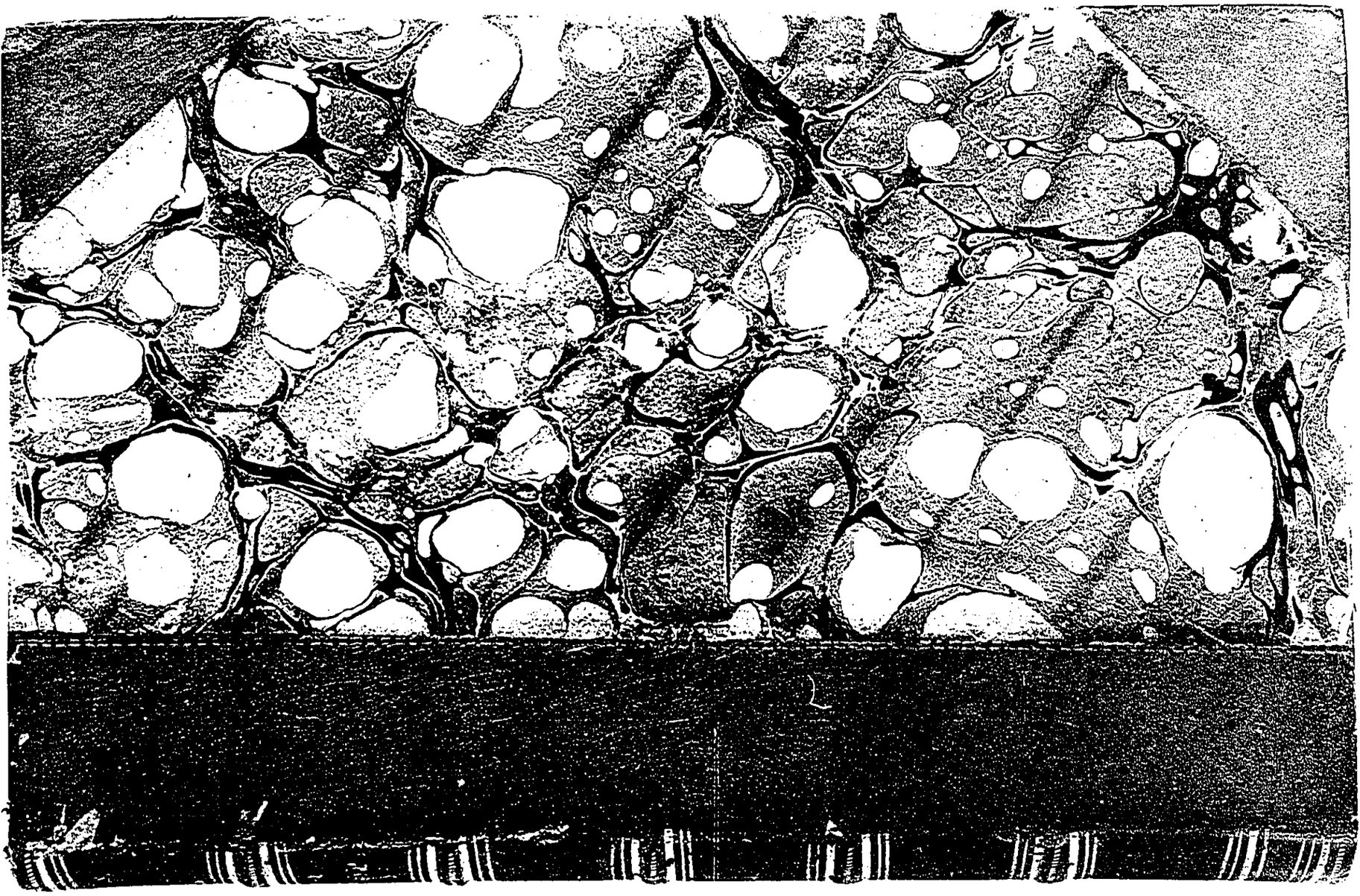

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ERRATUM.

Page 321, line 26, *for* "In '61 .... 5,505,765," *read* In '61 .... 4,505,265.

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JOURNAL OF THE STATISTICAL SOCIETY,

MARCH, 1864.

COMPARISON *of the* ORGANISATION *and* COST *in detail of* ENGLISH *and* FRENCH ARMIES.

By COLONEL W. H. SYKES, M.P., F.R.S., *President of the Statistical Society.*

[Read before Section (F) of the British Association, at Newcastle, 1863.]

CONTENTS:

I.—*Introductory.*

A FRIEND having placed at my disposal the French Official Army Budget for 1864, it seemed to me advantageous to place before the English taxpayers in juxtaposition the total charge for the English and French armies, effectives and non-effectives, the average cost per man of the total charge of each army, and then to follow the comparison into the details of the average cost per man in the

several branches of outlay for pay, clothing, provisions, barracks, manufacturing establishments, &c., as far as the classification and arrangement of charges in the respective armies would permit. In the latter object, however, in some instances the comparison is neither rigid nor satisfactory. I was quite prepared to find that the French army was maintained at a considerably less cost per man than the English army, owing to the smaller pay to officers and men, cheaper provisions, cheaper labour, and the habitual employment of the soldiers in military works,—but I was not prepared for the startling result of the primary comparison, which shows that the French Government maintain two soldiers for a trifle more than it costs the English Government to maintain one soldier! In addition to the causes above stated, I am disposed to attribute the less costly character of the French army to what the French call the "administration personal" (corresponding to our establishments), comprising a much smaller number (proportionably) of persons employed in the several departments of the army than with us; in other words, the same amount of work is done (indeed much more if we examine the details) by a smaller number of officials than are employed departmentally in the branches of the British army; and other grounds for increased discrepancies exist in the contrasts of the cost of the manufacturing and barrack departments. In comparing the French average charges with English, for the sake of convenience, I have valued the pound sterling at 25 francs, and the franc at 10*d*. This is rather unfavourable to the French, as it makes the divisors fractionally less than they ought to be.

European armies are all composed of the same arms,—infantry, cavalry, artillery, engineers, and military train. The French incorporate in their army a great body of gendarmerie, cavalry and infantry, which corresponds to a certain extent with the Irish constabulary, the cost of which is excluded from the cost of the English army, although quite as efficient as the gendarmerie of France. The French army has at its head a great department called "The Etats-Major," or staff corps, comprising 10 marshals of France, 90 generals of division, and 160 generals of brigade, and other superior officers—staff officers of the artillery, engineers, garrisons of towns, &c., in activity, besides 78 generals of division in reserve, 2 in administrative departments, and 180 generals of brigade. Officers only enter this distinguished body by successfully passing prescribed grades of education in the military schools. The Emperor has a personal guard, called the Escadron des Cent-Gardes à Cheval, and the imperial guard is in fact a corps of the army of all arms,—infantry, cavalry, gendarmerie, artillery, engineers, and military train. To avoid repetition in details, which would lead me to great lengths, I refer to Table I for the strength of the French army in detail, to Table II for the etats-major, imperial guard, and gendarmerie, and for the constitution of the army to Table III. The troops permanently stationed in Algiers are separately stated in all the tables, but included in the totals of the respective arms.

Effective Strength of the English and French Armies.

	English Army.				French Army.		
	Officers.	Sub-Officers and Men.	Total.		Officers.	Sub-Officers and Men.	Total.
General staff (exclusive of those on fixed establishment of regiments)	104	—	104	Etats-major	2,744	1,911	4,655
Royal guards, horse and foot	358	7,264	7,622	Escadron des cent-gardes	13	208	221
				Garde imperiale	1,405	28,518	29,923
				Gendarmerie	663	19,672	20,335
Infantry of the line	3,856	77,444	81,300	Infantry of the line	10,015	214,195	224,210
Cavalry	578	10,248	10,826	Cavalry	3,621	49,554	53,175
Artillery	887	19,825	20,712	Artillery	1,545	33,343	34,888
Engineers	401	4,505	4,906	Engineers	260	6,708	6,968
Military train	106	1,734	1,840	Military train	300	4,622	4,922
Depôts of regiments in India in the United Kingdom	458	8,891	9,349	Included in the infantry	—	—	—
West India regiments and colonial corps	451	8,613	9,064	Colonial corps, European and Native	651	10,887	11,538
Army hospital corps	1	939	940				
Commissariat staff corps	1	558	559	Administrative services	1,993	6,744	8,737
Establishments, depôts, recruiting, instruction, &c.	261	436	697	Included in the respective arms	—	—	—
Educational military colleges, schools	26	297	323				
				Veterans of the army	19	629	648
Total effectives	7,488	140,754	148,242	Total effectives	23,229	376,991	400,220

The English army has its general staff, but not constituted as the French Etats-Major, as there are only 104 officers in it, independent of those on the strength of regiments. It has a personal guard for the Sovereign, called the household troops, consisting of three regiments of cavalry and three regiments of infantry, called the life, horse, and foot guards. The remaining part of the troops consists of the same arms as in the French army, but it has in addi-

tion the disembodied militia, yeomanry, volunteers, and enrolled pensioners and army reserve force, under the designation of auxiliary forces, for all which votes are taken in the estimates.

For details of the effective strength of the English army, I must refer to the English estimates for the year 1863-61, and to the French budget, Table I, for the year 1861. It will suffice to give the number of officers and men of the different arms of the two armies.

The English army has 14,511 horses, without distinguishing officers' horses from those of the men, and the French army 11,257 officers' horses, 74,448 for men; total, 85,705.

The English have 3,474 officers and 69,202 men (total, 72,676) of all arms in India, which, as they are paid out of the revenues of India, are not comprised in the English estimates.

It would seem from the above tabular comparison that the proportion or ratio that the artillery bears to the total troops is very different in the two armies. The ratio of officers to men is much the same, 4·28 and 4·42 per cent; but the ratio of the whole artillery officers and men to the total number of troops in both armies is widely different; the artillery of the English army, horse and foot, is within a fraction of 14 per cent. of the whole army, while the ratio of the French artillery, excepting the artillery and other arms of the imperial guard, is only 9·4 per cent.; the English, therefore, have a much larger proportion of artillery than the French. With respect to the British engineers, the officers to the men are 8·2 per cent., and the whole body of engineers to the whole army, 3·3 per cent. The French engineer officers are 3·9 per cent., and the whole engineers to the whole army, minus imperial guard, are 1·9 per cent.; and yet the French engineer establishment has the construction, repair, and charge of all fortifications, military buildings, barracks, &c. The English cavalry officers of the line are 5·3 per cent. of the cavalry, and the line cavalry to the whole army, minus the household troops, is 7·3 per cent. The French cavalry of the line have a fraction less than 7 per cent. of officers; and the French cavalry, therefore, is better officered than the British, and the whole line cavalry to the whole army, minus the imperial guard, is 14·3 per cent., which is more than double the proportions in the English army. The total number of officers of every grade to the total strength is 5·05 per cent. in the English army, and 5·8 per cent. in the French army; consequently there is nearly one officer more to every 100 men in the French army than in the English.* But the great feature is in the numerous cavalry. On

* The composition of a company of French infantry is 3 officers, 6 sub-officers, 8 corporals, 2 drummers, and 66 men; total, 85. The total of a regiment of the guard of 4 battalions, 24 companies, and staff is 2,200 men.

The composition of a squadron of cavalry of the guard is 8 officers and 10 horses, 10 sub-officers and 10 horses, 21 brigadiers and farriers and 21 horses, 4 trumpeters and 4 horses, and 111 troopers with only 75 horses; total officers and men, 154, and 120 horses. The regiment consists of 6 squadrons, embracing 1,017 men and 801 horses. A regiment of the line of 3 battalions and 1 depôt has 1,929 officers and men, inclusive of staff; each company (24) has 19 officers and sub-officers and 55 men. The chasseurs à pied, 81 officers and men per company. A regiment of cavalry of the line has 6 squadrons, each with 7 officers and 28 sub-officers, and 95 troopers; total, 882 officers and men, including the staff, and 600 horses. A regiment of engineers consists of 2,203 officers and men. A regiment of infantry of the guard consists of 2,200 men.

The regiment of English life guards has 33 officers and 406 non-commissioned officers and troopers, the latter at 1*s.* 11½*d.* per diem. A regiment of cavalry of the line has the same number of officers, with a paymaster, 603 non-commissioned officers and troopers; pay of latter, 1*s.* 3*d.* per diem. A garrison brigade of artillery, 55 officers and 935 non-commissioned officers and bombardiers; pay of the latter, 2*s.* per diem. The field brigades vary from 1,436 officers and men in the coast to 1,931 officers and men in the 4th brigade. A regiment of cavalry, in the field, 546. A brigade of horse artillery, 784 of all ranks. The royal engineers have 399 officers, 40 companies, and 4,118 non-commissioned officers, sappers, and miners, and 2 mounted troops numbering 389. The regiment of grenadier guards has 109 officers, the colonel receiving 2,200*l.* per annum, 1 solicitor, and 2,586 non-commissioned officers and privates; the pay of the latter, 1*s.* 1*d.* per diem. The other regiments of guards have respectively 73 and 74 officers, and each a solicitor, and 1,724 and 1,736 non-commissioned officers and privates; the pay of the latter, 1*s.* 1*d.* per diem; the 2 colonels receiving 2,000*l.* a regiment per annum each. A regiment of infantry of the line, in garrison, has 45 officers, including 2 medical men, and 883 non-commissioned officers and privates; the pay of the privates, 1*s.* per diem. The colonel receives 1,000*l.* per annum. In the field it has 1,084 officers and men.

the other side, the English army has artillery in the proportion of 14 to 9, and engineers rather more than 3 to 2 as compared with the French army. The French army, in addition to the 400,220 men, has 5,622 youths, designated enfants de troupe, attached in varying proportions to each arm and regiment.

Having compared the organisation and strength of the two armies, I now proceed to compare the expense in detail of the different arms embraced under the various heads of administration, staff corps, pay, provisions, clothing, supply of arms, ammunition, &c. In some instances, however, the comparisons cannot be exact from the different groupings of charges; but a sufficient approximation to the truth is obtainable, and with respect to the absolute cost per man in the effective strength of both armies there can be no question. The English estimates are arranged under six heads:—1. Regular forces; 2. Auxiliary forces; 3. Stores; 4. Works and buildings; 5. Other services; these comprise the charges for the effective service; the 6th head is non-effective service. Each of these headings is divided into an irregular number of votes; the 1st, regular forces, has seven votes; the 2nd, auxiliary forces, four votes; the 3rd, stores, two votes; the 4th, works and buildings, one vote; the 5th, other services, four votes; total, eighteen votes for the effective

service. The 6th, non-effective service, has nine votes; total votes in the estimate for 1863-64 are *twenty-seven*.

The French War Minister divides his budget into five sections* and twenty-four chapters; each chapter has one or more articles; the sections corresponding to our headings, and the chapters to our votes. But the grouping of charges in the chapters occasionally does not correspond with our votes. For the description and subject matter of the sections and chapters, to save repetitions, I refer to Tables IV, V, VI. The English estimates comprise charges for disembodied militia, yeomanry, volunteers, and enrolled pensioners, and army reserve force. The French budget comprises only the effective regular forces and the gendarmerie.

The charges in the English estimates extend from the 1st April, 1863, to the 31st March, 1864; but the French budget commences on the 1st January, 1864, and ends 31st December, 1864; both budgets comprise an extra day for leap year. The English estimates were ordered by the House of Commons to be printed on the 15th February, 1863. On the 13th January, 1863, the French Minister of War presented the budget fixing the number and cost of the army for 1864, with an apology that for the preceding three years he had not been able to have the budget ready to present to the Legislative Body at its first meeting, but in conformity with the desire of the emperor, and their own repeated wishes, the army budget was presented for their earliest consideration and votes.

Total Charge for the English and French Armies for 1863-64 *and* 1864.

