the warmest since the year 1842.

The mean high day temperature was in excess to the amount of  $3^{\circ}8$ ,  $4^{\circ}6$ , and  $3^{\circ}7$  respectively in these three months.

The mean low night temperature was in excess to the amount of  $3^{\circ}2$ ,  $2^{\circ}2$ , and  $0^{\circ}2$  respectively in these months.

Therefore both the days and nights were warm in the months of January and February; in March the days were warm, and the nights differed but little from their average value.

The mean temperature of the air in January was  $5^{\circ}2$ , in February was  $3^{\circ}6$ , and in March  $2^{\circ}6$  in excess over the average of 43 years.



The temperature of the dew point was  $2^{\circ}4$ ,  $3^{\circ}2$ , and  $0^{\circ}9$  above the average in the months of January, February, and March respectively, as found from the observations of the preceding 22 years.

The degree of humidity was less than its average in January and March, and nearly of its average value in February.

The pressure of the atmosphere was in defect in January and March, and in excess in February.

The fall of rain in the extreme southern parts of England in January was somewhat in defect, was a little over its average about London, but north of  $53^{\circ}$  it was in excess, and very much so at northern stations.

All over the country the weather in February and March was remarkably fine and mild.

The mean temperature of the air at Greenwich in the three months ending February, constituting the three winter months, was  $42^{\circ}5$ , being  $4^{\circ}7$  above the average of the preceding 91 years.

| 1863.<br>Months. |      | Temperature of |   |   |              |   |               |   |                      |   | Elastic<br>Force<br>of<br>Vapour. |   | Weight<br>of Vapour<br>in a<br>Cubic Foot<br>of Air. |   |
|------------------|------|----------------|---|---|--------------|---|---------------|---|----------------------|---|-----------------------------------|---|--|---|
|                  |      | Air.           |   |   | Evaporation. |   | Dew<br>Point. |   | Air—<br>Daily Range. |   |                                   |   |  |   |
|                  |      | Mean.          | Diff.<br>from<br>Average<br>of 22<br>Years. | Diff.<br>from<br>Average<br>of 22<br>Years. | Mean.        | Diff.<br>from<br>Average<br>of 22<br>Years. | Mean.         | Diff.<br>from<br>Average<br>of 22<br>Years. | Mean.                | Diff.<br>from<br>Average<br>of 22<br>Years. | Mean.                             | Diff.<br>from<br>Average<br>of 22<br>Years. | Mean.  | Diff.<br>from<br>Average<br>of 22<br>Years. |
| Jan. ....        | 41.8 | +5.8           | +3.7  | 39.9  | +3.0         | 37.6  | +2.4          | 10.3  | +0.6                 | 41.5  | In. .225                          | +0.022                                      | 2.6  | +0.2  |
| Feb. ....        | 42.1 | +3.9           | +3.4  | 40.2  | +3.1         | 37.9  | +3.2          | 13.8  | +2.4                 | 43.0  | 228                               | +0.025                                      | 2.6  | +0.2  |
| March ...        | 43.9 | +3.0           | +2.0  | 41.0  | +1.1         | 37.6  | +0.9          | 18.0  | +3.5                 | 45.1  | .225                              | +0.006                                      | 2.6  | +0.1  |
| Mean.....        | 42.6 | +4.2           | +3.0  | 40.3  | +2.4         | 37.7  | +2.2          | 14.0  | +2.2                 | 43.2  | .226                              | +0.016                                      | 2.6  | +0.2  |

| 1863.<br>Months. |    | Degree<br>of<br>Humidity. |   | Reading<br>of<br>Barometer. |   | Weight of a<br>Cubic Foot<br>of Air. |   | Rain.    |   | Daily<br>Horizontal<br>Movement<br>of the<br>Air. | Reading of Thermometer on Grass. |                                    |               |   |  |
|------------------|----|---------------------------|---|-----------------------------|---|--------------------------------------|---|----------|---|---|----------------------------------|------------------------------------|---------------|---|--|
|                  |    | Mean.                     | Diff.<br>from<br>Average<br>of 22<br>Years. | Mean.                       | Diff.<br>from<br>Average<br>of 22<br>Years. | Mean.                                | Diff.<br>from<br>Average<br>of 22<br>Years. | Amnt.    | Diff.<br>from<br>Average<br>of 46<br>Years. |   | Number of Nights<br>it was       |                                    |               | Low-<br>est<br>Read-<br>ing<br>at<br>Night. | High-<br>est<br>Read-<br>ing<br>at<br>Night. |
|                  |    |                           |   |                             |   |                                      |   |          |   |   | At or<br>below<br>30°.           | Be-<br>tween<br>30°<br>and<br>40°. | Above<br>40°. |   |  |
| Jan. ....        | 85 | - 4                       | In. 29.619                                  | -147                        | Gr. 547                                     | - 7                                  | In. 2.6                                     | +0.8     | Miles. 357                                  | 10  | 19                               | 2                                  | 23.3          | 43.8  |  |
| Feb. ....        | 86 | + 1                       | 30.141                                      | +353                        | 557   | + 4                                  | 0.6   | -1.0     | 254   | 12  | 14                               | 2                                  | 19.5          | 44.7  |  |
| March ...        | 78 | - 5                       | 29.715                                      | -056                        | 547   | - 2                                  | 0.7   | -0.8     | 237   | 16  | 14                               | 1                                  | 22.5          | 42.4  |  |
| Mean.....        | 83 | - 3                       | 29.825                                      | +050                        | 550   | - 2                                  | Sum 3.9                                     | Sum -1.0 | Mean 283                                    | Sum 38  | Sum 47                           | Sum 5                              | Lowest 19.5   | Highest 44.7                                |  |

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

ENGLAND:—Meteorological Table, Quarter ended 31st March, 1863.

| 1                        | 2  | 3  | 4   | 5  | 6  | 7  | 8  | 9                                   |
|--------------------------|--|--|---|--|--|--|--|-------------------------------------|
| NAMES<br>OF<br>STATIONS. | Mean<br>Pressure of<br>Dry Air<br>reduced to the<br>Level of the<br>Sea. | Highest<br>Reading of the<br>Thermo-<br>meter. | Lowest<br>Reading of the<br>Thermo-<br>meter. | Range<br>of Tem-<br>perature<br>in the<br>Quarter. | Mean<br>Monthly<br>Range<br>of Tem-<br>perature. | Mean<br>Daily<br>Range<br>of Tem-<br>perature. | Mean<br>Tem-<br>perature<br>of the<br>Air. | Mean<br>Degree<br>of Hu-<br>midity. |
|                          | in.  | °  | °   | °  | °  | °  | °  |                                     |
| Guernsey .....           | 29.807   | 56.0   | 34.0  | 22.0   | 19.3   | 7.2  | 44.9                                       | 88                                  |
| Exeter .....             | 29.808   | 56.9   | 27.3  | 29.6   | 26.9   | 10.4   | 44.0                                       | 80                                  |
| Ventnor .....            | 29.800   | 59.0   | 34.0  | 25.0   | 20.3   | 8.1  | 45.0                                       | 78                                  |
| Barnstaple .....         | 29.764   | 61.5   | 28.0  | 33.5   | 29.0   | 14.6   | 44.3                                       | 86                                  |
| Royal Observatory        | 29.764   | 64.0   | 27.2  | 36.8   | 30.6   | 14.1   | 42.6                                       | 83                                  |
| Royston.....             | 29.729   | 63.4   | 25.5  | 37.9   | 30.7   | 12.8   | 41.9                                       | 85                                  |
| Lampeter .....           | 29.748   | 62.8   | 21.4  | 41.4   | 33.6   | 12.9   | 42.5                                       | 89                                  |
| Norwich.....             | 29.740   | 64.0   | 27.0  | 37.0   | 29.0   | 12.0   | 42.7                                       | 83                                  |
| Belvoir Castle ...       | 29.716   | 62.0   | 25.0  | 37.0   | 30.6   | 11.7   | 41.2                                       | 84                                  |
| Liverpool .....          | 29.700   | 61.4   | 31.9  | 29.5   | 23.5   | 7.9  | 43.9                                       | 79                                  |
| Wakefield .....          | 29.695   | 63.7   | 20.2  | 43.5   | 34.6   | 13.8   | 42.2                                       | 85                                  |
| Leeds .....              | 29.693   | 62.0   | 24.0  | 38.0   | 30.0   | 11.0   | 40.7                                       | 82                                  |
| Stonyhurst.....          | —  | —  | 25.0  | —  | —  | —  | —  | —                                   |
| York .....               | 29.689   | 60.0   | 25.5  | 34.5   | 28.8   | 10.9   | 41.7                                       | 88                                  |
| Scarborough .....        | 29.686   | 57.0   | 28.0  | 29.0   | 24.3   | 8.8  | 42.2                                       | 90                                  |
| North Shields ...        | 29.686   | 60.0   | 25.8  | 34.2   | 27.4   | 9.5  | 41.3                                       | 86                                  |

| 10                       | 11                             | 12                     | 13 | 14 | 15 | 16                             | 17  | 18                   |
|--------------------------|--------------------------------|------------------------|----|----|----|--------------------------------|---|----------------------|
| NAMES<br>OF<br>STATIONS. | WIND.                          |                        |    |    |    | Mean<br>Amount<br>of<br>Cloud. | RAIN.                                     |                      |
|                          | Mean<br>estimated<br>Strength. | Relative Proportion of |    |    |    |                                | Number of<br>Days<br>on which<br>it fell. | Amount<br>collected. |
|                          |                                | N.                     | E. | S. | W. |                                |   |                      |
|                          |                                |                        |    |    |    |                                |   | in.                  |
| Guernsey .....           | 1.6                            | 7                      | 5  | 8  | 10 | 4.5                            | 45  | 8.6                  |
| Exeter .....             | 1.1                            | 7                      | 5  | 7  | 11 | 6.3                            | 60  | 6.1                  |
| Ventnor .....            | —                              | 6                      | 4  | 8  | 11 | —                              | 34  | 6.2                  |
| Barnstaple .....         | 1.5                            | 9                      | 5  | 6  | 10 | 4.2                            | 53  | 7.5                  |
| Royal Observatory        | —                              | 5                      | 5  | 9  | 10 | 7.4                            | 34  | 3.9                  |
| Royston.....             | —                              | 6                      | 3  | 9  | 12 | 5.6                            | 58  | 4.0                  |
| Lampeter .....           | 0.8                            | 6                      | 5  | 9  | 10 | 6.7                            | 50  | 9.6                  |
| Norwich .....            | 1.4                            | 4                      | 3  | 11 | 12 | 6.3                            | 28  | 3.6                  |
| Belvoir Castle ...       | 1.7                            | 4                      | 2  | 11 | 13 | 7.9                            | 35  | 3.4                  |
| Liverpool .....          | 1.5                            | 3                      | 3  | 10 | 12 | 7.1                            | 45  | 4.0                  |
| Wakefield .....          | 1.9                            | 5                      | 6  | 8  | 12 | 7.6                            | 47  | 6.1                  |
| Leeds .....              | 1.7                            | 4                      | 4  | 11 | 11 | 7.0                            | 29  | 6.2                  |
| Stonyhurst.....          | 1.0                            | 5                      | 4  | 6  | 14 | 7.6                            | 63  | 11.3                 |
| York .....               | —                              | 5                      | 3  | 8  | 15 | —                              | 40  | 4.4                  |
| Scarborough .....        | 2.0                            | 5                      | 3  | 6  | 16 | —                              | 27  | 3.6                  |
| North Shields ...        | 2.1                            | 6                      | 3  | 8  | 13 | 5.6                            | 46  | 4.9                  |