English.		French.		Sterling.
	£		fr.	£
For effective services	12,932,399	For effective services	371,281,010	14,851,361
For non-effective services	2,127,838	For non-effective services	60,740,000	2,533,600
		Credit for military pensions	2,600,000	
Total	15,060,237	Total	431,621,010	17,384,961

Repayments in diminution of charge to the amount of 19,544,725 frs. are enumerated by the French Minister by the sale of powder to other departments of the State, for the sale of horses, retention of 2 per cent. of the pay of officers, repayments for education, &c., deductions from troops while in hospitals, calculated at one twenty-fifth of the effectives, one-sixteenth for men on leave of absence, &c., &c., reducing the expenditure to 351,739,315 frs.; but I do not propose to take these fluctuating repayments in different years

* *Vide* Tables IV, V, VI.

into consideration in either army in making averages with respect to the fixed annual charge for the French or English troops.

In taking the cost per head of the effective and non-effective strength, respectively, and the total cost per head of each army, the question of the number of men to be used as the divisor being determined, the total cost per head, effective and non-effective, presents no difficulty. The result is 101*l.* 11*s.* 10*d.* per head in the English army, and 43*l.* 9*s.* 4*d.* in the French; but this would embrace a fallacy, for the English estimates include charges for the disembodied militia, yeomanry, volunteers, and enrolled pensioners, of which the numbers are not given, and which should be included in the divisor of 148,242, which is the total number of effectives. The charge for these auxiliary forces is 1,222,977*l.*, leaving 13,837,260*l.*, inclusive of the charge for the non-effective services, and giving, therefore, 93*l.* 6*s.* 10*d.* per head for the maintenance of 148,242 effectives, and for the non-effective services. But to get at the real cost of the effective service, it is further necessary to make deduction of 2,127,838*l.* for the non-effective services, leaving 11,709,422*l.*, or 78*l.* 18*s.* 5*d.* per head, which is still more than double the cost of the French effectives per head. The French army consists of 400,000 effectives, besides 5,692 enfants de troupe. The cost is 371,284,040 frs. for effectives, and 63,340,000 frs. for dotations and pensions, in all 434,624,040 frs, or 43*l.* 11*s.* 10*d.* per head. But confining the comparison to the effectives of both armies, clothing, provisions, &c., included, the English cost as stated is 78*l.* 18*s.* 5*d.*, and the French 37*l.* 2*s.* 6*d.* per head, comparing pay alone, and excluding all other charges, the following are the results:—English of all arms, 147,118; pay and allowances, 4,967,603*l.*, equal to 33*l.* 15*s.* 3*d.* per head. The French per head, 16*l.* 13*s.* 4*d.**

II.—*The Administration, the Pay and Allowances of both Armies compared.*

ADMINISTRATION OF THE ARMY.

Taking next the administration of the army, which in the English army comprises the Secretary of State for War, War Office, Commander-in-Chief and his office, and the offices of the adjutant and quartermaster-general. The Secretary of State for War has a salary of 5,000*l.* per annum; the number of officers and clerks employed is 601, and the charge for 1863-64 is 164,917*l.*† This gives a cost of 1*l.* 2*s.* 3*d.* for each effective soldier. The other part of the administration of the army is the Commander's-in-Chief department, including the adjutant and quartermaster's-general departments,

* *Vide* Table VII.
† *Vide* pp. 66, 67 of the estimates.

charged 48,260*l.* for 123 officers and clerks, besides soldier clerks and servants. The Secretary of State and Commander's-in-Chief departments, together, amount to 213,177*l.*, or 1*l.* 8*s.* 8*d.* for each effective. But in the charge for the administration are the salaries of several great functionaries, such as inspector-general of engineers and director of works, director of ordnance, commissary-general-in-chief, purveyor-in-chief, &c., whose salaries in the French budget are either classed in the etat-major, or in the respective departments to which they belong. The administration of the army, 213,177*l.*, and the general staff, 114,576*l.*, together make 328,153*l.*, or 2*l.* 4*s.* 3*d.* per head. On the other side, the French charge their general officers on the etat-major, while in the English estimates 164 general officers, at a cost of 77,782*l.*, are charged in the non-effective services, and are therefore taken out of the comparison of the cost of the English staff with the etat-major. The French administration of the army constitutes section 1, and chapters i, ii, and iii of the budget. The first is called the administration central (personal), and is charged 1,910,538 frs. (*vide* Table VIII), and employes 479 officers and clerks, besides messengers and servants. The salary of the Minister at War is 130,000 frs. (5,200*l.*) per annum. The administration central (material) embraces repairs, furniture, books, papers, clothing of servants, &c., and costs 549,600 frs.; the third branch under the War Minister is the dépôt général de la guerre, and embraces charges for scientific instruments, maps, engravings, geodetical and topographical labours, photography, &c., and costs 144,500 frs.; the total charge for the administration of 400,000 men, by the Minister for War, is therefore 2,604,538 frs., or 5*s.* 5*d.* per head,

ETATS-MAJORS.

The next section in the French budget, and chapter iv, relates to the etats-majors. It has five articles, and it embraces the marshals of France, generals of divisions, generals of brigade, and staff officers of all grades in France and Algeria who are not with their regiments. The number is 794 employed, and there is a reserve of 78 plus 2 generals of divisions, and 260 generals of brigade, the total number being 1,054, and the charges 9,999,824 frs.; the staff officers of military intendance are 304, and the charges 3,173,152 frs. The staff of forts, cities, and towns, 710 officers; charge, 1,583,087 frs. The staff of the artillery, 1,477 officers and men, charges, 3,434,745 frs. The officers embrace directors of artillery, inspectors of arms, foundaries, professors in the artillery schools, &c. The 5th article of chapter iv gives details of the staff of the engineers, embracing 1,101 officers and men, at a charge of 3,083,490 frs.; there are 30 colonels who are directors of fortifications, 29 lieutenant-colonels,

sub-directors, 9 professors at the engineer schools, 111 chefs de bataillon, &c. The total number of men and officers employed in the etats-majors is 4,655, and the charge 21,280,298 frs., or 2*l.* 2*s.* 6*d.* per head upon 400,000 men. The average for each individual of the 4,655 officers and clerks is 183*l.* The nearest approximative comparison in the English army to the etats-majors is the general staff, but it consists entirely of officers, independently of the Secretary at War and his establishment. There are 261 commissioned officers at home and in the colonies, and the charge is 79,475*l.*; 6 lieutenant-generals, 21 major-generals, inspector-general of artillery, engineers, cavalry, and infantry, 14 colonels on the staff, 16 assistant-adjutants-general, &c., &c.; but the total charge, including staff serjeants, clerks, messengers, &c., is 114,976*l.*, which is a cost of 15*s.* 6½*d.* per head on the total strength; and the average cost of the 261 commissioned officers is 304*l.* 5*s.* per head, besides regimental pay; but to this should be added the charges for the administration of the army of 1*l.* 8*s.* 8*d.* per head; making with the general staff 2*l.* 4*s.* 3*d.* per head, the whole etats-majors of France being 2*l.* 2*s.* 6*d.* per head.

The nearest classification in the French army to admit of comparison with the English general staff is the first article of chapter iv of section 2. It comprises the 10 marshals of France, 90 generals of division, 160 generals of brigade, and other subordinate commissioned officers, to the number of 794, and the cost is 8,688,080 frs., or 438*l.* per head; but 7 of the marshals of France with commands receive each 133,650 frs., or 5,346*l.* per annum. And 74 generals of divisions provided with commands receive each 23,719 frs., or 948*l.* 15*s.* each, while English lieutenant-generals receive each 1,383*l.* 19*s.* 2*d.*, and a major-general commanding at Hong Kong has 2,535*l.* 15*s.* per annum. An English major-general in command in Scotland, Dublin, Cork, Chatham, &c., receives 691*l.* 19*s.* 7*d.* per annum. The French brigadier-general, the next grade below the general of division, has 601*l.* 11*s.* per annum.

PAY OF INFANTRY.

The average annual pay of the English infantry officers and soldiers for 81,000 men is 30*l.* 1*s.* per head, including extra pay for brevets, good-conduct pay, and beer money, agency, postage, &c. The average annual pay of the French infantry officers and soldiers is 14*l.* 17*s.* 6*d.*, including allowances or subscriptions to regiments, varying from 7,750 to 27,000 frs. to each regiment, donations to officers going into the field, half mountings, indemnity for wine and brandy not issued, increased pay for length of service, and other matters. *Vide* Table VIII A.

PAY OF CAVALRY OF THE LINE.

The English cavalry of the line, officers and men are 10,826, and the charge 448,980*l.*, or 41*l.* 9*s.* 8*d.* per man. It embraces the extra charges for good-conduct pay, beer money, &c., as in the infantry. The French cavalry of the line, 53,175, independently of 6,283 officers and men of the imperial guard, making a total of 59,379 cavalry, is charged at 4,426,716 frs., or 18*l.* 1*s.* 8*d.* per man; including subscriptions and indemnities varying from 9,000 frs. to 13,000 frs. per regiment; deductions are made while absent on leave, while in hospital, and indemnities are given in place of billets.

PAY OF ARTILLERY.

The pay of the English artillery, horse and foot, 22,372 men, including 1,882 at the depôt, costs 870,602*l.*, and gives 38*l.* 18*s.* 3*d.* per head. The French artillery comprises 34,888 men, horse and foot, besides 2,985 of the imperial guard, making a total of 37,873, the cost of the pay being 17,359,464 frs., or 18*l.* 6*s.* 8*d.* per head; but with the addition of subscriptions, two of 18,000 frs. and 19,000 frs. respectively, to two regiments of the imperial guard, and indemnities, the total charge for the artillery is 19,326,017 frs., or 20*l.* 8*s.* 4*d.* per head.

PAY OF ENGINEERS.

The Royal Engineers consist of 4,906 men, including 401 officers; the pay and allowances are put down at 277,142*l.*, or 56*l.* 9*s.* 9*d.* per head. The French engineers, besides those of the imperial guard, consist of 6,968, including 260 officers, and the cost is 2,937,936 frs., or 16*l.* 18*s.* 4*d.* per head only. This extraordinary contrast is owing to a very much greater proportion of officers to men in the English than the French engineers; the latter having 3·7 per cent. of officers to men; the English, 8·17 per cent.

MILITARY TRAIN.

The English military train consists of 1,840 officers and men, and costs 71,381*l.*, or 38*l.* 15*s.* 4*d.* per head. The French military train consists of 4,722 officers and men, and costs 2,316,721 frs., or 19*l.* 3*s.* 4*d.* per head.

ARMY HOSPITAL CORPS AND MEDICAL ESTABLISHMENT.

The English army hospital corps has only one commissioned officer and 939 men; total, 940, at a cost of 23,510*l.*, or 25*l.* –*s.* 2*d.* per head. The French army hospitals, on the contrary, have 1,144 officers and 3,249 hospital orderlies; total, 4,573; and the total cost, with gratifications and indemnities, is 4,921,884 frs., or 43*l.* –*s.* 10*d.* per head, by far the highest paid service in the French army; but upon the

total strength of the army the charge is only 10*s.* 3*d.* per head. In the French army the medical establishment embraces the hospitals, medical staff, and army hospital corps. In the English army the hospital corps is charged under a distinct head from the medical establishments. The total charge for the latter is 255,993*l.*, besides the pay of the director-general, 1,500*l.* per annum, charged with Administration Vote 18. The medical officers number 253, including 6 inspectors-general, 22 deputy inspectors-general, 20 surgeons-major, and 147 staff assistant surgeons, &c.; the purveyor's staff numbers 86, besides 8 military officers for the general hospitals of Netley and Woolwich; the lunatic establishment, diets, medicines, &c., and the pay of the purveyor-in-chief, is provided for in Vote 18, of 757*l.*; making a total charge of 281,260*l.* But as the number of extra clerks and men of the hospital corps employed at extra pay is not given, the average charge per head of the medical establishment cannot be given, but the cost per man on the strength of the army is 1*l.* 17*s.* 11*d.* The hospital charges, diets, medicines, &c., in the French army are estimated on the probable number of days each soldier will be in hospital; this number of men the French calculate at $\frac{1}{25}$th, or 4 per cent., of the total strength. Thus, at 1 fr. 35 c., or 11$\frac{1}{2}$*d.*, per diem, with extra charges, the cost is 14,753,650 frs., which would bring up the total expense per head for the army to 1*l.* 10*s.* 8*d.* per head. 321,179 men only of the French army are entitled to be taken into hospital, and from past experience it is calculated that each man will be 18 days in hospital annually, which, at 1 fr. 35 c. each per day, gives 7,806,944 frs.; and the cost of the school of medicine, expenses of medical inspections, support of 280 sisters of charity, 58 chaplains, 761 officiers de santé, 325 adjutants, and 3,429 hospital attendants, &c., make up a total of 9,911,122 frs.; which, with the charges for hospital officers and attendants, makes up the 14,753,650 frs. It will be observed in the comparative pay table of English and French regiments of the line that the surgeon major of the first class in the French army gets better paid than the lieutenant-colonel of the regiment.

COMMISSARIAT OFFICERS.—PROVISIONS AND FORAGE.

The total charge in the English army for 1863-64 is 1,223,936*l.*, besides 1,000*l.* per annum for the commissary-general-in-chief; therefore the cost per head is 8*l.* 5*s.* 2*d.*; 198 officers are employed besides a commissary-general-in-chief, with 1,000*l.* per annum, at a cost of 68,251*l.*, averaging 343*l.* per officer; and the number of clerks, storekeepers, &c., is not given; but the total cost of the commissariat staff is 97,329*l.*, and 20,897*l.* in Votes 1 and 3 are charged for pay and clothing of the commissariat staff corps. In the appendix to Vote 2 the cost of the commissariat is put at 1,330,943*l.*, instead of

1,223,936*l.* It is not stated for what numbers rations and forage are required, but a lump sum of 463,486*l.*, after stoppages, is fixed; neither the cost nor quantities of each ration is mentioned; lump sums only are given, and the House of Commons is destitute of the elements for pronouncing a judgment upon the proper cost and extent of each ration, or to what numbers rations ought to be given. The French budget, on the contrary, gives the exact number of persons to receive rations, including labourers, 3,565; the exact number of officers and men of all arms entitled is 348,207, but only 127,443,762 rations are charged for 366 days; and the whole is put down at 25,673,239 frs., or 1,026,929*l.*, for 400,000 men, instead of 1,223,936*l.* for 148,242 men. The average cost, therefore, is only 20 c. and $\frac{7}{1000}$ per ration, or 2*d.* and a fraction English.* Forage is provided for 83,484 horses; the cent-gardes and the native cavalry in Algeria are excluded; and the number of rations granted for 366 days is 30,555,144, at 1 fr. 25 c. the ration, the total cost being 38,622,995 frs., including the Paris guard of 663 horses, at 1 fr. 35 c. the ration.† The English charge for forage is 443,955*l.* or 11,098,875 frs. The warming and lighting in the French budget has the same minute details, particularizing the number of rations of firing, and the number of lights,‡ the cost of each ration and light, the whole charge being 2,813,654 frs.; and the whole of the commissariat charges, 68,772,140 frs., or 6*l.* 18*s.* 4*d.* per effective man of the army. The cost for fuel and lights in the English estimates, in the barrack department alone, amounts to 278,537*l.*, which must be added to the commissariat charges to admit of a proper comparison with the cost of the French commissariat; making the English charge per head 10*l.* 2*s.* 9*d.*, against the French 6*l.* 18*s.* 6*d.*

RATIONS.

The French and English rations for the soldier are stated in the following table, and for the sake of rigid comparison I have reduced them to English grains of 7,000 to the lb. avoirdupois. The French soldier always gets nearly half as much more bread than the English soldier in garrison, and in the field he gets nearly as much meat, but in garrison a-third less. He has smaller quantities of sugar, meat, and salt, and no tea or pepper, but he gets more coffee, and vegetables, and wine or brandy, which the English soldier does not get; and no deduction is made for his rations, while the English soldier has to pay 4½*d.* or 6*d.* per diem for his rations. The French soldier gets an indemnity in money for any portion of a ration not given, but the entire rations, with the exception of bread, are not necessarily given. 800 grammes cooking fuel are allowed.

* *Vide* Table IX.
† *Vide* Table X.
‡ *Vide* Table XI.

English Home Daily Rations.				French Daily Rations.		
Ration.	Weight.	Reduced to English Grains.	At Aldershot or Encamped.	Rations.	Weight.	Reduced to Grains English.
	ozs.				Grammes.	
Meat	12	5,250	5,250	Meat in the field	300	4,650
				Meat in garrison	250	3,875
Bread	16	7,000	10,500	Bread	750	11,625
Sugar	2	—	875	Sugar	21	325
Coffee	⅓	—	146	Coffee	16	248
				Rice	30	465
Tea	⅙	—	73	Tea	None	None
Salt	½	—	219	Salt	16¼	155
Pepper ...	⅛₀	—	12	Pepper	None	None
Wine	None	None	—	Wine ..... 25 centi-litres		About half an English pint
Vegetables	None	None	—	Pulse, beans &c.	60 grammes	930
				Brandy	⅒th of litre	⅛th of a pint

The English ration of bread and meat is supplied at a deduction of 1½*d.* per diem. Groceries and vegetables are supplied for 1½*d.*, if required, per diem. In tents at home, 1½ lb. of bread is given, and 3 lbs. of fuel; 1*d.* daily is given as beer money to every soldier at home, and they find their own spirits; abroad, a gill of rum or arrack is included in the ration.

Beer or cider ½ litre, or about a pint. The French gramme is 15·436 English grains of 7,000 to the lb. avoirdupois.

To save trouble, the reduction is made at 15½ grains to the gramme. Indemnities for wine or brandy are charged for the imperial guard 29,081 frs., and for the line 326,123 frs., for troops serving in France 851,912 frs.; for troops serving in Algeria 18 to 21 c. are given.

CLOTHING.

The total charge of the clothing department is 630,385*l.*, of which 61,758*l.* is for officers and establishment, besides the pay of a director and assistant director, charged in Vote 18, of 1,200*l.* and 800*l.* respectively, making 63,578*l.* Lump sums only are charged for each arm of the service, horse artillery, cavalry, infantry, foot guards, &c., but neither numbers nor the cost of clothing per man in each rank is given, nor what ranks and numbers are excepted from the supply. The total charge for clothing and necessaries is 560,221*l.*; the cost per head, therefore, for 140,754 men, deducting 7,488 officers, is 4*l.* 9*s.* 7*d.* per head. The French budget, on the contrary, gives the cost of the uniform of each rank in the different arms of the service, and the number of suits required.* The charge for the officers and establishment (personnel) is 291,070 frs. Clothing is provided for 336,626 non-commissioned

* *Vide* Table XII.

officers and privates of all arms; the total charge being 21,177,191 frs., flannel bands being supplied to 43,697 men in Algeria at an expense of 86,400 frs., or 1 fr. 80 c. per head. The cost per man, for his uniform, in the imperial guard, ranges from 105 frs. 14 c., for the guides, to 52 frs. 30 c., for the voltigeurs; and from 48 frs. 90 c. to 38 frs. 50 c. for the infantry of the line. In the cavalry, from 80 frs. 5 c., for the chasseurs d'Afrique, to 50 frs. 41 c., for the dragoons; and the artillery and engineers range from 69 frs. 10 c. to 48 frs. 90 c. The most costly uniform for a non-commissioned officer of the guides being 4*l.* 4*s.* 3*d.*; of an infantry soldier, 1*l.* 12*s.* 11*d.*; of a trooper of cavalry of the line (lancers), 2*l.* 1*s.* 4*d.*; of the artillery, 2*l.* –*s.* 8½*d.*; and of the engineers a trifle less. From a return to the House of Commons, obtained by General Peel on the 28th July, 1859, the cost of a non-commissioned officer or private's uniform of the life guards is stated to be 8*l.* 15*s.* 3*d.*; of dragoons, 5*l.* 8*s.* –¾*d.*; of the artillery, 3*l.* 1*s.* 6¼*d.*; of the engineers, 3*l.* 15*s.* 8*d.*; of the regiment of guards, 4*l.* 2*s.* 8*d.*; of the infantry of the line, 2*l.* 6*s.* 3*d.*; and of a West India regiment, 2*l.* 1*s.* 11¼*d.* The average cost per head, deducting officers in the English army, is 4*l.* 9*s.* 7*d.*, and in the French army, 1*l.* 19*s.* 11*d.* The non-commissioned officers* in the French army have a uniform which costs a little more than that of the privates. In the English army there is no distinction. The French soldier only gets a tunic once in two years; the English soldier gets one every year. Both English and French soldiers get a pair of pantaloons annually. On entering the service every soldier is allowed what is called "première mise de petit équipement." An infantry recruit is allowed 40 frs., a zouave 118 frs. The allowance is to provide shirts, shoes, gaiters, &c. A master workman entering a regiment gets 170 frs. as his première mise.

III.—*Cost of Barracks, of Military Justice, and of the Manufacture of Instruments and Munitions of War.*

BARRACK DEPARTMENT.

The charges for the barrack department in the English army forms a very heavy item in the estimates, amounting to 635,637*l.*, besides the salary of the superintendent, 707*l.*, charged in Vote 18, administration of the army. The establishment consists of 537 persons, barrack-masters, barrack-serjeants, &c., at a cost of 41,380*l.* The supplies of furniture, beds, fuel and lights, lodging money, and hire of barracks make up the rest. The cost per head is 4*l.* 5*s.* 4*d.* As in the clothing department, lump sums only are given; neither the number of beds nor other articles of furniture, nor the number of

* *Vide* Table XII.

persons to whom lodging money is given, nor the number of lights and fires are given, but sums, amounting to 126,500*l.*, are placed to bedding, furniture, washing beds, and bedding straw; and 12,219*l.* is charged for emptying cesspools (for the purchase of their contents for agricultural purposes it might have been supposed there would have been offers). 80,000*l.* is granted to the staff, departmental, and regimental officers for lodging money. In the French analogous department, headed "lits militaires," the cost for all the furniture required for a soldier of each arm is given, the numbers, &c., supplied, the amount of lodging money to each individual of each rank, the grant for repairs of each article of furniture; in fact, the most minute details of expense are given (*vide* Table XII). The total charge is 6,576,951 frs., or 13*s.* 6½*d.* per head; but it does not include lights and firing, which in the English estimates amount to 278,537*l.* And to the French barrack department should be added from the engineer charges 10,536,090 frs. for "bâtiments "militaires," their maintenance, repairs, &c., all which is superintended by the engineers. This sum, added to the 6,576,961 frs., brings up the charge to 1*l.* 15*s.* 7*d.*, still leaving a vast discrepancy between the charge per head for barracks for the English and French armies.

MARTIAL LAW.

The charge for the administration of military justice in the English army is 43,012*l.*, or 5*s.* 9*d.* per head; but the real charge is 79,602*l.*, the sum of 41,000*l.* being deducted for the full pay of men confined in military prisons;—the judge advocate-general getting 2,000*l.* per annum, and the deputy judge advocate-general 1,200*l.* per annum. There are no such officers in the French army, but 37 "commissaires impérieux," or deputy judge advocates, and 37 reporters, who attend courts-martial, and who receive 125,700 frs., or 1,698 frs., or 68*l.*, each. The total charge is 1,260,987 frs., or 2*s.* 6*d.* per head. The charges embrace expenses of courts-martial, allowance to witnesses, hire of rooms, lights and fire, the cost of military and industrial prisons, provisions, washing, office expenses. &c., the cost of all of which is given in great detail. The difference of the cost per head between the English and French armies would seem to originate in the high salaries of the judge advocate-general and deputy and their establishment, amounting to 22,852*l.*, and the cost of prisons, 26,486*l.*; besides occasional judge advocates appointed for local courts-martial not charged in the estimates. The officers fo the dispensation of military justice are permanent in the French army. In the English army acting judge advocates are appointed as their services are required. The prison establishments are permanent in both armies.

MANUFACTURING DEPARTMENT.

The charges in this department constitute the English Vote 12, and amount to 956,365*l.* The establishments cost 35,871*l.*; wages and police, 455,582*l.*; materials, 407,480*l.*, which is 301,474*l.* less than last year, and constitutes part of the so-called retrenchment; machinery, 15,315*l.*; buildings, 33,967*l.*; miscellaneous charges, 8,150*l.*; total, 956,365*l.* Neither quantities nor numbers of work-people, nor out-turn of work, are given for any of the factories. For instance, in the Royal Gun Factory, a lump sum of 127,280*l.* is put down for "materials;" whereas in the French budget 534,000 frs., or 22,250*l.*, only is put down for 200,000 kilograms of metals for 465 cannon, averaging 57*l.* 3*s.* per cannon. In the Royal Laboratory, 96,540*l.* is charged for materials. In the Small Arms Factory, 133,428*l.* for foremen, artificers, and others, and 34,307*l.* for materials. But in addition to the charges under this vote, in Vote 13, there is the charge of 838,369*l.* for the establishments and for the purchase of warlike stores for the army and navy, charges for store departments, small arms, iron ordnance, gunpowder, &c., at the rate of 5*l.* 13*s.* 6*d.* per head of the army, making, with the preceding vote, 12*l.* 2*s.* 6*d.* per head for the manufacturing departments, against 2*l.* 13*s.* 11½*d.* in the French army. No statement is made of the cost of an Enfield rifle, nor the number to be turned out in the year for the money asked for. Of course the House of Commons has no means whatever of forming a judgment of the propriety of the charges. The Royal Small Arms Department is put down at 181,944*l.* (in 1862-63 the sum was 256,817*l.*); Gunpowder Factory, 75,617*l.*; Gun Factory, 249,104*l.*; and the Gun Carriage Factory, at 204,930*l.*;—neither numbers nor cost of a gun of each calibre, nor gun carriage, is given, nor cost of a barrel of powder. The French budget gives the cost of each 100 kilograms of powder, from 286 frs. 27 c. for extra fine, to 146 frs. 52 c. for powder for war, down to 110 frs. 2 c. for mining powder, the prices running through eight varieties; and 6,654,200 kilograms is the amount to be allotted to the various arms of the service, including civil departments and the navy. In the Foundry, 165,000 kilograms of bronze, at 2 frs. 60 c. the kilogram, and 35,000 kilograms of copper, zinc, and tin, at 3 frs. the kilogram, are charged for casting of 465 guns of different calibre, weighing 200,000 kilograms. 104,000 frs. is the total cost for casting 465 cannon. The small arms to be manufactured in 1864 are 32,000 infantry rifles of the pattern of 1857; carbines, 6,000; cavalry sabres, 1,000; 10,000 bayonet sabres; 1,200 cuirasses, model of 1855; consequently the Legislative Chamber has the means of forming a judgment on quantities and prices, which the House of Commons does not possess. The small arms are distributed to private manufacturers at

St. Etienne, Mutzig, Chatellerault, and Tulle, who have concessions for twenty or fifteen years from certain dates. The establishment and material for the artillery is put down at 7,426,655 frs.; of the establishment and materials for the engineers, 10,951,890 frs.; of powder and saltpetre establishment, 882,482 frs., and the materials for gunpowder, at 7,508,983 frs.; total for the manufacturing establishments, 26,769,010 frs., or 2*l.* 13*s.* 11½*d.* per head of the army; and this embraces in the engineers' department the care and repair of fortifications. On the English side the purchase and manufacture of warlike stores for the navy is included in the estimates; but whatever charges are made for the supply of the navy with ordnance or warlike stores should be credited in the army estimates, and be charged in the navy estimates.

SMALL ARMS.

The charges for small arms (rifles, pistols, &c.) occur under the Votes 12 and 13. Under the former, for the manufacture, is 181,944*l.*, and under the latter, for the purchase, is 105,769*l.*, making a total of 287,713*l.*, or 1*l.* 18*s.* 9*d.* per head of the army effectives. Numbers are not given of the different arms manufactured, and in the manufacturing department the charge for materials is only 34,307*l.* In the French budget the numbers of the different arms to be purchased are given, and the charge is 2,060,000 frs.; and the repairing, altering, storing, &c., is put down at 1,449,230 frs.; the total being 3,509,230 frs., or 7*s.* 3½*d.* per head of the effective strength. The great charge per head in the English army is very probably referable to the cost of establishments, the English Government manufacturing the arms required; while the French, as before stated, contract for theirs. *Vide* Table No. XIV.

GUNPOWDER.

The charges for gunpowder are placed in Votes 12 and 13. The gunpowder factory is put down at 75,617*l.*, and the purchase of materials for gunpowder, Vote 13, at 133,688*l.*, or 1*l.* 8*s.* 2½*d.* per head; but the gunpowder made also supplies the navy, and as the *quantity* manufactured or purchased is not given, the 1*l.* 8*s.* 2½*d.* per head is necessarily not exact. But as the French, with the exception of a small amount, supply their navy from the army budget, the same objection arises as in the English average per head. The total cost of the French establishments is 882,482 frs., and materials, 7,508,903 frs.; for gunpowder in the French budget, 8,391,365 frs., or 17*s.* 6*d.* per head of the effective strength of the army. *Vide* Table XV.

REMOUNT.

The total number of horses in the English army supplied by Government is 14,511; the cost of the veterinary establishment, 3,921*l.*; and for the purchase of horses and medicines, 32,493*l.*; total, 36,414*l.*, which is a cost of 2*l.* 10*s.* 3*d.* per horse to keep the 14,511 horses annually efficient. From a return obtained by Sir Frederick Smith, on the 13th June, 1860, it would appear that the purchase of horses in 1858-59 cost 86,463*l.*, and in 1859-60 it was 55,792*l.*, and the number which died, were killed or sold as condemned in the former year was 1,352, and in the latter year, 1,290, making a total loss of 2,642 horses, a very serious and expensive loss, the regulation prices of horses being 26*l.*, 30*l.*, and 36*l.* respectively. In the English estimate the numbers required to complete are not given, and lump sums only are asked for; in the French budget, on the contrary, the exact number of horses required to complete in each denomination of the cavalry, whether of the imperial guard or of the line is stated; the total number required being 8,841, the price of each horse being fixed from 1,200 frs. for officers horses of the imperial guard down to 350 frs. for the light cavalry. The horses of the cavalry of the line, dragoons, and lancers, 650 frs.; of the cuirassiers, 800 frs.; and for draft horses for the artillery, 550 frs.; the total charge, including the veterinary establishment, indemnities, and divers expenses, is 5,429,250 frs.; and as the total number of cavalry horses or mules is 85,705, the cost of maintaining this number in a state of efficiency is 2*l.* 10*s.* 10*d.* per horse annually, the only approximation to an average charge in the English estimates and the French budget. But this approximation is chiefly owing to the French Government supplying the cavalry officers with horses. In the budget for 1861 officers of the imperial guard have 80 horses allotted to them at 1,200 frs. each, and the cavalry officers of the line have 900 horses allotted at 900 frs. each when purchased in France, and 500 frs. when purchased in Algeria. *Vide* Table XVI.

ROYAL GUN FACTORIES AND FOUNDRIES.