## No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER  
ENDED 31ST MARCH, 1863.

**BIRTHS.**—27,729 births were registered in Scotland during the quarter ended 31st March, 1863. This gives the annual proportion, 315 births in every 10,000 persons of the estimated population, or 1 birth in every 28 persons; being the exact mean birth-rate that has prevailed in Scotland during the first quarter of the seven previous years.

13,842 of the children were males, and 12,887 females; thus indicating a proportion of 107·4 males for every 100 females at birth.

The usual difference in the proportion of the births was observed in the town and in the country districts; by a wise law of nature, to prevent the extirpation of the human race, the births being in a higher ratio wherever the general mortality is greater. Thus, in the 126 town districts of Scotland (which embraces almost all the towns with a population of 2,000 inhabitants and upwards), 15,219 births were registered; while in the 883 country districts (embracing the remainder of the population of Scotland) 11,510 births occurred; thus indicating an annual proportion of 372 births to every 10,000 persons living in the town districts; but only 315 births in a like number of persons in the country districts.

Of the 26,729 births, 24,004 were legitimate, and 2,725 illegitimate, being in the proportion of one illegitimate in every 9·8 births, or 10·1 per cent. of the births illegitimate. The exceptional character of Scotland relative to this form of vice is again shown by the fact, that while only 9·7 per cent. of the births were illegitimate in the town districts, 10·7 per cent. were illegitimate in the country districts.

**DEATHS.**—19,227 deaths were registered in Scotland during the first quarter of 1863, being in the annual proportion of 248 deaths in every 10,000 persons of the estimated population. The mean death-rate of the first quarter, during the eight previous years, was 236 deaths in every 10,000 persons, so that the mortality has been unusually high during the past quarter.

The deaths in the town districts greatly exceeded those in the country. Thus, in the 126 town districts, 11,678 deaths were registered; while in 883 country districts the deaths only numbered 7,549. This indicates an annual proportion for the quarter of 285 deaths in every 10,000 persons living in the town districts, but only 206 deaths, in a like population, in the country districts.

Of the deaths, 6,377 were registered during January, 6,161 during February, and 6,689 during March; thus indicating 206 deaths daily during January, 220 daily during February, and 216 daily during March.

**INCREASE OF POPULATION.**—The births numbering 26,729, and the deaths 19,227, the increase of the births over deaths amounted to 7,502 persons, and by that number the population would have increased had there been no emigration. From a return, however, furnished to the Registrar-General by the Emigration Commissioners, it appears that 37,806 persons emigrated from the ports of Great Britain and Ireland, during the first quarter of 1863, of whom 1,841 were ascertained to be of Scottish origin. If to that number 273 be added, as the proportion of persons whose origin was not ascertained, the total number of Scottish emigrants would amount to 214, which, deducted from the increase of births over deaths, leaves only 5,388 as the increase of the population during the quarter.

**MARRIAGES.**—5,090 marriages were registered in Scotland during the first quarter, being in the annual proportion of 65 marriages in every 10,000 persons of the estimated population; a proportion higher than the mean of the corresponding quarter during the eight previous years, which was only at the rate of 60 marriages annually in every 10,000 persons. We must not be too hasty in drawing conclusions from this fact as to the general prosperity of trade, and the full employment

of the working classes, which an increase in the number of marriages generally indicates, because it must be remembered that the number of marriages during the fourth quarter of 1862 was very far below the usual amount, and the increase during the past quarter does not even balance the decrease of the previous quarter.

As usual, the proportion of marriages in the town districts greatly exceeded those in the country. Thus, in the 126 town districts, 3,135 marriages were registered, while in the 883 rural districts only 1,955 marriages were registered, thus indicating an annual proportion of 76 marriages in every 10,000 persons in the town districts, but only 53 marriages in every 10,000 persons in the rural districts.

Of the marriages, 2,503 were registered during January, 1,336 during February, and 1,251 during March.

**HEALTH OF THE POPULATION.**—The health of the population has not been good during the past quarter; much sickness has prevailed, the recoveries have been slow, and the deaths numerous. The long continued wet weather during the previous year, the great humidity of the atmosphere, and the want of the usual dry, bracing, frosty weather, no doubt contributed to weaken the constitutions of the people, and render them more liable to attacks of disease, and to sink under it when attacked. Hence it happened that, during the past quarter, the increased mortality was not attributable to the prevalence of any particular epidemic, but rather to the greater general increase of all complaints, and to the greater fatality of all.

Measles was the leading epidemic among children, and appeared to prevail equally over the whole country, but fortunately in a mild form. Typhus fever, in its varied forms, was very prevalent, but not apparently concentrated in any particular town or district. Diphtheria was unusually prevalent, and contributed largely to swell the number of deaths. In some districts, where it assumed the epidemic form, nearly all the deaths were caused by it. Affections of the throat were usually prevalent over Scotland during the whole quarter. Scarlet fever appeared in a few districts; and the very malignant form which prevailed in the town of Kineardine, in Perthshire, was, perhaps with justice, considered to be associated with the defective drainage of the town. Small-pox broke out in several localities, being introduced by strangers travelling with the disease on them. The registrar of Dunbar mentions a remarkable fact relative to the infectious nature of this disease and its introduction into that district. A person died of small-pox in Edinburgh, and his clothes were sent to Dunbar to be washed. The person who washed the clothes first took small-pox, when it spread from her to numerous others in that district. As showing the value of vaccination in protecting from a fatal result, it may be mentioned that several of the Registrars remark that the small-pox deaths were confined to those who had never been vaccinated. Influenza and bronchitic affections were common over the country during the quarter.

**WEATHER.**—During the first quarter of 1863, it can scarcely be said that there was any truly wintry weather. Frosts and snows were almost unknown; the weather was unusually mild; the mean temperature was higher than the average; the fall of rain during January was much greater than usual, and attended with strong, damp, south-westerly winds. The air was more than usually humid during both January and February; and it was not till March that the humidity of the atmosphere fell to its normal condition, and that the quantity of rain showed a material tendency to diminish. The lowest mean temperature in Scotland generally occurs during January or February, but during the past twelve months the lowest mean temperature occurred during November; and the mean temperature of January was 1°·4, and that of February 4°·1 above that of November. This damp mild weather, following the two damp rainy years just closed, apparently acted prejudicially on the health of the population, so that, even under a rising temperature, the mortality during February was greater than during January—a most unusual occurrence—for the daily deaths during January, with its lower temperature, was only 206; but the daily deaths during February, with its higher temperature, were 220. The setting in of the noxious easterly winds during March kept the deaths during that month at the high average of 216 daily.

SCOTLAND:—MARRIAGES, BIRTHS, and DEATHS Registered in the Quarter ended 31st March, 1863.

| 1                         | 2                     | 2                                  | 4          | 5       | 6       |
|---------------------------|-----------------------|------------------------------------|------------|---------|---------|
| DIVISIONS.<br>(Scotland,) | AREA<br>in<br>Statute | POPULATION,<br>1861.<br>(Persons.) | Marriages. | Births. | Deaths. |
|                           | Acres.                | No.                                | No.        | No.     | No.     |
| SCOTLAND.....Totals       | 19,639,377            | 3,062,294                          | 5,090      | 26,729  | 19,227  |
| I. Northern .....         | 2,261,622             | 130,422                            | 216        | 764     | 541     |
| II. North-Western .....   | 4,739,876             | 167,329                            | 291        | 1,139   | 898     |
| III. North-Eastern .....  | 2,429,594             | 366,783                            | 461        | 3,108   | 2,005   |
| IV. East Midland .....    | 2,790,492             | 523,822                            | 850        | 4,153   | 3,092   |
| V. West Midland .....     | 2,693,176             | 242,507                            | 344        | 2,003   | 1,456   |
| VI. South-Western .....   | 1,462,397             | 1,008,253                          | 2,031      | 10,264  | 7,391   |
| VII. South-Eastern .....  | 1,192,524             | 408,962                            | 674        | 3,619   | 2,597   |
| VIII. Southern .....      | 2,069,696             | 214,216                            | 223        | 1,679   | 1,247   |

No. III.—GREAT BRITAIN.