In the royal gun factories, in Vote 12, 6,890*l.* is charged for establishment, 127,280*l.* for material; for wages and other charges a total is made up of 249,104*l.*, for the gun factory; no statement is made of the quantities of gun metal required, the price per hundredweight, the number of persons employed, or the number of guns turned out. In Vote 13 an additional sum of 124,333*l.* is entered for the purchase of iron ordnance and projectiles. The total of Vote 12 for the manufacturing department and the manufacture of warlike stores is 956,365*l.*, and of Vote 13, for military store establishments and warlike stores purchased, is 838,369*l.*; total

of both votes is 1,794,734*l.*; and this very formidable sum is 1,133,834*l.* less than was charged in the estimates for 1862-63. The object, however, under review is the cost of the materials for cannon and the purchase of cannon, and this is entered at 251,513*l.*, or a cost of 1*l.* 13*s.* 11*d.* per head of effectives for cannon alone. In the French budget, under the head of foundries' minute, details are given, for instance 165,000 kilograms of bronze, at 2 frs. 60 c. the kilogram, 429,000 frs.; 35,000 kilograms of copper, zinc, tin, &c., at 3 frs. the kilogram, 105,000 frs.; cost of manufacture of 465 pieces of cannon of different calibres, weighing 200,000 kilograms, 104,000 frs.; total, 638,000 frs. To this is added the forge department, purchases of iron, steel, tools, &c., 420,000 frs.; total, 1,058,000 frs., or 2*s.* 1*d.* per head of army effectives for cannon. No mention is made of the purchase of iron cannon in the French budget; and if the comparison be confined to the materials for bronze cannon, it will stand 17*s.* 2*d.* for the English per head, and 2*s.* 1*d.* for the French army. *Vide* Table XVII.

IV.—*Cost of the Military Education of the English and French Armies.*

MILITARY EDUCATION—ENGLISH.

The following establishments exist in the English army for military educational purposes, namely, the Council of Military Education, Royal Military Academy at Woolwich, Royal Military College at Sandhurst, regimental and garrison schools and libraries, Royal Military Asylum at Chelsea, Royal Hibernian Military School at Dublin, Department for Instruction of Artillery Officers, and the Military Medical School. The total charge is 172,201*l.*, or 1*l.* 3*s.* 2½*d.* per head of the army effective strength. The Commander-in-Chief is the president of the Military Council of Education, and the vice-president, a major-general, gets 1,000*l.* per annum, besides unattached pay; the second member, also a major-general, gets 600*l.* per annum, besides retired full pay. There are five members besides the Commander-in-Chief, one secretary, seven clerks, one office keeper, and one messenger; the total cost of the council being 8,174*l.* per annum. The Royal Military Academy at Woolwich costs 41,872*l.* per annum. The Royal Military College costs 48,726*l.* per annum, the governor receiving 1,000*l.*, besides pay of commandant of royal engineers. The Royal Military College embraces the Cadets' College and the Staff College; 20 Queen's cadets, orphan sons of officers who have died in the service, in reduced circumstances, are educated here gratuitously and 20 Queen's cadets, under similar circumstances, for the army of India, are nominated by the Secretary of State for India, for which 3,000*l.* per annum is paid out of the revenues of India. The military branch of the Royal Military Asylum, Chelsea,

including provision for 500 boys, costs 10,491*l.* per annum, and the educational branch, 4,106*l.* per annum. The Royal Hibernian Military School, Dublin, costs, for military and educational branches, 12,921*l.* per annum. The Chelsea and Dublin asylums are for the children of soldiers. The regimental and garrison schools and libraries cost 37,708*l.* per annum; there are general and local inspectors, and first, second, and third-class schoolmasters and schoolmistresses. The Department for the Instruction of Artillery Officers is intended to instruct officers in the higher branches of artillery. An allowance is made to some of the officers to enable them to visit fortifications and manufacturing establishments; this cost is only 1,918*l.* per annum, with one director, one topographical drawing master, a German and French master, and a clerk. The Survey and Topographical Department costs 85,441*l.* The director receives in all 1,345*l.* per annum. The great survey of the United Kingdom is under the director, and the cost for 1863-64 is put down at 67,000*l.* Vote 17 embraces miscellaneous services, Ordnance Select Committee at Woolwich, president with 1,075*l.* per annum, vice-president, and four members; Iron Plate Committee; Armstrong and Whitworth Guns Committee; Royal Artillery Institution, Woolwich; subscriptions to Lock and other hospitals, 1,354*l.*; and charge for the Guernsey and Jersey militia, 11,870*l.* The total charge for Vote 17 is 88,135*l.*, and the total for military education, as previously stated, 172,201*l.* Throughout, the number of pupils or scholars is not given, so that a judgment cannot be formed of the cost per head for instruction.

FRENCH MILITARY EDUCATION.

The French army has eight military colleges and schools, which are subdivided into fifteen, including the Pyrotechnic at Metz, respectively placed at Auxonne, Besançon, Bourges, Douai, Grenoble, La Fere, Metz, Rennes, Strasbourg, Toulouse, Vincennes, and Valence, and the regimental schools.

FRENCH MILITARY SCHOOLS.

1. The Imperial Polytechnic costs 664,300frs. 2. Imperial Special Military School, 1,285,938 frs. 3. Prytanée, 492,000 frs. 4. Cavalry School, 236,425 frs. 5. Imperial School for the Etat-Major, 89,000 frs. 6. School for Artillery and Engineers, 99,500 frs. 7. Gymnase and School of Musketry, 36,270 frs. 8. Regimental schools, 100,000 frs. Total, 3,004,033 frs., or 7*s.* 1*d.* per head of the effective army. In the Polytechnic 260 pupils are to be educated, and 130 pupils to be admitted; 210,000 frs. are paid for board. The outfit of 20 new pupils is put down at 4,000 frs. The repairs of the building are charged in the school accounts. There are 51 professors and teachers and 63 administrators. In the Special Imperial School

600 pupils are to be educated, and 300 pupils are to be admitted; 567,600 frs. are paid for board, which would indicate that the cost of a military education at that school is about 38*l.* 1*s.* per head; 47 commissioned officers of different arms are attached to this school, 3 doctors, and 164 sub-officers and privates; there are 19 instructors and 72 administrators. The pupils in the Prytanée are 430, and the board to be repaid only 97,000 frs., or 9*l.* 7*s.* 6*d.* per pupil; 29 military men are attached to the school, 40 instructors, 3 chaplains, and 64 administrators. The School of Cavalry has 240 brigadiers, instructors of pupils, and 30 to 40 farrier-majors. The number of officers and sub-officers under instruction varies. There are 76 riding masters and other instructors. The School of Instruction for the Etat-Major has 50 sub-lieutenants constantly under instruction. The Artillery and Engineer School has 170 artillery pupils, of which 120 are for the artillery, and 50 for the engineers; 25 persons, professors, artists, librarian, &c., are on the establishment. The numbers of pupils and teachers in the Gymnasium and School of Musketry, and regimental schools, are not given. 1,510 pupils are under constant education in five schools; the numbers in the cavalry, gymnasium, and regimental schools are not given. The repairs of all the college and school buildings are charged in the accounts of each school, and not in the public works' department. The total charge for military education is 3,004,033 frs., or 7*s.* 1*d.* per head of total effectives.

V.—*Miscellaneous Charges of the English and French Armies.*

WORKS AND BUILDINGS AT HOME AND ABROAD.

Besides the 635,637*l.* in the English Vote 4 for salaries, furniture, and hire of barracks at home for the barrack department, in Vote 14 there is a charge of 810,941*l.* for works and buildings at home and abroad, besides the pay of an inspector-general at 1,500*l.* per annum, deputy director of works and fortifications, 700*l.* per annum, and a deputy director of works for barracks, 700*l.* per annum, charged in Vote 18; each of these officers has the addition of regimental pay. The cost per head of the effective army for Vote 14 is 5*l.* 9*s.* 4½*d.*, minus the inspector-general and deputies' salaries; and this is in addition to 4*l.* 5*s.* 9*d.* per head for the barrack establishment of Vote 4. Total for works, buildings, and barracks, 9*l.* 15*s.* 1½*d.* per head of effectives. The cost of officers and clerks, besides office-keepers and messengers, numbering 911 persons, is 80,512*l.*, besides 2,900*l.*, salaries of inspector-general and two deputies. In the works, Vote 14, new hospitals, new barracks and enlargement of barracks, purchase of land, conversion of buildings, &c., are included. A comparatively small sum is put down as cost of fortifications, but this is independent of the Parliamentary grant, at a prospective cost of 11 to 12 millions

sterling. In the French budget there is neither a distinct barrack establishment nor an establishment of works, buildings, and fortifications. The fortifications are under the engineer corps, and for new fortifications, repairs, or adaptations, in France and Algeria, 3,300,000 frs. are granted; and for the purchase of land, 60,000 frs.; military buildings, alterations of barracks, hire of buildings, exercise grounds, &c., 7,176,090 frs., and 415,800 frs. for civil servants; total, 10,951,890 frs. The engineer corps and establishment embraces, in fact, the three distinct English establishments of engineers, barrack department, and works and building department. The total cost to the French Government for all these objects is 1*l.* 2*s.* 6½*d.* per head of the effective strength of the army, instead of 5*l.* 9*s.* 4½*d.* per head for works and buildings, and 4*l.* 5*s.* 9*d.* per head for barracks (total, 9*l.* 15*s.* 1½*d.*) in the English army.

RECRUITING.

The tenth chapter of the third section of the French budget is devoted to the details of the payments consequent upon the annual ballot for the conscription; payments to prefects; printing of lists of those amenable to the ballot; indemnities to sub-prefects in respect to appeals; fees to examining medical officers; charges for conducting recruits to their stations, and extraordinary expenses, amounting in all to 689,479 frs., or 27,579*l.*

SADDLERY.

Chapter xiii of section 3 of the French budget gives the charges for horse equipment;* each saddle is to last twenty years, and each schabraque and saddle-cloth eight years. The guard imperial saddle costs 133 frs. 35 c.; schabraque, 58 frs. 10 c.; saddle-cloth, 29 frs. For the line respectively 124 frs. 22 c., 35 frs. 18 c., and 18 frs.; the exact number of each article required to replace is given.

COLONIAL EXPENDITURE.

Before passing to the charges for non-effectives, it may be noticed that the charge for the colonies included in the English estimates is 3,620,256*l.*, besides the supply of arms, barrack, hospital, and other stores; the contribution of the colonies toward the cost of their own defence is ridiculously small, 78,700*l.*, and there is an uncertain amount from the colonies of Australia.

NON-EFFECTIVE SERVICE.

In the English estimates nine votes are taken under this head. For rewards for military services, 25,933*l.* Pay of general officers,

* See also Table XVIIA.

77,782*l.*; numbers, 164. Pay of reduced and retired officers, 464,895*l.*; numbers, 2,866. Widows' pensions and compassionate allowances, 172,157*l.*; numbers, 2,708; children, 1,518. Pensions and allowances to wounded officers, 32,843*l.*; numbers, 310. In-pensions, that is to say, in Chelsea and Kilmanham Hospitals, 33,776*l.* Chelsea has only 538, and Kilmanham 141 in-pensioners, besides numerous establishments. Out-pensions, 1,142,702*l.*; numbers, 61,144; superannuation allowances, civilians, 144,964*l.*, and disembodied militia, 32,786*l.*; numbers, 838. The total sum asked for is 2,127,838*l.*, or 14*l.* 7*s.* 1*d.* per head of the effective strength of the army; and the number of military pensioners and half-pay, including the pay of 164 general officers, and 10 without regiments, is 64,853, besides 2,708 widows and 1,578 children. Nothing can be more honourable to the country than its provision, costly though it be, for those who have rendered good service to their country, or for their widows and children.

FRENCH BUDGET.

The French budget has not, in the non-effective service, the same subdivisions as in the English estimates. The heading is "invalides "de la guerre," and embraces the celebrated Hôtel des Invalides, where the body of Napoleon the Great reposes, and which is governed by a marshal of France, with a salary of 1,600*l.* per annum; with 84 superior military officers, 228 officers and employés for the administration; 21 for worship; 47 doctors, sisters of charity, and barbers; and 33 in the architect and surveyor's department; total officials, 413; and 2,198 invalid soldiers; the total charge being 2,179,002 frs. The Imperial Hôtel des Invalides corresponds to the Chelsea and Kilmanham Hospitals. The next charge is officers non-effective, with temporary infirmities, 314, and 205 unemployed; total, 519. The total charge, 413,000 frs. The next charge is provision for incurables, 15; prolongation of non-activity, 25; and on the grounds of discipline, 75; total, 115. The total charge of the three articles, or subdivisions, is 503,000 frs. The next chapter (xxii) is for compassionate allowances to old soldiers, their widows, and orphans, and to those wounded; there is also a charge in this chapter of 43,000 frs. for Egyptian refugees. The total charge for the non-effective services is 4,555,002 frs., or 9*s.* 2½*d.* per head of the effective strength. But there is an additional outlay of 60,740,000 frs., under the head of dotation, or endowment of the army; provision for which is made by other means than directly from the treasury. The following is a condensed explanation of the method of providing the means, a great portion of the outlay being for bounties to men for re-enlistment, and increased pay for increased service.

DOTATION.

In the only two annexes to the French budget are the articles "dotation," which means endowment, and "list of officials lodged "in Government buildings." For the year 1864 the dotation is put down at 60,740,000 frs., in addition to the cost of 371,254,040 frs. for the effective service of the army. The receipts and expenditure of the dotation fund are stated in the following way:—Expected purchase of substitutes by the 100,000 conscripts of 1863, to be called out in 1864, is estimated at 18,000 men who would pay for exoneration 2,500 frs. each, equal to 45,000,000 frs. Buying discharge for the remaining limit of service, at 550 frs. for each remaining year of service, estimated at 1,200 men at seven years' service, put at 4,400,000 frs. It would appear that part of this dotation money is annually laid out in purchase of stock in the public debt for forming a fund for the requisite endowments, pensions, and annuities. The available income of this fund in 1864 is calculated at 11,100,000 frs. The above, with two other small sums, make up the total of 60,740,000 frs. The objects for which this sum is accumulated comprise—first, premiums and annuities payable to men who have re-engaged in military service, in previous years, 11,500,000 frs. First part of premiums and annuities to those who may re-engage in 1864; 9,800 re-engagements are estimated at a cost of 2,200 frs. each, or 21,560,000 frs.; but as there is to be only a prompt payment to each of 1,000 frs., the rest being "*in futuro*," the charge for the year will be 9,800,000 frs. The next item is for increased pay of 10 c. or 20 c. to those who had re-engaged before 1864; this is put down at 5,000,000 frs. Premiums and annuities to obtain substitutes to fill up the vacancies of those who have exonerated themselves by the payment of 2,500 frs. each; the obligations for this are put down, for 8,000 vacancies, at 17,000,000 frs., but the prompt payment is 8,000,000 frs. Supplemental pensions to sub-officers, corporals, and for obtaining voluntary enlistments, is put at 1,900,000 frs. There are some other small charges for payments of the administration of the above disbursements; and the last item is purchase of stock of the public debt, 24,679,000 frs., to increase the dotation fund, and have available annual interest, making up the total 60,740,000 frs. But in addition to the above, an additional credit of 2,600,000 frs. for military pensions for 1864 is asked, making the total sum for dotation 63,340,000 frs. The second annex might well be adopted in the English estimates. It gives the number of rooms (nombre de pièces qu'ils occupent) occupied at the expense of the State by every public functionary, military or civil, recording their designation, in every department, and in every part of the country, from the War Minister to the meanest servant. For instance, in the War Office, in Paris, the total number of pièces occupied is 106, from the chef du cabinet to the lamplighter. At the Polytechnic School the functionaries occupy 136 pièces; at the cavalry school, at Saumur, 19 pièces are occupied; at the Hôtel Impérial des Invalides, at Paris, 228 pièces are occupied, of which the marshal of France, the governor, has 71 for his own share.