SUMMARY of MARRIAGES, in the Quarter ended 31st December, 1862; and BIRTHS, and DEATHS, in the Quarter ended 31st March, 1863.

| COUNTRIES.             | AREA<br>in<br>Statute | POPULATION,<br>1861.<br>(Persons.) | Marriages. | Births. | Deaths. |
|------------------------|-----------------------|------------------------------------|------------|---------|---------|
|                        | Acres.                | No.                                | No.        | No.     | No.     |
| England and Wales..... | 37,324,883            | 20,066,224                         | 48,659     | 186,653 | 128,524 |
| Scotland .....         | 19,639,377            | 3,062,294                          | 6,066      | 26,729  | 19,227  |
| GREAT BRITAIN.....     | 56,964,260            | 23,128,518                         | 54,725     | 213,382 | 147,751 |

Trade of United Kingdom, 1862-61-60.—Distribution of Exports from United Kingdom, according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of Imports at Port of Entry, and therefore including Freight and Importer's Profit.

| Merchandise (excluding Gold and Silver),<br>Imported from, and Exported to,<br>the following Foreign Countries, &c.<br>(The unit 000's are omitted.) | Whole Years.    |               |                 |               |                 |               |
|--|-----------------|---------------|-----------------|---------------|-----------------|---------------|
|  | 1862.           |               | 1861.           |               | 1860.           |               |
|  | Imports<br>from | Exports<br>to | Imports<br>from | Exports<br>to | Imports<br>from | Exports<br>to |
| <b>I.—FOREIGN COUNTRIES:</b>   | £               | £             | £               | £             | £               | £             |
| Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland   | 21,121,         | 4,124,        | 18,649,         | 5,057,        | 23,118,         | 5,042,        |
| Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium  | 27,921,         | 20,536,       | 24,663,         | 21,303,       | 27,889,         | 21,217,       |
| Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)  | 28,096,         | 14,912,       | 24,979,         | 15,126,       | 24,244,         | 10,879,       |
| Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta   | 5,045,          | 6,879,        | 4,872,          | 7,896,        | 4,887,          | 6,902,        |
| Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt  | 17,251,         | 6,661,        | 13,247,         | 6,306,        | 15,908,         | 7,716,        |
| Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco  | 489,            | 204,          | 544,            | 171,          | 296,            | 219,          |
| Western Africa   | 1,720,          | 939,          | 1,515,          | 878,          | 1,801,          | 967,          |
| Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands  | —               | 74,           | 6,              | 39,           | 54,             | 81,           |
| Indian Seas, Siam, Sumatra, Java, Philippines; other Islands   | 1,041,          | 1,248,        | 1,183,          | 1,918,        | 1,151,          | 2,122,        |
| South Sea Islands  | —               | —             | —               | 115,          | —               | 34,           |
| China, including Hong Kong   | 12,749,         | 3,190,        | 9,610,          | 4,891,        | 9,491,          | 5,319,        |
| United States of America   | 27,693,         | 14,399,       | 49,385,         | 9,058,        | 44,728,         | 21,614,       |
| Mexico and Central America   | 1,112,          | 925,          | 662,            | 756,          | 715,            | 645,          |
| Foreign West Indies and Hayti  | 4,591,          | 3,148,        | 4,900,          | 2,472,        | 3,578,          | 2,670,        |
| South America (Northern), New Granada, Venezuela, and Ecuador  | 916,            | 1,008,        | 539,            | 1,405,        | 687,            | 1,209,        |
| " (Pacific), Peru, Bolivia, Chili, and Patagonia   | 5,602,          | 1,707,        | 5,718,          | 2,561,        | 5,373,          | 3,086,        |
| " (Atlantic) Brazil, Uruguay, and Buenos Ayres   | 6,540,          | 5,073,        | 4,741,          | 6,525,        | 4,238,          | 7,149,        |
| Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands  | 123,            | 10,           | 135,            | 10,           | 153,            | 6,            |
| <b>Total.—Foreign Countries</b>  | 162,010,        | 85,037,       | 165,348,        | 86,487,       | 168,311,        | 96,877,       |
| <b>II.—BRITISH POSSESSIONS:</b>  |                 |               |                 |               |                 |               |
| British India, Ceylon, and Singapore   | 39,014,         | 16,282,       | 26,155,         | 17,925,       | 18,467,         | 19,310,       |
| Austral. Cols.—New South Wales and Victoria  | 4,950,          | 9,218,        | 4,945,          | 8,265,        | 4,698,          | 7,808,        |
| " " So. Aus., W. Aus., Tasm., and N. Zea.  | 2,160,          | 2,712,        | 1,956,          | 2,437,        | 1,772,          | 1,899,        |
| British North America  | 8,499,          | 3,993,        | 8,664,          | 3,697,        | 6,826,          | 3,738,        |
| " W. Indies with Btsh. Guiana & Honduras   | 6,584,          | 3,187,        | 6,106,          | 2,665,        | 6,304,          | 2,557,        |
| Cape and Natal   | 1,517,          | 1,922,        | 1,422,          | 1,987,        | 1,714,          | 2,064,        |
| Br. W. Co. of Af., Ascension and St. Helena  | 237,            | 411,          | 202,            | 434,          | 175,            | 395,          |
| Mauritius  | 968,            | 521,          | 1,914,          | 552,          | 1,684,          | 539,          |
| Channel Islands  | 653,            | 854,          | 639,            | 666,          | 697,            | 656,          |
| <b>Total.—British Possessions</b>  | 64,582,         | 39,100,       | 52,003,         | 38,628,       | 42,337,         | 38,966,       |
| <b>General Total</b>   | £226,592,       | 124,137,      | £217,351,       | 125,115,      | £210,648,       | 135,843,      |



IMPORTS.—(United Kingdom.)—Whole Years, 1862-61-60-59-8.—Computed Real Value (*Ex-duty*), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.

| (Whole Years.)<br>FOREIGN ARTICLES IMPORTED. | (000's omitted.) | 1862.    | 1861.    | 1860.    | 1859.    | 1858. |
|--|------------------|----------|----------|----------|----------|-------|
|  | £                | £        | £        | £        | £        | £     |
| RAW MATLS.—Textile. Cotton Wool ....         | 31,093,          | 38,653,  | 35,757,  | 34,568,  | 30,107,  |       |
| Wool (Sheep's) ..                            | 12,109,          | 9,719,   | 11,031,  | 9,831,   | 8,972,   |       |
| Silk .....                                   | 15,897,          | 7,907,   | 10,324,  | 10,596,  | 6,111,   |       |
| Flax .....                                   | 5,206,           | 3,423,   | 3,837,   | 3,769,   | 3,021,   |       |
| Hemp .....                                   | 2,645,           | 1,894,   | 1,865,   | 2,363,   | 1,873,   |       |
| Indigo .....                                 | 2,446,           | 2,977,   | 2,529,   | 1,929,   | 2,292,   |       |
|  | 69,396,          | 64,573,  | 65,343,  | 63,056,  | 52,376,  |       |
| “ “ Various. Hides .....                     | 3,188,           | 2,892,   | 3,296,   | 3,373,   | 2,480,   |       |
| Oils .....                                   | 3,951,           | 3,576,   | 3,923,   | 3,654,   | 3,636,   |       |
| Metals .....                                 | 4,604,           | 3,752,   | 4,228,   | 3,887,   | 3,710,   |       |
| Tallow .....                                 | 2,508,           | 3,312,   | 4,014,   | 2,933,   | 3,042,   |       |
| Timber .....                                 | 9,293,           | 9,931,   | 9,206,   | 8,163,   | 5,964,   |       |
|  | 23,544,          | 23,463,  | 24,667,  | 22,010,  | 18,832,  |       |
| “ “ Agrcltl. Guano .....                     | 1,635,           | 2,022,   | 1,563,   | 769,     | 4,084,   |       |
| Seeds .....                                  | 3,211,           | 3,108,   | 3,392,   | 3,042,   | 2,710,   |       |
|  | 4,846,           | 5,130,   | 4,955,   | 3,811,   | 6,794,   |       |
| TROPICAL, & C., PRODUCE. Tea .....           | 9,176,           | 6,851,   | 6,944,   | 5,813,   | 5,207,   |       |
| Coffee .....                                 | 3,303,           | 2,629,   | 2,543,   | 1,956,   | 1,742,   |       |
| Sugar & Molasses ..                          | 12,019,          | 13,252,  | 12,811,  | 12,539,  | 13,468,  |       |
| Tobacco .....                                | 2,351,           | 2,195,   | 1,778,   | 1,817,   | 2,531,   |       |
| Rice .....                                   | 2,400,           | 2,127,   | 1,023,   | 805,     | 1,653,   |       |
| Fruits .....                                 | 1,228,           | 1,470,   | 1,254,   | 1,599,   | 1,290,   |       |
| Wine .....                                   | 3,649,           | 3,863,   | 4,202,   | 2,781,   | 2,041,   |       |
| Spirits .....                                | 1,692,           | 1,734,   | 1,919,   | 2,228,   | 1,250,   |       |
|  | 35,818,          | 34,121,  | 32,474,  | 29,538,  | 29,182,  |       |
| FOOD .....                                   | 37,748,          | 34,750,  | 31,432,  | 17,894,  | 19,993,  |       |
| Grain and Meal..                             | 8,564,           | 7,780,   | 6,546,   | 3,372,   | 3,139,   |       |
| Provisions .....                             | 46,312,          | 42,530,  | 37,978,  | 21,266,  | 23,132,  |       |
| Remainder of Enumerated Articles .....       | 4,213,           | 3,869,   | 3,714,   | 3,379,   | 3,023,   |       |
| TOTAL ENUMERATED IMPORTS....                 | 184,129,         | 173,687, | 169,131, | 143,060, | 133,339, |       |
| Add for UNENUMERATED IMPORTS (say)           | 46,032,          | 43,422,  | 42,283,  | 35,765,  | 33,335,  |       |
| TOTAL IMPORTS.....                           | 230,161,         | 217,109, | 211,414, | 178,825, | 166,674, |       |

IMPORTS.—(United Kingdom.)—First Two Months (January — February), 1863-62-61-60-59.—Computed Real Value (*Ex-duty*), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.

| (First Two Months.)<br>FOREIGN ARTICLES IMPORTED. | (000's omitted.) | 1863.   | 1862.   | 1861.   | 1860.   | 1859. |
|---|------------------|---------|---------|---------|---------|-------|
|   | £                | £       | £       | £       | £       | £     |
| RAW MATLS.—Textile. Cotton Wool ....              | 3,532,           | 1,206,  | 3,979,  | 5,338,  | 3,952,  |       |
| Wool (Sheep's) ..                                 | 578,             | 510,    | 392,    | 660,    | 418,    |       |
| Silk .....  | 2,190,           | 2,034,  | 1,181,  | 1,385,  | 2,313,  |       |
| Flax .....  | 387,             | 366,    | 198,    | 297,    | 243,    |       |
| Hemp .....  | 110,             | 60,     | 54,     | 58,     | 72,     |       |
| Indigo .....                                      | 223,             | 179,    | 66,     | 93,     | 76,     |       |
|   | 7,020,           | 4,355,  | 5,870,  | 7,831,  | 7,074,  |       |
| “ “ Various. Hides .....                          | 162,             | 182,    | 124,    | 299,    | 140,    |       |
| Oils .....  | 378,             | 339,    | 170,    | 363,    | 306,    |       |
| Metals .....                                      | 411,             | 525,    | 260,    | 349,    | 287,    |       |
| Tallow .....                                      | 77,              | 145,    | 130,    | 134,    | 86,     |       |
| Timber .....                                      | 556,             | 498,    | 526,    | 363,    | 275,    |       |
|   | 1,584,           | 1,689,  | 1,210,  | 1,508,  | 1,094,  |       |
| “ “ Agrcltl. Guano .....                          | 141,             | 54,     | 151,    | 134,    | 88,     |       |
| Seeds .....                                       | 233,             | 242,    | 288,    | 317,    | 326,    |       |
|   | 374,             | 296,    | 379,    | 451,    | 414,    |       |
| TROPICAL, & C., PRODUCE. Tea ... ..               | 2,120,           | 1,639,  | 1,110,  | 1,158,  | 476,    |       |
| Coffee .....                                      | 350,             | 284,    | 172,    | 188,    | 118,    |       |
| Sugar & Molasses ..                               | 1,357,           | 1,153,  | 1,304,  | 1,111,  | 1,097,  |       |
| Tobacco .....                                     | 314,             | 154,    | 179,    | 43,     | 67,     |       |
| Rice .....  | 100,             | 46,     | 128,    | 87,     | 24,     |       |
| Fruits .....                                      | 40,              | 82,     | 173,    | 100,    | 80,     |       |
| Wine .....  | 595,             | 448,    | 544,    | 391,    | 242,    |       |
| Spirits .....                                     | 345,             | 241,    | 186,    | 215,    | 168,    |       |
|   | 5,221,           | 4,047,  | 3,796,  | 3,293,  | 2,272,  |       |
| FOOD .....  | 3,957,           | 5,274,  | 6,172,  | 1,709,  | 1,993,  |       |
| Grain and Meal..                                  | 565,             | 658,    | 508,    | 649,    | 352,    |       |
| Provisions .....                                  | 4,522,           | 5,932,  | 6,680,  | 2,358,  | 2,345,  |       |
| Remainder of Enumerated Articles .....            | 512,             | 408,    | 311,    | 431,    | 308,    |       |
| TOTAL ENUMERATED IMPORTS....                      | 19,233,          | 16,727, | 18,246, | 15,872, | 13,507, |       |
| Add for UNENUMERATED IMPORTS (say)                | 4,808,           | 4,182,  | 4,561,  | 3,968,  | 3,377,  |       |
| TOTAL IMPORTS.....                                | 24,041,          | 20,909, | 22,807, | 19,840, | 16,884, |       |

EXPORTS. — (United Kingdom.) — First Three Months (January—March), 1863-62-61-60-59. — Declared Real Value, at Port of Shipment, of Articles of BRITISH and IRISH Produce and Manufactures Exported from United Kingdom.

| (First Three Months.) (Unit 000's omitted.)<br>BRITISH PRODUCE, &c., EXPORTED. |                        | 1863.   | 1862.   | 1861.   | 1860.   | 1859.   |
|--|------------------------|---------|---------|---------|---------|---------|
|  |                        | £       | £       | £       | £       | £       |
| MANFRS.—Textile.   | Cotton Manufactures..  | 6,312,  | 7,530,  | 9,134,  | 9,389,  | 9,550,  |
|  | „ Yarn .....           | 1,143,  | 1,389,  | 1,908,  | 2,425,  | 2,303,  |
|  | Woollen Manufactures   | 3,209,  | 2,985,  | 2,876,  | 3,005,  | 2,948,  |
|  | „ Yarn .....           | 984,    | 669,    | 641,    | 807,    | 543,    |
|  | Silk Manufactures ...  | 443,    | 473,    | 532,    | 503,    | 559,    |
|  | „ Yarn .....           | 84,     | 78,     | 55,     | 48,     | 50,     |
|  | Linen Manufactures.... | 1,455,  | 1,088,  | 1,084,  | 1,122,  | 1,177,  |
|  | „ Yarn .....           | 493,    | 403,    | 327,    | 469,    | 475,    |
|  |                        | 14,123, | 14,615, | 16,557, | 17,768, | 17,607, |
| „ Sewed.   | Apparel .....          | 526,    | 422,    | 390,    | 462,    | 452,    |
|  | Haberdy. and Millnry.  | 860,    | 673,    | 902,    | 989,    | 1,085,  |
|  |                        | 1,386,  | 1,095,  | 1,292,  | 1,451,  | 1,537,  |
| METALS .....   | Hardware .....         | 680,    | 566,    | 732,    | 816,    | 831,    |
|  | Machinery .....        | 838,    | 718,    | 750,    | 663,    | 576,    |
|  | Iron .....             | 2,536,  | 2,049,  | 2,058,  | 2,395,  | 2,604,  |
|  | Copper and Brass ..... | 748,    | 596,    | 474,    | 676,    | 661,    |
|  | Lead and Tin .....     | 610,    | 586,    | 350,    | 573,    | 581,    |
|  | Coals and Culm .....   | 765,    | 782,    | 658,    | 618,    | 608,    |
|  |                        | 6,178,  | 5,297,  | 5,022,  | 5,741,  | 5,870,  |
| Ceramic Manufcts.  | Earthenware and Glass  | 435,    | 357,    | 385,    | 480,    | 442,    |
| Indigenous Mfrs.   | Beer and Ale .....     | 456,    | 402,    | 348,    | 645,    | 572,    |
|  | Butter .....           | 108,    | 54,     | 134,    | 139,    | 161,    |
|  | Cheese .....           | 31,     | 25,     | 27,     | 26,     | 30,     |
|  | Candles .....          | 54,     | 47,     | 69,     | 63,     | 32,     |
|  | Salt .....             | 52,     | 58,     | 78,     | 61,     | 39,     |
|  | Spirits .....          | 114,    | 58,     | 79,     | 60,     | 56,     |
|  | Soda .....             | 198,    | 186,    | 117,    | 226,    | 251,    |
|  |                        | 1,013,  | 830,    | 852,    | 1,220,  | 1,141,  |
| Various Manufcts.  | Books, Printed .....   | 89,     | 83,     | 100,    | 101,    | 101,    |
|  | Furniture .....        | 64,     | 45,     | 35,     | 48,     | 51,     |
|  | Leather Manufactures   | 456,    | 585,    | 402,    | 514,    | 431,    |
|  | Soap .....             | 59,     | 53,     | 46,     | 63,     | 39,     |
|  | Plate and Watches ...  | 114,    | 94,     | 102,    | 120,    | 126,    |
|  | Stationery .....       | 59,     | 57,     | 143,    | 181,    | 185,    |
|  |                        | 842,    | 917,    | 828,    | 1,027,  | 933,    |
| Remainder of Enumerated Articles .....   |                        | 1,771,  | 1,663,  | 710,    | 707,    | 771,    |
| Unenumerated Articles .....  |                        | 1,813,  | 1,649,  | 2,023,  | 2,087,  | 2,219,  |
| TOTAL EXPORTS .....  |                        | 27,561, | 26,423, | 27,669, | 30,481, | 30,520, |

SHIPPING. — FOREIGN TRADE. — (United Kingdom.) — First Three Months (January—March), 1863-62-61-60. — Vessels Entered and Cleared with Cargoes, including repeated Voyages, but excluding Government Transports.