Having completed the comparison of the cost of maintaining the English and French armies in their several departments, and in some detail, as far as harmonizing classifications permitted, it remains only for me to say that no Englishman can for a moment begrudge the proper outlay for securing to the British soldier comfort, health, efficiency, and self respect; but Englishmen have a right to insist that whatever public money is given for the maintenance of the efficiency of the British army should be devoted in the most economical manner to the purposes for which it is given, and the result of the comparisons in the preceding paper lead to the conclusion that such is not the case, particularly in the clothing, barrack, and warlike stores departments of the British army.

APPENDIX.

(I.)—*Effectif. Tableau Général de l'Effectif en Hommes et en Chevaux, servant de base à l'Etablissement du Budget de l'Exercice* 1864.

Désignation des Armes.	Hommes. — Cadres des Régiments, Bataillons, Escadrons, Compagnies ou Batteries. — Officiers.	Sous-Officiers et Employés y Assimilés.	Caporaux et Brigadiers	Soldats hors Rang, Tambours, Trompettes, &c.	Total des Cadres.	Hommes. — Soldats.	Total des Hommes.	Chevaux ou Mulets — d'Officiers.	De Troupe (Selle et Trait).	Total.	Enfants de Troupe.	Désignation des Armes.
TROUPES FRANCAISES.												TROUPES FRANCAISES.
Etats-Majors—												*Etats-Majors*—
Divisions territoriales de l'intérieur ...	2,483	1,732	—	—	4,215	—	4,215	—	—	—	—	Divisions territoriales de l'intérieur
Algérie ...	261	179	—	—	440	—	440	520	—	520	—	Algérie
Total ...	2,744	1,911	—	—	4,655	—	4,655	520	—	520	—	Total
Maison de l'Empereur—												*Maison de l'Empereur*—
Escadron des cent-gardes ...	13	18	28	12	71	150	221	27	152	179	—	Escadron des cent-gardes
Garde Impériale ...	1,405	2,378	3,010	2,443	9,236	20,687	20,023	839	7,109	7,948	571	*Garde Impériale*
Gendarmerie—												*Gendarmerie*—
Divisions territoriales de l'intérieur ...	642	1,309	2,389	4	4,314	15,262	19,606	686	12,756	13,442	468	Divisions territoriales de l'intérieur
Algérie ...	21	48	90	—	159	570	729	39	484	523	20	Algérie
Total ...	663	1,357	2,479	4	4,503	15,832	20,335	725	13,240	13,965	488	Total
Infanterie—												*Infanterie*—
Divisions territoriales de l'intérieur ...	9,226	17,726	21,894	14,184	63,030	136,962	199,992	—	—	—	2,710	Divisions territoriales de l'intérieur
Algérie ...	789	1,493	1,869	1,064	5,215	18,983	21,198	189	—	189	113	Algérie
Total ...	10,015	19,219	23,763	15,248	68,245	155,945	224,190	189	—	189	2,823	Total
Cavalerie—												*Cavalerie*—
Divisions territoriales de l'intérieur ...	3,186	3,622	4,953	4,371	16,132	29,477	45,609	4,400	28,896	33,296	703	Divisions territoriales de l'intérieur
Algérie ...	435	546	816	600	2,397	5,169	7,566	1,029	4,842	5,871	108	Algérie
Total ...	3,621	4,168	5,769	4,971	18,529	34,646	53,175	5,429	33,738	39,167	811	Total
Artillerie—												*Artillerie*—
Divisions territoriales de l'intérieur ...	1,396	3,181	2,812	4,368	11,757	19,074	30,831	2,164	10,653	12,817	506	Divisions territoriales de l'intérieur
Algérie ...	149	312	270	402	1,133	2,924	4,057	228	1,420	1,648	66	Algérie
Total ...	1,545	3,493	3,082	4,770	12,890	21,998	34,888	2,392	12,073	14,465	572	Total
Génie—												*Génie*—
Divisions territoriales de l'intérieur ...	226	440	425	473	1,564	3,895	5,459	9	230	239	110	Divisions territoriales de l'intérieur
Algérie ...	34	117	145	96	392	1,117	1,509	60	540	600	2	Algérie
Total ...	260	557	570	569	1,956	5,012	6,968	69	770	839	112	Total

APPENDIX.

(I.)—*Effectif. Tableau Général de l'Effectif en Hommes et en Chevaux—Contd.*

Désignation des Armes.	Hommes.					Hommes.		Chevaux ou Mulets			Enfants de Troupe.	Désignation des Armes.
	Cadres des Régiments, Bataillons, Escadrons, Compagnies ou Batteries.											
	Officiers.	Sous-Officiers et Employés y Assimilés.	Caporaux et Brigadiers.	Soldats hors Rang, Tambours, Trompettes, &c.	Total des Cadres.	Soldats.	Total des Hommes.	D'Officiers.	De Troupe (Selle et Trait).	Total.		
Equipages Militaires—												*Equipages Militaires*—
Divisions territoriales de l'intérieur	155	235	292	362	1,044	1,304	2,318	156	1,732	1,888	32	Divisions territoriales de l'intérieur
Algérie	145	208	284	370	1,007	1,367	2,374	182	2,604	2,786	29	Algérie
Total	300	443	576	732	2,051	2,671	4,722	338	4,336	4,674	61	Total
Vétérans de l'Armée—												*Vétérans de l'Armée*—
Divisions territoriales de l'intérieur	19	54	80	10	163	485	618	—	—	—	18	Divisions territoriales de l'intérieur
Services Administratifs—												*Services Administratifs*—
Intérieur	1,294	309	399	84	2,086	4,062	6,148	—	—	—	30	Intérieur
Algérie	699	136	216	36	1,087	1,502	2,589	160	—	160	12	Algérie
Total	1,993	445	615	120	3,173	5,564	8,737	160	—	160	42	Total
Total des troupes françaises ...	22,578	34,043	39,972	28,879	125,472	262,990	388,462	10,688	71,418	82,106	5,498	Total des troupes françaises
CORPS ETRANGER.												CORPS ETRANGER.
Infanterie—												*Infanterie*—
Algérie	90	172	215	132	609	1,440	2,019	37	20	57	25	Algérie
CORPS INDIGENES.												CORPS INDIGENES.
Infanterie et Cavalerie—												*Infanterie et Cavalerie*—
Algérie	561	783	1,014	576	2,934	6,555	9,489	532	3,010	3,542	99	Algérie
Totaux généraux	23,229	34,998	41,201	29,587	129,015	270,985	400,000	11,257	74,448	85,705	5,622	Totaux généraux

(II.)—*Section* 2, *Chapitre* 4—*Etats-Majors.*

Effectif. Intérieur. Etat-Major Général et Corps d'Etat-Major.	Effectif. Intérieur. Officiers hors Cadres.	Effectif. Algérie.	Effectif. Total.	Nature des Dépenses.	Crédits Demandés pour l'Exercice 1864. Divisions Territoriales de l'Intérieur.	Crédits Demandés pour l'Exercice 1864. Algérie.	Crédits Demandés pour l'Exercice 1864. Total.
				Section 2e. ETATS-MAJORS—GENDARMERIE. Chapitre 4.—*Etats-Majors.* Art 1.—Traitement des Maréchaux de France, Officiers Généraux, Supérieurs et autres d'Etat-Major. (Loi du 4 Août 1839, et decrets des 20 Decembre 1851, 19 Février et 1 Décembre 1852.)	fr.	fr.	fr.
				Section 1er. TRAITEMENTS D'ACTIVITE.			
10	—	—	10	*Maréchaux de France*— 7 pourvus de commandement .... fr. 935,550; 3 sans commandement 90,000	1,025,620	—	1,025,620
86	—	4	90	*Généraux de Division*— 74 pourvus de fonctions ..... 1,755,274; 16 en disponibilité 151,920	1,726,944	180,250	1,907,194
151	—	9	160	*Généraux de Brigade*— 156 pourvus de fonctions ..... 2,381,260; 2 en disponibilité.... 12,660; 2 payés sur le chapitre 1er (administration centrale) ..... —	2,231,920	162,000	2,393,920
32	4	3	39	*Colonels* (dont 4 payés sur le chapitre 1er (administration centrale)	295,502	27,030	322,532
32	2	3	37	*Lieutenants-Colonels*	268,028	18,420	286,448
104	37	6	147	*Chefs d'Escadron et de Bataillon*	876,618	36,120	912,738
136	—	13	149	*Capitaines* de 1re classe	622,737	58,210	680,947
133	11	18	162	„ 2e „	566,696	53,460	620,156
—	—	—	—	*Traitement* de 40 interprètes titulaires et de 35 auxiliaires	—	200,000	200,000
—	—	—	—	*Frais de bureau* des chefs d'état-major	74,100	—	74,100
—	—	—	—	*Remboursement* de frais extraordinaire aux officiers généraux	20,000	—	20,000
—	—	—	—	*Allocations spéciales* aux inspecteurs généraux d'armes	141,900	18,750	160,650
—	—	—	—	*Allocations extraordinaires* en cas de ressemblement de troupes, et pour les camps d'instruction	31,380	—	31,380
—	—	—	—	*Gratification* d'entrée en campagne	—	28,600	28,600
—	—	—	—	*Indemnité* representative des vivres de campagne	—	31,801	31,801
684	54	56	794	Totaux de Section 1er	7,881,445	814,641	8,696,086
738							

(II.)—*Section* 2, *Chapitre* 4—*Etats-Majors—Contd.*

Effectif. Intérieur. Etat-Major Général et Corps d'Etat-Major.	Effectif. Intérieur. Officiers hors Cadres.	Effectif. Algérie.	Effectif. Total.	Nature des Dépenses.	Crédits Demandés pour l'Exercice 1864. Divisions Territoriales de l'Intérieur.	Crédits Demandés pour l'Exercice 1864. Algérie.	Crédits Demandés pour l'Exercice 1864. Total.
				Section 2. SOLDE DE RESERVE.	fr.	fr.	fr.
270	—	260		78 *Généraux de divisions* à 9,000 fr. l'un, 360*l.* per an. fr. 702,000; 2 *Généraux* payés sur le chapitre 1er (administration centrale) ..... —; 180 *Généraux de brigade* à 6,000 fr. l'un, 210*l.* per an. 1,080,000	1,782,000	—	1,782,000
998	56	1,014		Totaux de l'Article 1er	9,663,445	814,641	10,478,086

(III.)—*Décomposition de l'Effectif à entretenir dans les Divisions Territoriales de l'Intérieur.*

Armes et Corps Spéciaux.

ETATS-MAJORS.

Maréchaux de France, officiers généraux, supérieurs et autres d'état-major.
Intendance militaire.
Etat-major des places.
Etat-major particulier de l'artillerie.
Etat-major particulier du génie.

MAISON DE L'EMPEREUR.

Escadron des cents-gardes à cheval.

GARDE IMPERIALE.

Infanterie—
7 régiments (dont 3 de grenadiers et 4 de voltigeurs) à 4 bataillons de 6 compagnies.
1 régiment de zouaves à 2 bataillons de 7 compagnies.
1 bataillon de chasseurs à pied de 10 compagnies.

Cavalerie—
6 régiments (dont 2 de cuirassiers, 1 de dragons, 1 de lanciers, 1 de guides et 1 de chasseurs) à 6 escadrons.

Gendarmerie—
1 régiment à pied à 2 bataillons de 8 compagnies.
1 escadron pour la surveillance des forêts.

(III.)—*Décomposition de l'Effectif—Contd.*

GARDE IMPERIALE—*Contd.*

Artillerie—
1 division d'artillerie à pied de 2 batteries.
1 régiment d'artillerie monté de 8 batteries.
1 „ à cheval de 6 batteries.
1 escadron de train de 2 compagnies.

Génie—
1 division de 2 compagnies.

Equipages Militaires—
1 escadron de 4 compagnies.

GENDARMERIE.

26 légions ou 92 compagnies départmentales.
1 compagnie de gendarmes vétérans.

TROUPES.

Infanterie—
94 régiments de ligne à 3 bataillons de 6 compagnies et un dépôt de 6 compagnies.
Dépôt des 6 régiments de ligne employes en Algerie
20 bataillons de chasseurs a pied a 8 compagnies.

Cavalerie—
49 régiments à 6 escadrons dont 2 de carabiniers.
10 de cuirassiers, 12 de dragons, 8 de lanciers.
11 de chasseurs et 6 de hussards.
Ecole de cavalerie.
Dépôts de remonte, vétérinaires et cavaliers de remonte (6 compagnies).

Artillerie—
18 régiments (3 batteries à cheval, 100 montées, 64 à pied).
1 régiment de pontonniers (10 compagnies).
5 escadrons du train à 5 compagnies.
10 compagnies d'ouvriers.

Génie—
3 régiments à 2 bataillons (42 compagnies).
1 compagnie d'ouvriers.

Equipages Militaires—
Parcs de construction.
2 escadrons du train (10 compagnies actives et 2 cadres de dépôt).
3 compagnies d'ouvriers.

Vétérans de l'Armée—
1 compagnie de sous-officiers.
4 compagnies de canonniers.

(IV.)—*Comparison of the Five Sections.—Ministère de la Guerre. Budget Général des Dépenses Ordinaires de l'Exercice* 1864.

Section.	Nature des Services.	Crédits Demandés		
		Pour Dépenses formant les Charges de l'Etat.	Pour Dépenses d'Ordre.	Total.
		fr.	fr.	fr.
1	Administration centrale ; dépôt general de la guerre	2,604,538	—	2,604,538
2	Etats-majors ; gendarmerie	47,520,086	1,769,932	49,290,018
3	Solde et entretien des troupes	284,897,645	163,794	285,061,439
4	Matériel de l'artillerie et du génie, et service des poudres et salpêtres	25,882,189	886,821	26,769,010
5	Ecoles militaires ; invalides de la guerre ; traitements temporaires et secours ; dépenses secrètes	7,559,035	—	7,559,035
	Total	368,463,493	2,820,547	371,284,040
	Dotation de l'armée, section unique	—	—	60,740,000
	Crédit éventuel pour inscription de pension militaire en 1864.....	—	—	2,600,000

Comparaison par Chapitre des Crédits Demandés pour 1864 *avec les Crédits accordés pour* 1863.

Effectif servant de base aux Dépenses relatives à l'Entretien des Troupes.

	Effectif.					
	Hommes.			Chevaux.		
	Intérieur.	Algérie.	Total.	Intérieur.	Algérie.	Total.
Allocations pour 1863	334,310	65,690	400,000	69,809	15,896	85,705
Provisions de 1864.....	345,000	55,000	400,000	69,809	15,896	85,705
Différence en plus	10,690	—	—	—	—	—
Différence en moins	—	10,690	—	—	—	—

	Dépenses.		
	Intérieur.	Algérie.	Total.
	fr.	fr.	fr.
Allocations pour 1863	307,432,099	59,188,268	366,620,367
Provisions de 1864.....	316,347,138	54,936,902	371,284,040
Différence en plus	8,915,039	—	4,663,673
Différence en moins	—	4,251,366	—

Comparaison des Crédits Demandés pour 1864 *avec les Crédits Accordés pour* 1863.