| (First Three Months.)         | 1863.    |                          |                 | 1862.    |                          | 1861.    |                          | 1860.    |                          |
|-------------------------------|----------|--------------------------|-----------------|----------|--------------------------|----------|--------------------------|----------|--------------------------|
|                               | Vessels. | Tonnage (000's omitted.) | Average Tonnage | Vessels. | Tonnage (000's omitted.) | Vessels. | Tonnage (000's omitted.) | Vessels. | Tonnage (000's omitted.) |
|                               |          |                          |                 |          |                          |          |                          |          |                          |
| ENTERED:—                     | No.      | Tons.                    | Tons.           | No.      | Tons.                    | No.      | Tons.                    | No.      | Tons.                    |
| Vessels belonging to—         |          |                          |                 |          |                          |          |                          |          |                          |
| Russia .....                  | 43       | 16,                      | 372             | 55       | 20,                      | 60       | 23,                      | 39       | 15,                      |
| Sweden .....                  | 112      | 22,                      | 195             | 65       | 16,                      | 117      | 25,                      | 70       | 17,                      |
| Norway .....                  | 427      | 100,                     | 234             | 314      | 62,                      | 212      | 43,                      | 182      | 42,                      |
| Denmark .....                 | 479      | 47,                      | 98              | 309      | 32,                      | 379      | 39,                      | 328      | 34,                      |
| Prussia and Ger. Sts. ....    | 496      | 140,                     | 282             | 361      | 101,                     | 375      | 108,                     | 311      | 79,                      |
| Holland and Belgium ....      | 406      | 53,                      | 130             | 356      | 47,                      | 295      | 39,                      | 271      | 40,                      |
| France .....                  | 760      | 64,                      | 84              | 396      | 35,                      | 597      | 47,                      | 302      | 27,                      |
| Spain and Portugal .....      | 87       | 26,                      | 297             | 77       | 24,                      | 102      | 25,                      | 61       | 17,                      |
| Italy & other Eupn. Sts.      | 135      | 40,                      | 370             | 81       | 27,                      | 214      | 61,                      | 117      | 37,                      |
| United States .....           | 209      | 217,                     | 1,033           | 248      | 221,                     | 489      | 450,                     | 331      | 326,                     |
| All other States .....        | 5        | 2,                       | 400             | 2        | 1,                       | 3        | 1,                       | 7        | 2,                       |
| United Kingdom. & Depds. .... | 3,159    | 728,                     | 230             | 2,264    | 586,                     | 2,843    | 861,                     | 2,019    | 636,                     |
|                               | 4,544    | 1,392,                   | 306             | 3,844    | 1,181,                   | 4,054    | 1,221,                   | 3,712    | 1,113,                   |
| Totals Entered                | 7,703    | 2,120,                   | 275             | 6,108    | 1,767,                   | 6,897    | 2,082,                   | 5,731    | 1,749,                   |
| CLEARED:—                     |          |                          |                 |          |                          |          |                          |          |                          |
| Russia .....                  | 82       | 31,                      | 378             | 91       | 31,                      | 81       | 28,                      | 70       | 25,                      |
| Sweden .....                  | 86       | 23,                      | 267             | 100      | 25,                      | 116      | 28,                      | 116      | 29,                      |
| Norway .....                  | 236      | 55,                      | 233             | 227      | 51,                      | 183      | 44,                      | 207      | 52,                      |
| Denmark .....                 | 432      | 46,                      | 106             | 414      | 44,                      | 404      | 46,                      | 412      | 46,                      |
| Prussia and Ger. Sts. ....    | 687      | 163,                     | 237             | 739      | 153,                     | 594      | 134,                     | 564      | 133,                     |
| Holland and Belgium ....      | 369      | 52,                      | 113             | 438      | 68,                      | 307      | 43,                      | 322      | 53,                      |
| France .....                  | 1,010    | 101,                     | 100             | 1,223    | 127,                     | 1,098    | 110,                     | 697      | 76,                      |
| Spain and Portugal .....      | 77       | 26,                      | 337             | 76       | 24,                      | 77       | 21,                      | 69       | 19,                      |
| Italy & other Eupn. Sts.      | 190      | 60,                      | 316             | 97       | 32,                      | 259      | 72,                      | 206      | 64,                      |
| United States .....           | 177      | 178,                     | 15              | 260      | 219,                     | 377      | 357,                     | 340      | 327,                     |
| All other States .....        | 6        | 2,                       | 333             | 12       | 6,                       | 5        | 2,                       | 6        | 2,                       |
| United Kingdom. & Depds. .... | 3,352    | 737,                     | 207             | 3,687    | 780,                     | 3,501    | 885,                     | 3,009    | 826,                     |
|                               | 5,966    | 1,723,                   | 288             | 5,792    | 1,640,                   | 4,792    | 1,332,                   | 4,683    | 1,339,                   |
| Totals Cleared                | 9,318    | 2,460,                   | 253             | 9,479    | 2,420,                   | 8,293    | 2,217,                   | 7,692    | 2,165,                   |

SHIPPING CASUALTIES Reported in Lloyd's "REGISTER OF LOSSES," during  
(Casualties to Foreign Coasters, or to

Note.—This information, in a different form, was originally published, at intervals, in "Lloyd's

|                        | Wrecked. |                   |                                      |        | Sunk. |         |        | Abandoned. |            |        | Misc. |
|------------------------|----------|-------------------|--------------------------------------|--------|-------|---------|--------|------------|------------|--------|-------|
|                        | Totally. | Part Cargo Saved. | Whole, or nearly so, of Cargo Saved. | Total. | Lost. | Raised. | Total. | Lost.      | Recovered. | Total. |       |
| January—               |          |                   |                                      |        |       |         |        |            |            |        |       |
| 1854.....              | 145      | 12                | 3                                    | 160    | 32    | 6       | 38     | 42         | 6          | 48     | 10    |
| '55.....               | 86       | 14                | 3                                    | 103    | 19    | 6       | 25     | 17         | 6          | 23     | 5     |
| '56.....               | 119      | 7                 | 4                                    | 130    | 36    | 1       | 37     | 27         | 5          | 32     | 1     |
| '57.....               | 89       | 15                | 6                                    | 110    | 48    | 4       | 52     | 24         | 7          | 31     | 7     |
| '58.....               | 57       | 6                 | 3                                    | 66     | 28    | 2       | 30     | 10         | 4          | 14     | 3     |
| '59.....               | 56       | 16                | 3                                    | 75     | 23    | 3       | 26     | 17         | 2          | 19     | 8     |
| Average of Six Years } | 92.0     | 11.67             | 3.67                                 | 107.33 | 31.0  | 3.67    | 34.67  | 22.83      | 5.0        | 27.83  | 5.83  |
| February—              |          |                   |                                      |        |       |         |        |            |            |        |       |
| 1854.....              | 73       | 3                 | 1                                    | 77     | 18    | 2       | 20     | 28         | 12         | 40     | 4     |
| '55.....               | 59       | 4                 | 5                                    | 68     | 27    | 1       | 28     | 16         | 3          | 19     | —     |
| '56.....               | 42       | 13                | 1                                    | 56     | 22    | 5       | 27     | 21         | 9          | 30     | 4     |
| '57.....               | 58       | 16                | 9                                    | 83     | 15    | 3       | 18     | 22         | 6          | 28     | 4     |
| '58.....               | 71       | 8                 | —                                    | 79     | 22    | 1       | 23     | 11         | 3          | 14     | 5     |
| '59.....               | 46       | 4                 | 1                                    | 51     | 34    | 2       | 36     | 13         | 3          | 16     | 7     |
| Average of Six Years } | 58.17    | 8.0               | 2.83                                 | 69.0   | 23.0  | 2.33    | 25.33  | 18.5       | 6.0        | 24.5   | 4.0   |
| March—                 |          |                   |                                      |        |       |         |        |            |            |        |       |
| 1854.....              | 49       | 1                 | —                                    | 50     | 22    | 3       | 25     | 25         | 4          | 29     | 8     |
| '55.....               | 53       | 10                | 1                                    | 64     | 18    | 2       | 20     | 19         | 10         | 29     | 6     |
| '56.....               | 54       | 7                 | 3                                    | 64     | 18    | 1       | 19     | 13         | 3          | 16     | 1     |
| '57.....               | 58       | 17                | 2                                    | 77     | 29    | 2       | 31     | 24         | 4          | 28     | 9     |
| '58.....               | 67       | 8                 | 1                                    | 76     | 29    | 5       | 34     | 12         | 7          | 19     | 4     |
| '59.....               | 59       | 12                | 6                                    | 77     | 25    | 3       | 28     | 11         | 6          | 17     | 3     |
| Average of Six Years } | 56.67    | 9.17              | 2.17                                 | 68.0   | 23.5  | 2.67    | 26.17  | 17.33      | 5.67       | 23.0   | 5.17  |
| March Quarter—         |          |                   |                                      |        |       |         |        |            |            |        |       |
| 1854.....              | 267      | 16                | 4                                    | 287    | 72    | 11      | 83     | 95         | 22         | 117    | 22    |
| '55.....               | 198      | 28                | 9                                    | 235    | 64    | 9       | 73     | 52         | 19         | 71     | 11    |
| '56.....               | 215      | 27                | 8                                    | 250    | 76    | 7       | 83     | 61         | 17         | 78     | 7     |
| '57.....               | 205      | 48                | 17                                   | 270    | 92    | 9       | 101    | 70         | 17         | 87     | 20    |
| '58.....               | 195      | 22                | 4                                    | 221    | 79    | 8       | 87     | 33         | 14         | 47     | 12    |
| '59.....               | 161      | 32                | 10                                   | 203    | 82    | 8       | 90     | 41         | 11         | 52     | 18    |
| Average of Six Years } | 206.83   | 28.83             | 8.67                                 | 244.33 | 77.5  | 8.67    | 86.17  | 58.67      | 16.67      | 75.33  | 15.0  |

\* The majority of these may

the Months of JANUARY, FEBRUARY, and MARCH, from 1854 to 1859 inclusive.  
Vessels Unidentified, are not included.)

List," but is now collated and tabulated by HENRY JEULA, Esq., Member of Lloyd's, F.S.S.

|                      | Stranded.                      |          |                                  | Condemned.          |                    |        | Touched the Ground, sustaining Trifling Damage. | Total.  |
|----------------------|--------------------------------|----------|----------------------------------|---------------------|--------------------|--------|---|---------|
|                      | Subsequent Fate not Reported.* | Got Off. | Got Off with Loss of part Cargo. | After Striking, &c. | From other Causes. | Total. |   |         |
| January—             |                                |          |                                  |                     |                    |        |   |         |
| 1854.....            | 155                            | 179      | 5                                | 339                 | 5                  | 4      | 9   | 610     |
| '55.....             | 55                             | 119      | 3                                | 177                 | 5                  | 2      | 7   | 342     |
| '56.....             | 74                             | 120      | 5                                | 199                 | 4                  | 4      | 8   | 411     |
| '57.....             | 116                            | 197      | 10                               | 323                 | 1                  | 3      | 4   | 529     |
| '58.....             | 44                             | 101      | 9                                | 154                 | 4                  | 9      | 13  | 280     |
| '59.....             | 38                             | 120      | 7                                | 165                 | 4                  | 5      | 9   | 302     |
| Average of Six Years | 80.33                          | 139.33   | 6.5                              | 226.17              | 3.83               | 4.5    | 8.33  | 412.33  |
| February—            |                                |          |                                  |                     |                    |        |   |         |
| 1854.....            | 63                             | 112      | 4                                | 179                 | 7                  | 7      | 14  | 339     |
| '55.....             | 47                             | 95       | 1                                | 143                 | 1                  | 3      | 4   | 262     |
| '56.....             | 71                             | 101      | 3                                | 175                 | 1                  | 1      | 2   | 298     |
| '57.....             | 35                             | 105      | 7                                | 147                 | —                  | 6      | 6   | 288     |
| '58.....             | 51                             | 103      | 6                                | 160                 | —                  | 3      | 3   | 284     |
| '59.....             | 33                             | 105      | 4                                | 142                 | 7                  | 12     | 19  | 271     |
| Average of Six Years | 50.0                           | 103.5    | 4.17                             | 157.67              | 2.67               | 5.33   | 8.0   | 290.33  |
| March—               |                                |          |                                  |                     |                    |        |   |         |
| 1854.....            | 51                             | 94       | 5                                | 150                 | 5                  | 2      | 7   | 271     |
| '55.....             | 45                             | 115      | 8                                | 168                 | 2                  | 3      | 5   | 292     |
| '56.....             | 42                             | 84       | 5                                | 131                 | 4                  | 5      | 9   | 241     |
| '57.....             | 76                             | 149      | 5                                | 230                 | 4                  | 3      | 7   | 385     |
| '58.....             | 42                             | 119      | 3                                | 164                 | 4                  | 7      | 11  | 308     |
| '59.....             | 46                             | 124      | 4                                | 174                 | 1                  | 10     | 11  | 310     |
| Average of Six Years | 50.33                          | 114.17   | 5.0                              | 169.5               | 3.33               | 5.0    | 8.33  | 301.17  |
| March Quarter—       |                                |          |                                  |                     |                    |        |   |         |
| 1854.....            | 269                            | 385      | 14                               | 668                 | 17                 | 13     | 30  | 1,220   |
| '55.....             | 147                            | 329      | 12                               | 488                 | 8                  | 8      | 16  | 896     |
| '56.....             | 187                            | 305      | 13                               | 505                 | 9                  | 10     | 19  | 950     |
| '57.....             | 227                            | 451      | 22                               | 700                 | 5                  | 12     | 17  | 1,202   |
| '58.....             | 137                            | 323      | 18                               | 478                 | 8                  | 19     | 27  | 872     |
| '59.....             | 117                            | 349      | 15                               | 481                 | 12                 | 27     | 39  | 883     |
| Average of Six Years | 180.67                         | 357.0    | 15.67                            | 553.33              | 9.83               | 14.83  | 24.67   | 1003.83 |

be considered as "Wrecks."



**GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—Computed Real Value for the First Three Months (January—March), 1863-62-61.**

(000's at unit end omitted.)

| (First Three Months.)            | 1863.  |         | 1862.  |         | 1861.  |         |
|----------------------------------|--------|---------|--------|---------|--------|---------|
|                                  | Gold.  | Silver. | Gold.  | Silver. | Gold.  | Silver. |
| <b>Imported from:—</b>           | £      | £       | £      | £       | £      | £       |
| Australia .....                  | 1,001, | —       | 1,661, | —       | 1,612, | —       |
| So. Amca. and W. Indies .....    | 1,267, | 2,019,  | 553,   | 1,307,  | 357,   | 1,579,  |
| United States and Cal. ....      | 2,496, | 320,    | 1,208, | 36,     | —      | 5,      |
|                                  | 4,764, | 2,339,  | 3,422, | 1,343,  | 1,969, | 1,584,  |
| France .....                     | 7,     | 302,    | 65,    | 249,    | 886,   | 206,    |
| Hanse Towns, Holl. & Belg. ....  | 181,   | 485,    | 344,   | 591,    | 138,   | 114,    |
| Prtgl., Spain, and Gbrltr. ....  | 3,     | 21,     | 7,     | 33,     | 4,     | 60,     |
| Mita., Trky., and Egypt .....    | 114,   | 1,      | 2,     | 5,      | 1,     | 3,      |
| China .....                      | —      | —       | —      | 1,      | —      | —       |
| West Coast of Africa .....       | 28,    | 1,      | 38,    | 2,      | 12,    | —       |
| All other Countries....          | 7,     | 2,      | 77,    | 7,      | 14,    | 8,      |
| <b>Totals Imported</b>           | 5,104, | 3,151,  | 3,955, | 2,231,  | 3,024, | 1,975,  |
| <b>Exported to:—</b>             |        |         |        |         |        |         |
| France .....                     | 1,294, | 245,    | 1,214, | 202,    | 639,   | 278,    |
| Hanse Towns, Holl. & Belg. ....  | 944,   | 148,    | 117,   | 91,     | 5,     | 115,    |
| Prtgl., Spain, and Gbrltr. ....  | 1,221, | —       | 486,   | 7,      | 224,   | 4,      |
|                                  | 3,459, | 393,    | 1,817, | 300,    | 868,   | 397,    |
| Ind. and China (via Egypt) ..... | 610,   | 2,662,  | 353,   | 2,380,  | 188,   | 2,499,  |
| Danish West Indies....           | —      | —       | 28,    | 4,      | —      | —       |
| United States .....              | 2,     | —       | 26,    | —       | 3,063, | 18,     |
| South Africa .....               | 34,    | 11,     | —      | —       | 6,     | —       |
| Mauritius .....                  | —      | —       | —      | —       | —      | 2,      |
| Brazil .....                     | 350,   | 25,     | 5,     | 10,     | 5,     | 37,     |
| All other Countries....          | 152,   | 25,     | 252,   | 13,     | 14,    | 37,     |
| <b>Totals Exported</b>           | 4,607, | 3,116,  | 2,481, | 2,707,  | 4,144, | 2,990,  |
| <b>Excess of Imports ....</b>    | 497,   | 35,     | 1,474, | —       | —      | —       |
| <b>„ Exports ....</b>            | —      | —       | —      | 476,    | 1,120  | 1,015,  |

**REVENUE.—(UNITED KINGDOM.)—31st MARCH, 1863-62-61-60.**

*Net Produce in YEARS and QUARTERS ended 31st MARCH, 1863-62-61-60.*

[Unit 000's omitted.]

| QUARTERS,<br>ended 31st March. | 1863.   | 1862.   | 1863.              |        | Corresponding Quarters. |         |
|--------------------------------|---------|---------|--------------------|--------|-------------------------|---------|
|                                |         |         | Less.              | More.  |                         |         |
|                                | £       | £       | £                  | £      | £                       | £       |
|                                | Mins.   | Mins.   | Mins.              | Mins.  | Mins.                   | Mins.   |
| Customs .....                  | 5,722,  | 5,724,  | 2,                 | —      | 5,821,                  | 5,551,  |
| Excise .....                   | 4,665,  | 5,044,  | 379,               | —      | 4,873,                  | 4,507,  |
| Stamps .....                   | 2,374,  | 2,294,  | —                  | 80,    | 2,191,                  | 2,128,  |
| Taxes .....                    | 357,    | 355,    | —                  | 2,     | 314,                    | 313,    |
| Post Office .....              | 955,    | 905,    | —                  | 50,    | 895,                    | 915,    |
|                                | 14,073, | 14,322, | 381,               | 132,   | 14,097,                 | 13,414, |
| Property Tax .....             | 3,890,  | 4,427,  | 537,               | —      | 4,024,                  | 6,002,  |
|                                | 17,963, | 18,749, | 918,               | 132,   | 18,121,                 | 19,416, |
| Crown Lands .....              | 79,     | 77,     | —                  | 1,     | 76,                     | 75,     |
| Miscellaneous .....            | 1,171,  | 780,    | —                  | 392,   | 339,                    | 729,    |
| <b>Totals .....</b>            | 19,213, | 19,606, | 918,               | 525,   | 18,536,                 | 20,220, |
|                                |         |         | NET DECR. £392,868 |        |                         |         |
| YEARS,<br>ended 31st March.    | 1863.   | 1862.   | 1863.              |        | Corresponding Years.    |         |
|                                |         |         | Less.              | More.  |                         |         |
|                                | £       | £       | £                  | £      | £                       | £       |
|                                | Mins.   | Mins.   | Mins.              | Mins.  | Mins.                   | Mins.   |
| Customs .....                  | 24,034, | 23,674, | —                  | 360,   | 23,306,                 | 24,461, |
| Excise .....                   | 17,155, | 18,332, | 1,177,             | —      | 19,435,                 | 20,361, |
| Stamps .....                   | 8,994,  | 8,591,  | —                  | 403,   | 8,348,                  | 8,043,  |
| Taxes .....                    | 3,150,  | 3,160,  | 10,                | —      | 3,127,                  | 3,232,  |
| Post Office .....              | 3,650,  | 3,510,  | —                  | 140,   | 3,400,                  | 3,310,  |
|                                | 56,983, | 57,267, | 1,187,             | 903,   | 57,616,                 | 59,407, |
| Property Tax .....             | 10,567, | 10,365, | —                  | 202,   | 10,924,                 | 9,596,  |
|                                | 67,550, | 67,632, | 1,187,             | 1,105, | 68,540,                 | 69,003, |
| Crown Lands .....              | 300,    | 295,    | —                  | 5,     | 290,                    | 284,    |
| Miscellaneous .....            | 2,753,  | 1,747,  | —                  | 1,006, | 1,453,                  | 1,802,  |
| <b>Totals .....</b>            | 70,603, | 69,674, | 1,187,             | 2,116, | 70,283,                 | 71,089, |
|                                |         |         | NET INCR. £929,082 |        |                         |         |

REVENUE.—(UNITED KINGDOM).—QUARTER ENDED 31ST MARCH, 1863 :—  
APPLICATION.

*An Account showing the REVENUE and other RECEIPTS of the QUARTER ended 31st March, 1863; the APPLICATION of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon such Charge.*

## Received:—

|  |             |
|--|-------------|
| Surplus Balance beyond the Charge of the Consolidated Fund for the Quarter ended 31st December, 1862, viz.:— | £           |
| Great Britain .....  | —           |
| Ireland .....  | £24,400     |
|  | 024,400     |
| Income received in the Quarter ended 31st March, 1863, as shown on preceding page .....                      | 19,213,746  |
| Amount raised per Act 23 and 24 Victoria, cap. 109, on account of Fortifications, &c. ....                   | 200,000     |
| Amount received in the Quarter ended 31st March, 1863, in repayment of Advances for Public Works, &c. ....   | 299,702     |
|  | £20,638,023 |

## Paid:—

|  |            |             |
|--|------------|-------------|
| Amount applied out of the Income for the Quarter ended 31st March, 1863, in redemption of Exchequer Bills (Deficiency), for the Quarter ended 31st December, 1862..... | £          | 2,168,512   |
| Amount applied out of the Income to Supply Services in the Quarter ended 31st March, 1863 .....  |            | 10,507,332  |
| Charge of the Consolidated Fund for the Quarter ended 31st March, 1863, viz.:—   |            |             |
| Interest of the Permanent Debt .....   | £5,715,487 |             |
| Terminable Debt .....  | 600,080    |             |
| Principal of Exchequer Bills .....   | 6,800      |             |
| Interest of .....  | 85,455     |             |
| „ Deficiency Bills .....   | 175        |             |
| The Civil List .....   | 101,051    |             |
| Other Charges on Consolidated Fund .....   | 655,278    |             |
| Advances for Public Works, &c. ....  | 130,786    |             |
|  |            | 7,384,612   |
| Surplus Balance beyond the Charge of the Consolidated Fund for the Quarter ended 31st March, 1863, viz.:—  |            |             |
| Great Britain .....  | £198,200   |             |
| Ireland .....  | 889,282    |             |
|  |            | 587,572     |
|  |            | £20,638,023 |