Sections.	Chapitres.	Désignation des Services.		Crédits Démandés pour 1864.	Crédits Alloués pour 1863.	Différences au Budget de 1864	
						En Plus.	En Moins.
				fr.	fr.	fr.	fr.
1	1	Administration centrale (personnel)		1,910,538	1,740,668	169,870	—
1	2	„ (matériel)		549,500	549,500	—	—
1	3	Dépôt général de la guerre		144,500	144,500	—	—
2	4	Etat-majors		21,280,298	21,353,556	—	73,258
2	5	Gendarmerie impériale		28,009,720	27,593,307	416,413	—
3	6	Solde et prestations en natures.	1 p. Soldo et abonnements payables comme la solde, 355,187 men and officers	fr. 147,801,500	237,697,226	236,139,664	1,557,562	—
			2 p. Vivres chauffage et fourrages	68,772,140				
			3 p. Hôpitaux militaires	14,753,650				
			4 p. Service de marche	6,369,936				
3	7	Habillement et campement		21,177,191	20,269,841	907,350	—
3	8	Lits militaires		6,576,961	6,631,882	—	54,921
3	9	Transports généraux		2,492,850	2,242,850	250,000	—
3	10	Recrutement et réserve		689,479	739,479	—	50,000
3	11	Justice militaire		1,260,987	1,256,037	4,950	—
3	12	Remonte générale		5,429,250	4,929,250	500,000	—
3	13	Harnachement		764,085	700,018	64,067	—
3	14	Corps indigènes en Algérie		8,973,410	9,491,012	—	517,602
4	15	Etablissements et matériel de l'artillerie		7,425,655	7,477,288	—	51,633
4	16	Etablissements et matérial du génie		10,951,890	10,951,890	—	—
4	17	Poudres et salpêtres (personnel)		882,482	769,144	113,338	—
4	18	„ (matériel)		7,508,983	5,912,700	1,596,283	—
5	19	Ecoles impériales militaires		3,004,033	2,939,033	65,000	—
5	20	Invalides de la guerre		2,179,002	2,392,718	—	213,716
5	21	Solde de non-activité et soldo de réforme		503,000	503,000	—	—
5	22	Secours		1,733,000	1,733,000	—	—
5	23	Dépenses temporaires		90,000	110,000	—	20,000
5	24	„ secrètes		50,000	50,000	—	—
5	25	„ des exercices clos		—	—	—	—
5	26	„ „ périmés non frappés de déchéance		—	—	—	—
		Totaux		371,284,040	366,620,367	5,644,833	981,160
						en plus 4,663,673	
		Dotation de l'armée (section unique)		60,740,000	60,340,000	400,000	—
		Crédit éventuel pour inscription de pensions militaires en 1864		2,600,000	2,400,000	200,000	—

(V.)—*Table Détaillée des Matières.*

(VI.)—*Récapitulation Générale.*

Sections.	Chapitres.	Nature des Services.	Crédits Demandés pour 1864. Intérieur.	Algérie. Troupes Françaises.	Algérie. Corps Etranger.	Algérie. Dépenses Générales.	Total.
			fr.	fr.	fr.	fr.	fr.
1	I.	Administration centrale (personnel)	1,910,538	—	—	—	1,910,538
	II.	Administration centrale (matériel)	549,500	—	—	—	549,500
	III.	Dépôt général de la guerre	135,400	—	—	9,100	141,500
2	IV.	Etats-majors	18,887,826	2,392,472	—	—	21,280,298
	V.	Gendarmerie impériale	27,060,186	949,534	—	—	28,009,720
3	VI.	Soldo et prestations en nature	204,407,206	32,140,731	1,149,289	—	237,697,226
	VII.	Habillement et campement	18,113,694	2,891,922	171,575	—	21,177,191
	VIII.	Lits militaires	5,557,345	985,415	34,201	—	6,576,961
	IX.	Transports généraux	1,855,244	632,300	5,306	—	2,492,850
	X.	Recrutement et réserve	689,479	—	—	—	689,479
	XI.	Justice militaire	852,810	404,932	3,245	—	1,260,987
	XII.	Remonte générale	4,441,350	987,900	—	—	5,429,250
	XIII.	Harnachement	659,578	104,507	—	—	764,085
	XIV.	Corps indigènes en Algérie	—	—	8,973,410	—	8,973,410
4	XV.	Etablissements et matériel de l'artillerie	6,974,592	170,878	10,000	270,185	7,425,655
	XVI.	Etablissements et matériel du génie	8,351,890	—	—	2,600,000	10,951,890
	XVII.	Poudres et salpêtres (personnel)	882,482	—	—	—	882,482
	XVIII.	Poudres et salpêtres (matériel)	7,508,983	—	—	—	7,508,983
5	XIX.	Ecoles impériale militaires	3,004,033	—	—	—	3,004,033
	XX.	Invalides de la guerre	2,179,002	—	—	—	2,179,002
	XXI.	Solde de non-activité et solde de réforme	503,000	—	—	—	503,000
	XXII.	Secours (gratuity)	1,733,000	—	—	—	1,733,000
	XXIII.	Dépenses temporaires	90,000	—	—	—	90,000
	XXIV.	Dépenses secrètes	—	—	—	50,000	50,000
	XXV.	Dépenses des exercices clos et périmés	—	—	—	—	—
		Total général	316,347,138	41,660,591	10,347,026	2,929,285	371,284,040
				54,936,902			
Unique	—	Donation de l'armée	—	—			60,740,000

(VII.)—*Récapitulation de la Part* 1, *Section* 3, *Chapitre* 6.

Paye.	Effectif. Intérieur. Garde Impériale.	Intérieur. Troupes de Ligne.	Algérie.	Total.
Art. 1. Infanterie	17,784	199,992	26,247	244,023
„ 2. Cavalerie	6,504	45,609	7,566	59,679
„ 3. Artillerie	2,985	30,831	4,057	37,873
„ 4. Génie	341	5,459	1,509	7,309
„ 5. Equipages militaires	933	2,348	2,374	5,655
„ 6. Vétérans	—	648	—	648
Totaux	28,547	284,887	41,753	355,187

Paye.	Intérieur.	Algérie. Troupes Françaises.	Algérie. Corps Etranger.	Total des Crédits Demandés pour 1864.	Crédits Alloués pour 1863.
	fr.	fr.	fr.	fr.	fr.
Art. 1. Infanterie	80,901,071	8,954,124	773,974	90,629,169	88,972,266
„ 2. Cavalerie	27,312,602	3,664,081	—	30,976,683	30,535,188
„ 3. Artillerie	17,473,365	1,852,652	—	19,326,017	20,411,058
„ 4. Génie	2,705,187	601,579	—	3,306,766	3,024,687
„ 5. Equipages militaires	1,881,757	1,445,372	—	3,327,129	3,263,504
„ 6. Vétérans	235,736	—	—	235,736	232,634
Totaux	130,509,718	16,517,808	773,974	147,801,500	146,439,337
		17,291,782			

(VII A.)—*Section* 3, *Chapitre* 3, *Part* 1—*Solde des Troupes.*

Nature des Dépenses.	Crédits Demandés pour l'Exercice 1864. Divisions Territoriales de l'Intérieur.	Algérie. Troupes Françaises.	Algérie. Corps Etranger.	Total.
	fr.	fr.	fr.	fr.
SECTION 2.				
Abonnements et Indemnités.				
MASSE GENERALE D'ENTRETIEN.				
Garde Impériale.				
1 régiment de zouaves à 11,200 11,200				
7 régiments d'infanterie à 27,000 par corps 189,000	206,400	—	—	206,400
1 bataillon de chasseurs à 6,200 6,200				
Troupes de Ligne.				
101 régiments d'infanterie (y compris le régiment étranger) à 13,000	1,240,000	60,000	13,000	1,313,000
20 bataillons de chasseurs à pied (à 4,300 frs.)	86,000	—	—	86,000
3 régiments de zouaves à 7,550 frs. l'un	—	22,650	—	22,650
3 bataillons d'infanterie légère d'Afrique à 2,900 frs.	—	8,700	—	8,700
7 compagnies de discipline à 300 frs.	—	2,100	—	2,100
A reporter	1,532,400	93,450	13,000	1,638,850

(VIII.)—*Dépenses.—Section* 1, *Chapitre* 1—*Administration Centrale (Personnel).*

Nature des Dépenses.		Crédits		Différences au Budget de 1864.	
		Demandés pour l'Exercice 1864.	Alloués pour l'Exercice 1863.	En Plus.	En Moins.
		fr.	fr.	fr.	fr.
SECTION 1. *Administration Centrale. Depôt Général de la Guerre.*					
Chapitre 1. *Administration Centrale (Personnel).*					
ARTICLE 1. *Traitement du Ministre.*					
Traitement du ministre		130,000	130,000	—	—
ARTICLE 2. *Appointement des Chefs et Commis. Appointements des Directeurs, des Chefs et des Commis des divers Services, ensemble 479 personnes, savoir :—*					
7 directeurs de 18,000 à 25,000 frs.	479	1,646,998	—	—	—
1 chef de cabinet du ministre à 12,000 frs.					
4 directeurs-adjoints et sous-directeurs à 10,000 frs.					
25 chefs de bureaux de 7,000 à 9,000 frs.					
28 sous-chefs de 5,000 à 6,000 frs.					
25 chefs de section à 4,000 frs.					
382 commis principaux et ordinaires de toutes classes, dessinateurs et graveurs de 18,000 à 36,000 frs.					
2 traducteurs de 2,400 à 4,000 frs.					
1 agent comptable à 6,000 frs.					
1 conservateur de mobilier à 5,000 frs.					
2 élèves dessinateurs ou graveurs à 600 frs.					
1 inspecteur des travaux de bâtiment à 1,000 frs.					
A déduire : Pour incomplets présumés, compensation faite des allocations nécessaires, pour travaux extraordinaires, indemnités des employés auxiliares, indemnités de licenciement &c.		3,000	—	—	—
Reste pour l'Article 2		1,649,998	1,474,118	169,870	—
ARTICLE 3. *Salaires des Agents Secondaires.*					
Huissiers, concierges, garçons de bureaux et hommes de pied à l'armée, pour les divers services du ministre		136,550	136,550	—	—
Total du Chapitre 1		1,916,548	1,740,668	169,870	—

(IX.)—*Suite de la Section* 3, *Chapitre* 6, *Partie* 2—*Vivres, Chauffage et Fourrages.*

Nature des Dépenses.	Intérieur.	Algérie.	Total.
SUITE DE L'ARTICLE 2—(Vivres). *Evaluation de la Dépense.* Effectif ayant droit aux Distributions : 349,207 hommes (comme d'autre part).	Rations.	Rations.	Rations.
SECTION 1.—*Vivres Pain.* * Rations de pain, à 20 c. dans l'intérieur et en Algérie	100,848,554	15,975,861	116,824,415
SECTION 2.—*Vivres de Campagne.* Rations mixtes de sucre et café, à 7 c. l'une	—	10,650,547	10,650,547
SECTION 3.—*Liquides.* Rations de vin de 25 centilitres, à 4 c. 50 m. l'une	—	5,925,287	5,925,287

* Rations for $\frac{1}{3}\frac{1}{5}$th of strength, supposed to be in hospital, not included.

(IX.)—*Suite de la Section 3, Chapitre 6, Partie 2—Contd.*

Nature des Dépenses.	Crédits Demandés pour l'Exercice 1864.			
	Divisions Territoriales de l'Intérieur.	Algérie. Troupes Françaises.	Algérie. Corps Etranger.	Total.
	fr.	fr.	fr.	fr.
SUITE DE L'ARTICLE 2—(Vivres). *Evaluation de la Depense.* Effectif ayant droit aux Distributions : 348,207 hommes (comme d'autre part).				
SECTION 1.—*Vivres Pain.* Rations de pain, à 20 c. dans l'intérieur et en Algérie, savoir :—				
Garde impériale, 9,066,735 rations	1,813,347	—	—	1,813,347
Troupes de ligne, 107,757,680 „	18,356,364	3,060,109	135,063	21,551,536
Total de Section 1	20,169,711	3,060,109	135,063	23,364,883
SECTION 2.—*Vivres de Campagne.* Achat de riz, legumes secs, viand et sel pour les troupes tenant garrison dans les îles et forts en mer, et pour les ateliers de condamnés dans l'intérieur	30,000	—	—	30,000
Dépenses extraordinaires pour les camps d'instruction	407,000	—	—	407,000
Rations mixtes de sucre et café, à 7 c. l'une	—	714,025	31,515	745,540
Total de Section 2	437,000	714,025	31,515	1,182,540
SECTION 3.—*Liquides.* Rations de vin de 25 centilitres, à 4 c. 50 m. l'une	—	256,508	10,130	266,638
Fourniture et transport l'eau douce, tant pour le service des troupes casernées à Paris, Vincennes, Courbevoie, Saint-Denis, Rouen, Longwy &c. que pour les garrisons des îles Tatihou, Saint-Marcouf et du fort La Hogue	55,000	—	—	55,000
Total de Section 3	55,000	256,508	10,130	321,638
SECTION 4.—*Approvisionnements de Siège.* Renouvellement entretien en conservation des denrées composant les approvisionnements des îles et forts en mer	15,000	—	—	15,000
SECT. 5.—*Deuxième Portion du Contingent.* 4,615,890 rations de pain, à 20 c. l'une	989,178	—	—	989,178
Total de l'Article 2	21,665,889	4,030,642	176,708	25,873,239
Report au chapitre 9 (transports généraux), des frais de transport de vivres	200,000	—	—	200,000
Reste pour 1864	21,465,889	4,207,350		25,673,239
Credit alloué pour 1863	—	—	—	25,539,421
Augmentation pour 1864	—	—	—	133,818

(X.)—*Suite de la Section 3, Chapitre 6, Partie 2—Vivres, Chauffage et Fourrages.*

Nature des Dépenses.	Intérieur. Garde Impériale.	Intérieur. Troupes.	Algérie.	Total.
ARTICLE 4.—*Fourrages.*	Chevaux.	Chevaux.	Chevaux.	Chevaux.
Le nombre des chevaux compris dans l'effectif est de	8,127	61,682	15,896	85,705
A déduire—				
Les chevaux des cent-gardes à cheval	179	—	—	3,721
„ corps indigènes dont les frais de nourriture sont compris au chapitre 14	—	—	3,542	
Reste	7,948	61,682	12,354	81,984
A quoi il convient d'ajouter, par approximation, 1,500 chevaux d'officiers généraux, supérieurs et autres, autorisés à percevoir les rations en nature au lieu de l'indemnité de fourrages que leur est attribuée par les tarifs de la solde	—	1,500	—	1,500
Total	7,948	63,182	12,354	83,484
	71,130			
	Rations.	Rations.	Rations.	Rations.
Lesquels, à nourrir pendant 360 jours, porteront le nombre des journées de nourriture ou des rations journalières à distribuer à	2,908,968	23,124,612	4,521,564	30,555,144
	26,033,580			

Nature des Dépenses.	Crédits Demandés pour l'Exercice 1864. Divisions Territoriales de l'Intérieur.	Algérie. Troupes Françaises.	Algérie. Corps Etranger.	Total.
	fr.	fr.	fr.	fr.
Ces 30,555,144 rations, décomptées au prix de 1 fr. 25 c. la ration pour l'intérieur et pour l'Algérie, occasionneront la dépense ci-après, savoir :				
Garde impériale	3,636,210	—	—	3,636,210
Troupes de ligne	28,905,765	5,625,878	26,077	34,557,720
Frais de nourriture des reproducteurs entretiens dans les dépôts et stations en Algérie	—	42,910	—	42,910
Supplement de ration aux chevaux de remonte, pendant la route des lieux d'achats aux dépôts de remonte et de ces dépôts aux corps, et aux chevaux des camps d'instruction	88,000	20,567	—	108,567
Garde de Paris ; 663 chevaux, pendant 366 jours, consommeront 242,658 rations, lesquelles, au prix du 1 fr. 35 c. l'une, couteront	327,588	—	—	327,588
Total de l'Article 4	32,957,563	5,689,355	26,077	38,672,995
A déduire : Pour frais de transport mis à la charge du chapitre 9 (Transports généraux)	50,000	—	—	50,000
Reste pour 1864	32,907,563	5,715,432		38,622,995
Crédit alloué pour 1863	—	—		38,450,033
Augmentation pour 1864	—	—		172,962

Récapitulation de la Partie 2.