## CORN.—Gazette Average Prices (ENGLAND AND WALES) First Quarter of 1863.

[This Table is communicated by H. F. JADIS, Esq., Comptroller of Corn Returns.]

| Weeks ended on a Saturday 1863. | Weekly Average. (Per Impl. Quarter.) |         |       |       |        |       |
|---------------------------------|--------------------------------------|---------|-------|-------|--------|-------|
|                                 | Wheat.                               | Barley. | Oats. | Rye.  | Beans. | Peas. |
|                                 | s. d.                                | s. d.   | s. d. | s. d. | s. d.  | s. d. |
| January 3 .....                 | 45 10                                | 34 3    | 20 5  | 32 —  | 36 8   | 37 5  |
| „ 10 .....                      | 46 10                                | 34 6    | 20 6  | 41 0  | 36 8   | 37 4  |
| „ 17 .....                      | 47 10                                | 35 —    | 20 2  | 35 —  | 36 7   | 37 5  |
| „ 24 .....                      | 48 1                                 | 35 8    | 20 9  | 30 8  | 36 3   | 38 1  |
| „ 31 .....                      | 47 11                                | 35 9    | 20 10 | 32 4  | 36 3   | 36 8  |
| Average for January ..          | 47 4                                 | 35 —    | 20 6  | 34 3  | 36 5   | 37 4  |
| February 7 .....                | 47 7                                 | 35 11   | 20 4  | 35 2  | 36 3   | 36 10 |
| „ 14 .....                      | 47 2                                 | 36 3    | 21 8  | 33 —  | 36 7   | 37 10 |
| „ 21 .....                      | 46 6                                 | 36 5    | 21 8  | 31 6  | 36 3   | 37 2  |
| „ 28 .....                      | 46 7                                 | 36 5    | 21 9  | 33 4  | 36 4   | 37 8  |
| Average for February ..         | 46 11                                | 36 3    | 21 4  | 33 3  | 36 4   | 37 4  |
| March 7 .....                   | 46 2                                 | 36 10   | 21 11 | 33 1  | 36 2   | 37 3  |
| „ 14 .....                      | 45 3                                 | 36 7    | 21 4  | 34 5  | 35 10  | 35 11 |
| „ 21 .....                      | 45 —                                 | 36 9    | 21 6  | 35 11 | 35 7   | 34 6  |
| „ 28 .....                      | 45 4                                 | 36 5    | 21 2  | 32 4  | 35 4   | 36 5  |
| Average for March ....          | 45 5                                 | 36 7    | 21 5  | 33 11 | 35 8   | 36 —  |
| Average for the Quarter ..      | 46 7                                 | 35 10   | 21 —  | 33 10 | —      | 36 11 |

## RAILWAYS.—PRICES, Jan.—March,—and TRAFFIC, Jan.—March, 1863.

| Total Capital Ex-<br>pended<br>Mlbs. | Railway.           | For the (£100).<br>Price on |             |             | Miles Open. |       | Total Traffic<br>first 13 Weeks.<br>(unit 000's omitted.) |        | Traffic pr.<br>Mile pr. Wk.<br>13 Weeks. |      | Dividends per Cent.<br>for Half Years. |                 |                 |
|--------------------------------------|--------------------|-----------------------------|-------------|-------------|-------------|-------|---|--------|--|------|--|-----------------|-----------------|
|                                      |                    | 2nd<br>Mch.                 | 2nd<br>Feb. | 1st<br>Jan. | '63.        | '62.  | '63.  | '62.   | '63.                                     | '62. | 30 Jun.<br>'62.                        | 31 Dec.<br>'61. | 30 Jun.<br>'61. |
| £                                    |                    |                             |             |             | No.         | No.   | £   | £      | £  | £    | s. d.                                  | s. d.           | s. d.           |
| 47.7                                 | Lond. & N.Westn.   | 99½                         | 98          | 98          | 1,179       | 1,130 | 1,055,  | 986,   | 69                                       | 67   | 37 6                                   | 47 6            | 37 6            |
| 41.3                                 | Great Western .... | 66½                         | 65½         | 68½         | 992         | 964   | 666,  | 634,   | 51                                       | 53   | 5 —                                    | 30 —            | 22 6            |
| 13.9                                 | „ Northern....     | 123½                        | 128         | 125½        | 330         | 330   | 331,  | 311,   | 75                                       | 72   | 45 —                                   | 77 6            | 37 6            |
| 16.8                                 | „ Eastern ....     | 49½                         | 47½         | 46½         | 663         | 644   | 341,  | 320,   | 39                                       | 38   | 20 —                                   | 30 —            | 16 3            |
| 10.4                                 | Brighton .....     | 114                         | 113½        | 118½        | 250         | 241   | 194,  | 172,   | 59                                       | 54   | 50 —                                   | 70 —            | 50 —            |
| 14.6                                 | South-Eastern .... | 94½                         | 94½         | 88½         | 306         | 306   | 222,  | 198,   | 56                                       | 49   | 42 6                                   | 50 —            | 41 8            |
| 13.9                                 | „ Western ....     | 101½                        | 103½        | 102         | 442         | 400   | 224,  | 196,   | 39                                       | 37   | 40 —                                   | 55 —            | 40 —            |
| 158.6                                |                    | 92½                         | 92½         | 92½         | 4,162       | 4,015 | 3,033,  | 2,817, | 56                                       | 53   | 34 3                                   | 51 —            | 35 1            |
| 22.0                                 | Midland.....       | 125½                        | 128½        | 128½        | 630         | 614   | 493,  | 464,   | 60                                       | 58   | 55 —                                   | 70 —            | 62 6            |
| 19.5                                 | Lancsh. and York.  | 109                         | 109½        | 109½        | 395         | 395   | 410,  | 391,   | 79                                       | 76   | 37 6                                   | 50 —            | 45 —            |
| 11.7                                 | Sheffield and Man. | 46                          | 42½         | 41          | 237         | 237   | 186,  | 172,   | 60                                       | 57   | —                                      | 12 6            | 7 6             |
| 23.8                                 | North-Eastern .... | 98½                         | 100½        | 100         | 894         | 867   | 491,  | 466,   | 42                                       | 41   | 42 6                                   | 50 —            | 52 6            |
| 77.0                                 |                    | 94½                         | 95½         | 94½         | 2,156       | 2,113 | 1,580,  | 1,493, | 57                                       | 54   | 45 —                                   | 45 6            | 41 9            |
| 9.1                                  | Caledonian .....   | 117½                        | 115½        | 116½        | 230         | 230   | 199,  | 192,   | 66                                       | 64   | 50 —                                   | 55 —            | 50 —            |
| 5.3                                  | Gt. S. & Wn. Irln. | 101                         | 104         | 106         | 329         | 329   | 93,   | 94,    | 22                                       | 22   | 50 —                                   | 50 —            | 50 —            |
| 250.0                                | Gen. aver. ....    | 95½                         | 96          | 96          | 6,877       | 6,687 | 4,905,  | 4,596, | 55                                       | 53   | 36 6                                   | 49 9            | 39 5            |

Consols.—Money Prices 2nd March, 92½ to ¾,—2nd February, 92½ to ¾,—1st January, 92½.  
Exchequer Bills. „ 2s. dis. to 2s. pm. „ 4s. dis. to par. „ 9s. to 13s. pm.

## BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the FIRST QUARTER (Jan.—March) of 1863.

| ISSUE DEPARTMENT. |               |                  |                   |                        | COLLATERAL COLUMNS.                               |   |
|-------------------|---------------|------------------|-------------------|------------------------|---|---|
| 1                 | 2             | 3                | 4                 | 5                      | 6   | 7   |
| Liabilities.      | DATES.        | Assets.          |                   |                        | Notes in Hands of Public. (Col. 1 minus col. 16.) | Minimum Rates of Discount at Bank of England. |
| Notes Issued.     | (Wednesdays.) | Government Debt. | Other Securities. | Gold Coin and Bullion. |   |   |
| Mins. £           | 1863.         | Mins. £          | Mins. £           | Mins. £                | Mins. £   | 1863. Per ann.                                |
| 28,44             | Jan. 7 ....   | 11,02            | 3,63              | 13,79                  | 20,23   | 15 Jan. 4 p. ct.                              |
| 27,89             | " 14 ....     | 11,02            | 3,63              | 13,24                  | 20,29   |   |
| 27,61             | " 21 ....     | 11,02            | 3,63              | 12,96                  | 20,18   |   |
| 27,39             | " 28 ....     | 11,02            | 3,63              | 12,74                  | 20,10   | 29 " 5 "                                      |
| 27,46             | Feb. 4 ....   | 11,02            | 3,63              | 12,81                  | 20,07   |   |
| 27,82             | " 11 ....     | 11,02            | 3,63              | 13,17                  | 19,83   |   |
| 28,30             | " 18 ....     | 11,02            | 3,63              | 13,65                  | 19,31   | 19 Feb. 4 "                                   |
| 28,37             | " 25 ....     | 11,02            | 3,63              | 13,72                  | 19,12   |   |
| 28,26             | Mch. 4 ....   | 11,02            | 3,63              | 13,61                  | 19,69   |   |
| 28,10             | " 11 ....     | 11,02            | 3,63              | 13,45                  | 19,23   |   |
| 28,32             | " 18 ....     | 11,02            | 3,63              | 13,67                  | 19,46   |   |
| 28,79             | " 25 ....     | 11,02            | 3,63              | 14,14                  | 19,60   |   |

## BANKING DEPARTMENT.

| 8                 | 9         | 10      | 11       | 12                         | 13            | 14          | 15       | 16      | 17                    | 18                                |
|-------------------|-----------|---------|----------|----------------------------|---------------|-------------|----------|---------|-----------------------|-----------------------------------|
| Liabilities.      |           |         |          |                            | Assets.       |             |          |         |                       | Totals of Liabilities and Assets. |
| Capital and Rest. | Deposits. | DATES.  |          |                            | Securities.   |             | Reserve. |         |                       |                                   |
| Capital.          | Rest.     | Public. | Private. | Seven Day and other Bills. | (Wednesdays.) | Government. | Other.   | Notes.  | Gold and Silver Coin. |                                   |
| Mins. £           | Mins. £   | Mins. £ | Mins. £  | Mins. £                    | 1863.         | Mins. £     | Mins. £  | Mins. £ | Mins. £               | Mins. £                           |
| 14,55             | 3,15      | 8,78    | 14,39    | ,70                        | Jan. 7        | 11,63       | 20,89    | 8,21    | ,85                   | 41,58                             |
| 14,55             | 3,19      | 4,28    | 16,77    | ,73                        | " 14          | 10,87       | 20,20    | 7,60    | ,86                   | 39,55                             |
| 14,55             | 3,23      | 4,96    | 14,99    | ,72                        | " 21          | 10,74       | 19,39    | 7,43    | ,90                   | 38,46                             |
| 14,55             | 3,25      | 5,42    | 14,41    | ,67                        | " 28          | 10,61       | 19,53    | 7,29    | ,87                   | 38,30                             |
| 14,55             | 3,28      | 6,35    | 13,35    | ,64                        | Feb. 4        | 10,60       | 19,30    | 7,39    | ,88                   | 38,17                             |
| 14,55             | 3,37      | 6,95    | 13,60    | ,61                        | " 11          | 11,04       | 19,15    | 7,99    | ,90                   | 39,08                             |
| 14,55             | 3,38      | 7,41    | 13,77    | ,60                        | " 18          | 11,04       | 18,75    | 8,99    | ,94                   | 39,72                             |
| 14,55             | 3,34      | 7,90    | 13,37    | ,60                        | " 25          | 11,04       | 18,57    | 9,25    | ,89                   | 39,76                             |
| 14,55             | 3,66      | 8,04    | 13,37    | ,63                        | Mch. 4        | 11,14       | 19,64    | 8,57    | ,90                   | 40,25                             |
| 14,55             | 3,67      | 8,67    | 13,28    | ,57                        | " 11          | 11,19       | 19,81    | 8,87    | ,88                   | 40,75                             |
| 14,55             | 3,67      | 9,34    | 13,00    | ,55                        | " 18          | 11,19       | 20,19    | 8,86    | ,87                   | 41,12                             |
| 14,55             | 3,68      | 10,36   | 12,74    | ,54                        | " 25          | 11,29       | 21,51    | 9,19    | ,89                   | 41,88                             |

## CIRCULATION.—COUNTRY BANKS.

Average amount of Promissory Notes in Circulation in ENGLAND and WALES, on Saturday, in each Week during the FIRST QUARTER (Jan.—March) of 1863; and in SCOTLAND and IRELAND, at the Three Dates, as under.

| ENGLAND AND WALES. |                                     |   |                             | SCOTLAND.         |                 |           |                             | IRELAND.        |           |                             |
|--------------------|-------------------------------------|---|-----------------------------|-------------------|-----------------|-----------|-----------------------------|-----------------|-----------|-----------------------------|
| DATES.             | Private Banks. (Fixed Issues, 433.) | Joint Stock Banks. (Fixed Issues, 330.) | TOTAL. (Fixed Issues, 763.) | Four Weeks, ended | £5 and upwards. | Under £5. | TOTAL. (Fixed Issues, 275.) | £5 and upwards. | Under £5. | TOTAL. (Fixed Issues, 635.) |
|                    | Mins. £                             | Mins. £                                 | Mins. £                     | 1863.             | Mins. £         | Mins. £   | Mins. £                     | Mins. £         | Mins. £   | Mins. £                     |
| 1862.              |                                     |   |                             |                   |                 |           |                             |                 |           |                             |
| Dec. 20            | 3,10                                | 2,79                                    | 5,89                        |                   |                 |           |                             |                 |           |                             |
| " 27               | 3,10                                | 2,76                                    | 5,86                        |                   |                 |           |                             |                 |           |                             |
| 1863.              |                                     |   |                             |                   |                 |           |                             |                 |           |                             |
| Jan. 3             | 3,14                                | 2,77                                    | 5,91                        |                   |                 |           |                             |                 |           |                             |
| " 10               | 3,24                                | 2,86                                    | 6,10                        | Jan. 10           | 1,56            | 2,66      | 4,22                        | 2,73            | 2,81      | 5,54                        |
| " 17               | 3,26                                | 2,89                                    | 6,15                        |                   |                 |           |                             |                 |           |                             |
| " 24               | 3,23                                | 2,88                                    | 6,11                        |                   |                 |           |                             |                 |           |                             |
| " 31               | 3,17                                | 2,83                                    | 6,00                        |                   |                 |           |                             |                 |           |                             |
| Feb. 7             | 3,14                                | 2,81                                    | 5,95                        | Feb. 7            | 1,50            | 2,49      | 3,99                        | 2,70            | 2,79      | 5,49                        |
| " 14               | 3,11                                | 2,82                                    | 5,93                        |                   |                 |           |                             |                 |           |                             |
| " 21               | 3,09                                | 2,82                                    | 5,91                        |                   |                 |           |                             |                 |           |                             |
| " 28               | 3,07                                | 2,80                                    | 5,87                        |                   |                 |           |                             |                 |           |                             |
| March 7            | 3,08                                | 2,74                                    | 5,82                        | March 7           | 1,44            | 2,44      | 3,88                        | 2,70            | 2,70      | 5,40                        |
| " 14               | 3,07                                | 2,85                                    | 5,92                        |                   |                 |           |                             |                 |           |                             |
| " 21               | 3,10                                | 2,89                                    | 5,99                        |                   |                 |           |                             |                 |           |                             |
| " 28               | 3,18                                | 2,96                                    | 6,14                        |                   |                 |           |                             |                 |           |                             |

FOREIGN EXCHANGES.—Quotations as under, LONDON on Paris, Hamburg & Calcutta; —and New York, Calcutta, Hong Kong & Sydney, on LONDON—with collateral cols.

| 1        | 2                | 3                      | 4         | 5                              | 6                | 7                      | 8            | 9                      | 10      | 11         | 12      | 13                                 | 14  |
|----------|------------------|------------------------|-----------|--------------------------------|------------------|------------------------|--------------|------------------------|---------|------------|---------|------------------------------------|-----|
| DATES.   | Paris.           |                        |           | Hamburg.                       |                  |                        | New York.    | Calcutta.              |         | Hong Kong. | Sydney. | Standard Silver in bars in London. |     |
|          | London on Paris. | Bullion as arbitrated. |           | Prem or Dis on Gold per mille. | London on Hambg. | Bullion as arbitrated. |              |                        |         |            |         |                                    |     |
|          |                  | Agnst. Engd.           | For Engd. |                                |                  | Agnst. Engd.           |              | For Engd.              |         |            |         |                                    |     |
|          |                  |                        |           |                                |                  |                        |              |                        |         |            |         |                                    |     |
| 3 m. d.  |                  |                        | 3 m. d.   |                                |                  | 60 d. s.               | India House. | At Calcutta on London. | 6 m. s. | 30 d. s.   | pr. oz. |                                    |     |
| 1862.    |                  |                        |           |                                |                  |                        |              |                        |         |            |         |                                    |     |
| Jan. 3.. | 25.45            | —                      | —         | par                            | 13.6½            | —                      | 0.2          | 146                    | 24½     | 24⅞        | 55      | pr. ct.                            | 61½ |
| " 17..   | .55              | 0.2                    | —         | ½ pm                           | .6¾              | —                      | 0.2          | "                      | 24      | " ¾        | "       | "                                  | "   |
| Feb. 7.. | .55              | —                      | —         | 2 pm                           | .7¾              | —                      | 0.6          | 163                    | "       | " ⅝ ¾      | "       | "                                  | "   |
| " 21..   | .50              | —                      | —         | —                              | .7½              | —                      | —            | —                      | 23⅞     | " ¾        | 57      | 1 p.                               | "   |
| Mch. 7.. | .52½             | —                      | —         | 1½,,                           | .8               | —                      | 0.5          | —                      | "       | " ⅝        | "       | "                                  | "   |
| " 21..   | .52½             | —                      | 0.1       | 1,,                            | .8               | —                      | 0.3          | 188½                   | "       | " ⅝        | "       | "                                  | "   |



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Vol. XXVI.]

[Part III.]

**JOURNAL OF THE STATISTICAL SOCIETY,**  
SEPTEMBER, 1863.

*On SUFFICIENT and INSUFFICIENT DIETARIES, with especial REFERENCE to the DIETARIES of PRISONERS. By WILLIAM A. GUY, M.B., Cantab, Fellow of the Royal College of Physicians, Professor of Forensic Medicine, King's College, London, Medical Superintendent to the Prison at Millbank, and one of the Honorary Secretaries of the Statistical Society.*

[Read before the Statistical Society, 16th June, 1863.]

If the most distinguished of our chemists, physiologists, and physicians were asked, each for himself, to prescribe a fitting diet for an individual of a given sex and age, the task would not be found an easy one. The results would perhaps display a general agreement in principle, but they would certainly exhibit a wide divergence in detail; for the elementary constituents of a wholesome diet, and the proportions in which they ought to be blended, are much better understood than the quantities necessary to the support of life and health.

But the difficulties which attach to the selection of a suitable diet in the case of individuals, are increased tenfold when we come to arrange the dietaries for men, women, or children, in the mass; especially when the element of economy has to be added to the considerations of fitness by which our choice must be mainly determined. Even in the comparatively simple case of a boys' school, the diet which would be sufficient for the eldest boy could scarcely fail to be in excess for the youngest, and *vice versa*; and in the army and navy, which consist of men selected from the population on account of their freedom from deformity and disease, there is a similar disparity of age, as well as great diversity of constitution. But in such institutions as workhouses, prisons, and hospitals, the task of constructing suitable dietaries is beset with unusual difficulties. If we take the case of prisoners, to which I wish especially to direct the attention of the Society this evening, we shall find the task of prescribing proper dietaries by no means easy. For in the first place, though the majority of prisoners are between the ages of