	Crédits Demandés pour 1864.			
	Intérieur.	Algérie.		Total.
	fr.	fr.	fr.	fr.
Art. 1. Personnel	1,084,087	578,155	—	1,662,242
„ 2. Vivres	21,465,889	4,030,642	176,708	25,673,239
„ 3. Chauffage et éclairage	2,358,992	434,438	20,234	2,813,664
„ 4. Fourrages	32,907,563	5,689,355	26,077	38,622,995
Total de la partie 2	57,816,531	10,732,590	223,019	68,772,140
		10,955,609		

	Allocations de 1863.	Différences à 1863.	
		En Plus.	En Moins.
	fr.	fr.	fr.
Art. 1. Personnel	1,631,355	30,887	—
„ 2. Vivres	25,539,421	133,818	—
„ 3. Chauffage et éclairage	2,822,557	—	8,893
„ 4. Fourrages	38,450,033	172,062	—
Total de la partie 2	68,443,366	337,667	8,893
		En plus 328,774	

(XI.)—*Suite de la Section 3, Chapitre 6, Partie 3—Vivres, Chauffage et Fourrages.*

Nature des Dépenses.	Intérieur.	Algérie.	Total.
	No.	No.	No.
ARTICLE 3.—Chauffage et éclairage.			
SEC. 1.—*Chauffage des Troupes.*			
GARDE IMPERIALE.			
Troupes faisant usage de Fourneaux Economiques.			
Rations de sous-officiers, pour 366 jours	860,723	—	860,723
Rations collectives de l'ordinaire, pour 366 jours	131,028	—	131,028
Idem de chauffage des chambres, pour 134 jours d'hiver	62,676	—	62,676
TROUPES DE LIGNE.			
Troupes faisant usage de Fourneaux Economiques.			
Rations de sous-officiers	8,897,508	1,176,974	10,074,482
Rations collectives de l'ordinaire	1,384,744	162,000	1,546,744
Idem de chauffage des chambres, pour 134 jours d'hiver	648,049	2,000	650,049
Troupes ne faisant pas usage de Fourneaux Economiques.			
Rations individuelles de l'ordinaire	1,782,377	5,665,548	7,447,925
Idem de chauffage des chambres	701,447	—	701,447
Distribution extraordinaire de combustibles pour les camps d'instruction	—	—	—
SECTION 2.			
Chauffage et Eclairage des Corps de Garde.			
1,400 corps de garde dans l'intérieur, pendant 221 jours:—			
Journées de chauffage	295,400	—	295,400
„ d'éclairage	512,400	—	512,400
360 corps de garde en Algérie, pendant 121 jours:—			
Journées de chauffage	—	43,560	43,560
„ d'éclairage	—	131,760	131,760

(XI.)—*Suite de la Section 3, Chapitre 6, Partie 3.—Chauffage—Contd.*

Nature des Dépenses.	Crédits Demandés pour l'Exercice 1864. Divisions Territoriales de l'Intérieur.	Algérie. Troupes Françaises.	Algérie. Corps Etranger.	Total.
	fr.	fr.	fr.	fr.
ARTICLE 3.—Chauffage et éclairage.				
SEC. 1.—*Chauffage des Troupes.*				
GARDE IMPERIALE.				
Troupes faisant usage de Fourneaux Economiques.				
Rations de sous-officiers, à 4 c. la ration, pour 366 jours	34,429	—	—	34,429
Rations collectives de l'ordinaire, à 50 c. la ration, pour 366 jours	65,514	—	—	65,514
Idem de chauffage des chambres, pour 134 jours d'hiver, à 65 c. idem	40,739	—	—	40,739
	140,682	—	—	140,682
TROUPES DE LIGNE.				
Troupes faisant usage de Fourneaux Economiques.				
Rations de sous-officiers, à 4 c. la ration à l'intérieur et 6 c. en Algérie	355,900	67,028	3,590	426,518
Rations collectives de l'ordinaire, à 50 c. la ration à l'intérieur et 80 c. en Algérie	692,372	128,000	1,600	821,972
Idem de chauffage des chambres, pour 134 jours d'hiver, à 65 c. la ration pour l'intérieur et à 70 c. pour l'Algérie	421,232	1,400	—	422,632
	1,469,504	196,428	5,190	1,671,122
Troupes ne faisant pas usage de Fourneaux Economiques.				
Rations individuelles de l'ordinaire, à 2 c. à l'intérieur et 3 c. en Algérie	35,647	154,992	15,044	205,683
Idem de chauffage des chambres, à 2 c. l'une à l'intérieur	14,029	—	—	14,029
Distribution extraordinaire de combustibles pour les camps d'instruction	60,000	—	—	60,000
Total de Section 1	1,719,862	351,420	20,234	2,091,516
SECTION 2.				
Chauffage et Eclairage des Corps de Garde.				
1,400 corps de garde dans l'intérieur, pendant 221 jours:— fr.				
Journées de chauffage, à 95 c. l'une.... 280,630	408,730	—	—	408,730
„ d'éclairage, à 25 c. l'une..... 128,100				
360 corps de garde en Algérie, pendant 121 jours:—				
Journées de chauffage, à 1 fr. l'une 43,560	—	83,088	—	83,088
„ d'éclairage, à 30 c. l'une..... 39,528				
Total de Section 2	408,730	83,088	—	491,818

(XI.)—*Suite de la Section 3, Chapitre 6, Partie 3.—Chauffage—Contd.*

Nature des Dépenses.	Crédits Demandés pour l'Exercice 1864. Divisions Territoriales de l'Intérieur.	Algérie. Troupes Françaises.	Algérie. Corps Etranger.	Total.
	fr.	fr.	fr.	fr.
SECTION 3.				
Eclairage des Casernes et Bâtiments Militaires de Paris et Arrondissement.				
Entretien, dans les bâtiments militaires, de 950 becs de lumière (éclairage au gaz) fr. 82,000	105,000	—	—	105,000
Idem de 450 becs de lumière (éclairage à l'huile) 23,000				
SEC. 4.—*Dépenses Accessoires.*				
Frais de transport de combustibles pour les troupes éloignées des magasins	3,000	—	—	3,000
SEC. 5.—*Deuxième Portion du Contingent.*				
4,615,890 rations individuelles	122,400	—	—	122,400
Total de l'Article 3	2,358,992	434,508	20,234	2,813,734
		454,672		
Crédit alloué pour 1863	—	—		2,822,557
Diminution pour 1864	—	—		8,893

(XII.)—*Suite de la Section 3, Chapitre 7*—*Habillement et Campement.*

NATURE DE
ART. 2—Matériel.—SEC. 1—Fourniture d'Ef

Désignation des Armes.	Effectif. Intérieur. Sous-Officiers et Cadres.	Effectif. Intérieur. Soldats.	Effectif. Algérie. Sous-Officiers et Cadres.	Effectif. Algérie. Soldats.	Dépense Moyenne par Homme. Sous-Officiers et Cadres.	Dépense Moyenne par Homme. Soldats.
Garde Impériale—					fr. c.	fr. c.
Grenadiers	1,560	4,722	—	—	72 72	63 1
Voltigeurs	2,080	6,296	—	—	58 86	52 8
Zouaves	322	1,008	—	—	56 1	51 6
Chasseurs à pied	253	700	—	—	65 5	58 4
Cuirassiers	614	1,324	—	—	100 53	93 2
Dragons	307	662	—	—	89 26	81 9
Lanciers	307	662	—	—	86 82	75 2
Guides	307	662	—	—	105 14	102 7
Chasseurs	307	662	—	—	86 22	83 2
Division d'artillerie à pied	56	184	—	—	63 7	61 4
Regiment „ monté	442	912	—	—	86 13	76 5
„ „ à cheval	357	708	—	—	89 29	88 5
Escadron du train d'artillerie	52	148	—	—	87 89	88 5
Division du génie	82	220	—	—	85 46	85 1
Escadron du train des équipages	269	620	—	—	90 67	91 4
Total de la garde impériale	7,315	19,490	—	—	—	—
Infanterie—						
Infanterie de ligne	50,572	119,139	3,092	16,391	48 90	40 8
Chasseurs à pied	4,277	8,024	606	2,400	45 18	40 0
Infanterie legère d'Afrique	—	—	429	1,230	45 58	39 8
Compagnies de discipline	—	—	175	686	41 26	27 1
Régiments étrangers	—	—	516	2,061	44 21	38 5
Total de l'infanterie	54,849	127,163	4,818	22,768	—	—
Cavalerie—						
De reserve — Caribiniers	488	1,140	—	—	76 -	51 8
De reserve — Cuirassiers	2,440	5,700	—	—	73 90	55 8
De ligne — Dragons	2,928	6,840	—	—	65 72	50 4
De ligne — Lanciers	1,952	4,560	—	—	66 3	51 0
Legère — Chasseurs	2,196	5,130	1,373	2,279	63 38	51 3
Legère — Hussards	1,952	4,560	—	—	65 13	51 6
Ecole impériale de cavalerie	112	95	—	—	63 38	48 7
Cavaliers de remonte	448	1,627	192	591	58 59	49 -
Chasseurs d'Afrique	—	—	1,373	2,279	80 5	50 6
Total de la cavalerie	12,516	29,652	2,938	5,149	—	—
Artillerie—						
Régiments	8,830	16,884	537	1,232	60 45	50 8
Pontonniers	358	720	56	208	51 48	46 1
Escadron du train d'artillerie	821	1,050	271	1,200	69 10	58 5
Compagnies d'ouvriers	280	420	112	284	62 49	51 0
Total de l'artillerie	10,289	19,074	976	2,924	—	—

DEPENSES.
d'Habillement aux Corps de Troupes.

Dépense Totale. Intérieur. Sous-Officiers et Cadres.	Dépense Totale. Intérieur. Soldats.	Dépense Totale. Algérie. Sous-Officiers et Cadres.	Dépense Totale. Algérie. Soldats.
fr.	fr.	fr.	fr.
113,443	298,336	—	—
128,429	327,281	—	—
18,035	55,067	—	—
16,458	40,887	—	—
61,725	123,437	—	—
25,149	54,231	—	—
26,654	49,829	—	—
32,278	68,027	—	—
26,470	55,105	—	—
3,532	11,859	—	—
38,069	69,950	—	—
31,877	62,700	—	—
4,570	13,107	—	—
7,008	18,729	—	—
24,390	56,699	—	—
558,087	1,305,244	—	—
2,472,970	4,825,129	151,198	663,835
192,243	326,496	27,560	98,056
—	—	19,553	48,609
—	—	7,220	18,624
—	—	22,827	79,348
2,665,213	5,151,625	228,358	908,472
37,088	61,893	—	—
180,316	318,459	—	—
192,418	344,804	—	—
128,890	235,296	—	—
139,222	263,322	87,080	116,981
127,133	230,615	—	—
7,098	4,631	—	—
26,248	79,723	11,249	28,959
—	—	109,908	115,431
838,413	1,538,743	208,237	261,371
533,773	858,213	32,461	62,622
18,529	33,228	2,882	9,599
56,731	61,467	18,726	70,248
17,497	21,672	6,998	14,654
626,530	974,580	61,067	157,123

Crédits Demandés pour l'Exercice 1864.

Divisions Territoriales de l'Intérieur.	Algérie. Troupes Françaises.	Algérie. Corps Etranger.	Total.
fr.	fr.	fr.	fr.
1,863,331	—	—	1,863,331
7,816,838	1,034,655	102,157	8,953,668
2,377,156	469,548	—	2,846,704
1,601,110	218,190	—	1,819,300

(XII.)—*Suite de la Section 3, Chapitre 7—Habillement et Campement—Contd.*

NATURE DES DÉPENSES.
Art. 2—Matériel.—Sec. 1— Fourniture d'Effets d'Habillement aux Corps de Troupes.

Désignation des Armes.	Effectif. Intérieur. Sous-Officiers et Cadres.	Effectif. Intérieur. Soldats.	Effectif. Algérie. Sous-Officiers et Cadres.	Effectif. Algérie. Soldats.	Dépense Moyenne par Homme. Sous-Officiers et Cadres.	Dépense Moyenne par Homme. Soldats.	Dépense Totale. Intérieur. Sous-Officiers et Cadres.	Dépense Totale. Intérieur. Soldats.	Dépense Totale. Algérie. Sous-Officiers et Cadres.	Dépense Totale. Algérie. Soldats.	Crédits Demandés pour l'Exercice 1864. Divisions Territoriales de l'Intérieur.	Crédits Demandés pour l'Exercice 1864. Algérie. Troupes Françaises.	Crédits Demandés pour l'Exercice 1864. Algérie. Corps Etranger.	Crédits Demandés pour l'Exercice 1864. Total.
					fr. c.	fr. c.	fr.	fr.	fr.	fr.	fr.	fr.	fr.	fr.
Génie—														
Régiments	1,102	2,220	382	1,167	51 20	48 90	56,521	107,558	19,592	56,966				
Compagnies d'ouvriers	30	68	40	195	49 38	48 90	1,467	3,325	1,975	9,535				
Total du génie	1,132	2,288	422	1,362	—	—	57,988	110,883	21,567	66,501	168,871	88,068	—	256,939
Train des Equipages—														
Parcs de construction—escadrons	561	1,100	834	1,212	61 55	47 81	34,529	52,591	51,332	57,368				
Compagnies d'ouvriers	84	204	28	155	43 38	43 89	3,643	8,953	1,214	6,802				
Total des équipages militaires	645	1,304	862	1,367	—	—	38,172	61,544	52,546	64,170	99,716	116,716	—	216,432
Vétérans—														
Sous-officiers	16	97	—	—	43 60	43 67	697	4,325	—	—				
Canonniers	128	388	—	—	40 23	39 83	5,580	15,461	—	—				
Total des vétérans	144	485	—	—	—	—	6,277	19,786	—	—	25,973	—	—	25,973
Services Administratifs—														
Infirmiers militaires	463	1,736	220	1,010	43 32	42 95	20,057	74,561	9,350	43,379				
Ouvriers d'administration	329	2,326	168	492	52 —	36 19	17,108	84,177	8,736	17,805				
Total des services administratifs	792	4,062	388	1,502	—	—	37,165	158,738	18,086	61,184	195,903	79,450	—	275,353
	87,682	203,518	10,404	35,072			4,817,845	9,321,143	589,861	1,518,821	14,148,898	2,006,627	102,157	16,257,700
Totaux généraux	291,150		45,476				14,148,898		2,108,802					
A déduire: Pour prélèvement sur les approvisionnements	—		—		—	—	—		—		100,000	—	—	100,000
											14,048,898	2,006,627	102,175	16,157,700

Note.—Crédits alloués pour l'exercice 1863, 15,257,700 frs. Différences au budget de 1864, en plus 900,000 frs.

(XIII.)—*Suite de la Section 3, Chapitre 8—Lits Militaires.*

Quantités de Mobiliers Entretenus ou Occupés.		Nature des Dépenses.	Prix de Location ou de Conservation par An.	
Intérieur.	Algérie.		Intérieur.	Algérie.
			fr. c.	fr. c.
		CHAPITRE 8.—*Lits Militaires.*		
		ARTICLE 1.		
		Dépenses de Location et de Conservation.		
		GARDE IMPERIALE.		
		SECTION 1.—*Loyer d'Entretien.*		
28,079	—	Fournitures complètes de soldat	6 74	—
841	—	„ d'infirmerie	7 3	—
420	—	Demi-fournitures	6 14	—
500	—	Capotes de sentinelle	6 17	—
		SECTION 2.—*Loyer d'Occupation.*		
26,742	—	Fournitures complètes de soldat	7 73	—
—	—	„ d'infirmerie	10 41	—
—	—	Demi-fournitures	8 52	—
		SECTION 3.—*Abonnement de Conservation et d'Entretien.*		
9,610	—	Couchettes en fer de soldat	– 19	—
19,280	—	Châlits à tréteaux en fer	– 148	—
		TROUPES DE LIGNE.		
		SECTION 1.—*Loyer d'Entretien.*		
1,450	2	Fournitures d'officier et d'employé militaire, à	14 28	19 85
1,100	2	Ameublements d'officier	27 62	29 81
1,540	—	„ d'employé et d'adjutant sous-officier	7 95	—
276,921	61,550	Fournitures complètes de soldat	6 74	7 1
—	3,180	„ de hamacs pour soldat	—	3 11
7,759	1,645	„ d'infirmerie	7 03	7 48
4,823	1,851	Demi-fournitures de salle de police et prison	6 14	6 16
4,700	1,212	Capotes de sentinelle	6 17	5 35
		SECTION 2.—*Loyer d'Occupation.*		
1,050	2	Fournitures d'officier et d'employé militaire, à	11 48	14 30
746	2	Ameublements d'officier	22 64	28 40
1,450	—	„ d'employé militaire et d'adjutant sous-officier	6 44	—
267,000	48,000	Fournitures complètes de soldat	7 73	7 56
—	3,020	„ de hamacs pour soldat	—	8 5
7,695	1,645	„ d'infirmerie	10 41	10 34
3,817	1,440	Demi-fournitures de salle de police et prison	8 52	4 14
55	19	Mobiliers de corps de garde d'officier	13 45	18 88
1,236	329	„ „ de soldat	15 71	17 29
		SECTION 3.—*Abonnement de Conservation et d'Entretien.*		
1,569	—	Couchettes en fer d'officier, à	– 25	—
60,728	—	„ „ de soldat	– 19	—
195,412	63,647	Châlits à tréteaux en fer	– 148	– 24
71,165	—	„ „ en bois	– 114	—
		SECTION 4.—*Service Supplétif de Couchage.—Loyer d'Entretien.*		
32,650	—	Demi-fournitures auxiliaires	5 14	—
		Loyer d'Occupation.		
—	—	Demi-fournitures auxiliaires	7 52	—

(XIII.)—*Lits Militaires—Contd.*

SECTION 5.—*Deuxième Portion de Contingent.*

Frais de Couchage et Entretien du Mobilier.

ARTICLE 2.—*Dépenses Accessoires.*

SECTION 1.—*Loyers de Magasin et Logement chez l'Habitant.*

Loyers de magasins, à défaut d'emplacement dans les bâtiments militaires.

Pertes et dégradations à la charge de l'Etat, frais d'expertise, de transport et autres dépenses accidentelles.

Indemnité aux habitants pour logement fourni aux troupes, à défaut d'emplacement ou de lits militaires.

Fourniture de couverture aux troupes bivouaquées, ou transportées par mer, en Algérie.

SECTION 2.—*Ameublement des Officiers Généraux et Mess.*

Frais d'entretien des ameublements existant dans les appartements de reception des hôtels occupés par des officiers généraux.

Frais d'entretien des ameublements garnissant les mess des officiers de la garde impériale.

Entretien de l'ameublement des hôtels des maréchaux de France pourvus de grands commandements.

(XIV.)—*Section 4, Chapitre 15, Article 2—Armes Portatives. Section 1—Armes Neuves.*

	Divisions Territoriales de l'Intérieur.	Algérie.	Total.	Crédits Alloués pour l'Exercice 1863.
	fr.	fr.	fr.	fr.
Fabrication d'armes neuves*	2,000,000	—	2,000,000	—
Encaissement des armes expédiées sur les arsenaux	40,000	—	40,000	—
Achat de petits nécessaires d'armes, monte-ressorts et tire-balles (nouveau modèle)	20,000	—	20,000	—
A reporter— Total de sect. 1 de l'art. 2	2,060,000	—	2,060,000	2,060,000
Total de l'article 1	1,772,519	230,185	2,002,704	2,002,704

* Détail des armes à fabriquer, en 1864, pour le compte du département de la guerre:—

32,000 fusils d'infanterie, modèle 1857;
2,000 fusils de dragon, idem;
6,000 carabines;
4,000 mousquetons d'artillerie;
10,000 sabres-baïonnettes;
1,000 sabres de cavalerie;
1,200 cuirasses, modèle 1855.

Note.—Les commandes seront réparties entre les diverses manufactures dans la proportion assignée à chacune d'elles par leurs marchés respectifs.

La date et la durée de ces marchés sont indiquées ci-après, savoir:—

Manufacture de Saint Etienne.—Adjudication du 30 Novembre, 1838, pour vingt ans, à compter du 1er Janvier, 1839, prorogée au 31 Décembre, 1873.

Manufacture de Mutzig.—Traité du 14 Août, 1839, pour vingt ans, à partir du 1er Septembre, 1839, prorogé au 1er Novembre, 1869.

Manufacture de Châtellerault.—Adjudication du 15 Septembre, 1851, pour quinze ans, à compter du 1er Octobre, 1851 (armes à feu et armes blanches).

Manufacture de Tulle.—Adjudication du 1er Octobre, 1855, pour quinze ans, à compter du 1er Janvier, 1856.

(XV.)—*Suite de la Section 4—*

Nature des Dépenses.	Crédits. Demandes pour l'Exercice 1864.	Crédits. Alloués pour l'Exercice 1863.	Différences au Budget de 1863. En Plus.	Différences au Budget de 1863. En Moins.
CHAP. 18.—*Poudres et Salpêtres (Matériel).**	fr.	fr.	fr.	fr.
Article Unique.				
SECTION 1.				
Matières d'Approvisionnements Principaux.				
Achat de salpêtre brut 4,360,000				
„ soufre brut 196,125	4,977,853			
„ bois à charbon à poudre et frais accessoires 415,738				
SECTION 2.				
Matières d'Approvisionnements Secondaires.				
Achat de colle potasse merrains, cercles osiers, confection de barillages et caisses 932,065				
Achat de toiles sacs et draps de séchoir et de dortoir 178,825				
Achat de bois à brûler de charbon de terre et bourbe 118,552	1,842,849			
Achat et façon de cuivres, bois pièces de rechange planches et voliges 116,000				
Achat de boîtes pour le pliage des poudres de chasse, remplissage des boîtes et frais accessories... 496,507				
SEC. 3.—*Ustensiles.*				
Achat confection et réparation d'ustensiles....	243,293			
SEC. 4.—*Frais Généraux d'Exploitation.*				
Achat d'huiles et de chandelles, vieux oing &c., abonnements divers, menus transports, service santé, curage de canaux, secours, indemnités &c.	144,938			
SEC. 5.—*Bâtiments et Usines.*				
Grosses réparations, améliorations, acquisitions et constructions 224,000				
Dépenses d'entretien &c., bâtiments et de machines immobilières; loyers rentes et contributions..... 76,000	300,000			
Total du chapitre 18	7,508,983	5,912,700	1,596,283†	
Récapitulation de la Section 4.				
Chap. 15. Etablissements et matériel de l'artillerie	7,425,655	7,477,288	—	51,633
„ 16. Etablissements et matériel du génie	10,951,890	10,951,890	—	—
„ 17. Poudres et salpêtres (personnel)....	882,482	769,144	113,338	—
„ 18. „ (matériel)	7,508,983	5,912,700	1,596,283	—
Total de la Section 4.....	26,769,010	25,111,022	1,709,621	51,633
			En plus 1,657,988	

Poudres et Salpêtres (Matériel).

OBSERVATIONS.

Nota.—Le prix de revient des poudres se compose des éléments ci-après, savoir:—

Dépenses du personnel, chapitre 17.....	882,482
„ matériel „ 18.....	7,508,983
Total	8,391,464

Cette somme, appliquée aux quantités de poudres à fabriquer, fait reporter le prix de revient ci-après par espèces, savoir:—

	Les 100 Kilogrammes Sort Poudre.			
	fr.	c.	fr.	fr.
Poudres—				
De guerre ..... à	146	52	774,000	1,134,064
Idem (ministère des finances) ..... à	134	73	15,000	20,209
De mine..... à	110	2	5,204,000	5,725,440
„ commerce extérieur ..... à	122	10	150,000	183,150
„ chasse, fine, ministère de la guerre ..... à	154	2	5,000	7,701
„ „ „ des finances, services de l'Algérie ..... à	246	46	309,500	762,793
„ chasse, superfine, idem ..... à	283	18	161,300	456,769
„ extra fine, „ ..... à	286	27	35,400	101,339
Total	—		6,654,200	8,391,465

* Les prévisions de ce service sont établies d'après une fabrication de 6,654,200 kilogrammes de poudres de diverses espèces, à repartir ainsi qu'il soit entre les ministères consommateurs, savoir:—

	Ministère de la Guerre, Service de l'Artillerie.	Ministère de la Marine. Service Marine.	Ministère de la Marine. Service Colonial.	Ministère des Finances.	Services de l'Algérie.	Totaux.
Poudres—	kil.	kil.	kil.	kil.	kil.	kil.
De guerre	600,000	150,000	24,000	15,000	—	789,000
„ mine.....	—	—	4,000	5,000,000	200,000	5,204,000
„ commerce extérieur	—	—	—	150,000	—	150,000
„ chasse, fine	5,000	1,000	—	260,000	48,500	314,500
„ „ superfine.....	—	—	—	160,000	1,300	161,300
„ „ extra fine.....	—	—	—	35,000	400	35,400
Totaux.....	605,000	151,000	28,000	5,620,000	250,200	6,654,200
Les évaluations de budget de 1863 étaient basées sur une commande de	605,000	167,000	28,100	4,000,000	168,000	4,968,100
	—	—	—	1,620,000	82,200	1,702,200
	—	16,000	100	—	—	16,100
Différence définitive en plus pour 1864	—	—	—	—	1,686,100	

† Conséquence d'une commande de poudres beaucoup plus considérable que celle de 1863.

(XVI.)—*Suite de la Section 3, Chapitre 12—Remonte Générale.*

Nombre de Chevaux à Acheter.			Nature des Dépenses.	Crédits Demandés pour l'Exercice 1864.		
Intérieur.	Algérie.	Total.		Divisions Territoriales de l'Intérieur.	Algérie.	Total.
			CHAP. 12.—*Remonte Générale.* ARTICLE 1. *Achat de Chevaux d'Officiers et de Troupe.* GARDE IMPERIALE.			
80	—	80	Chevaux d'officiers de toutes armes, à 1,200 frs.	96,000	—	96,000
—	20	20	Chevaux pour les chasseurs de la garde, à 600 f.s. (achetés en Algérie)	—	12,000	12,000
202	—	202	Chevaux pour les régiments de cuirassiers, à 850 frs. l'un	171,700	—	171,700
301	—	301	Chevaux pour les régiments de guides, dragons et lanciers, à 750 frs. l'un	225,750	—	225,750
—	100	100	Chevaux de chasseurs à 400 frs., l'un (achetés en Algérie)	—	40,000	40,000
112	—	112	Chevaux de selle, pour l'artillerie, le génie et les equipages, militaires à 750 frs. l'un	84,000	—	84,000
695	120	815	Total pour la garde impériale	577,450	52,000	629,450
			TROUPES DE LIGNE.			
580	320	900	Chevaux d'officiers de toutes armes, à 900 frs. à l'intérieur et 500 frs. en Algérie	522,000	160,000	682,000
1,008	—	1,008	Chevaux de cavalerie de reserve (carabiniers et cuirassiers), à 800 frs. l'un	806,400	—	806,400
1,680	—	1,680	Chevaux de cavalerie de ligne (dragons et lanciers), à 650 frs. l'un	1,092,000	—	1,092,000
936	—	936	Chevaux de cavalerie legère (chasseurs et hussards), à 550 frs. l'un	514,800	—	514,800
74	—	74	Chevaux pour les écoles de Saumur et de Saint Cyr, à 650 frs. l'un	48,100	—	48,100
—	492	492	Chevaux pour les six régiments de cavalerie legère de l'intérieur (achetés en Algérie), à 350 frs. l'un	—	172,200	172,200
—	968	968	Chevaux pour les chasseurs d'Afrique, à 350 frs. l'un	—	338,800	338,800
781	50	831	Chevaux de selle, pour l'artillerie et les équipages militaires, à 650 frs. l'un	507,650	32,500	540,150
300	237	537	Chevaux de trait, pour l'artillerie, le génie et les équipages militaires, à 550 frs. l'un	165,000	130,350	295,350
5,359	2,067	7,426	Total pour les troupes de ligne	3,655,950	833,850	4,489,800
6,054	2,187	8,241	Total de l'article 1	4,233,400	885,850	5,119,250

Averaging 579 frs., or 23*l.* 3*s.* 4*d.*, each horse.

(XVII.)—*Article 3—Fonderies.*

Nature des Dépenses.	frs.
Valuer de 165,000 kilogrammes de bronze, à prélever sur les approvisionnements de l'artillerie pour la fonte des bouches à feu, à 2 frs. 60 c. le kilogramme	429,000
Valuer de 35,000 kilogrammes de métaux neufs, cuivre, zinc, étain, à acheter pour la fonte des bouches à feu, à 3 frs. le kilogramme	105,000
Façon de 165 bouches à feu de divers calibres et de menus objets en bronze d'un poids total de 200,000 kilogrammes	104,000
Total	638,000

(XVII A.)—*Suite de la Section 3, Chapitre 12—Harnachement.*

Nature des Dépenses.	Crédits Demandés pour l'Exercice 1864.		
	Divisions Territoriales de l'Intérieur.	Algérie.	Total.
	fr.	fr.	fr.
CHAPITRE 12.—*Harnachement.* ARTICLE 1. *Harnachement des Chevaux de la Cavalerie.* GARDE IMPERIALE.			
Selles complètes, 133 frs. 35 c. l'une	28,137	—	28,137
Schabraques en drap, 58 frs. 10 c. l'une	30,677	—	30,677
Couvertures, 29 frs. l'une	15,312	—	15,312
	74,126	—	74,126
TROUPES DE LIGNE.			
Selles complètes, 124 frs. 22 c. l'une	180,491	39,999	220,490
Schabraques en drap, 35 frs. 18 c. l'une	127,844	—	127,844
Couvertures, 18 frs. l'une	65,412	14,508	79,920
	447,873	54,507	502,380
Fonds de secours à la masse d'entretien du harnachement et ferrage, fournitures de manége, dépenses	30,000	10,000	40,000
Total de l'Article 1	477,873	64,507	542,380
ARTICLE 2. *Harnachement des Chevaux de l'Artillerie.*			
Entretien et réparation des effets en magasin, dans les arsenaux tant à l'intérieur qu'en Algérie	160,205	10,000	170,205
ART. 3.—*Harnachement des Chevaux du Génie.*			
Entretien des effets en magasin et remplacement de ceux qui atteindront en 1864 le tenu de leur durée	1,500	4,000	5,500
ARTICLE 4.—*Harnachement des Chevaux des Equipages Militaires.*			
Entretien des effets en magasin et remplacement de ceux qui atteindront en 1864 le tenu de leur durée	20,000	26,000	46,000
Total du Chapitre 13	659,578	104,507	764,085
Crédit alloué pour 1863	—	—	700,018
Augmentation pour 1864	—	—	64,067

(XVIII.)—*Comparative Table of the Number of Officers and Men in the English and French Armies, and the respective Cost of each.*

ENGLISH ARMY.

Effectives.	Number.	Cost.	Cost per Head.
		£	£ s. d.
1. Effective and non-effective services....	148,242	15,060,237	101 11 10
Deduct charges for auxiliary forces, disembodied militia, enrolled pensioners, and volunteers	148,242	1,222,977	
		13,837,260	93 6 10
2. Effectives and non-effectives	148,242	13,837,260	
Deduct from charges, the non-effectives	—	2,127,836	
		11,709,424	78 18 5
3. Infantry pay	102,765		
Cavalry „	13,867		
Artillery „	23,740		
Engineers „	4,906		
Military train pay.....	1,840		
	147,118	4,967,603	33 15 3
4. Administration of the army	148,242	161,017	1 2 3
Secretary of State for War, Commander-in-Chief's department	148,242	48,260	
Total	—	213,177	1 8 8
5. General staff	148,242	114,976	
Administration of the Army.....	—	213,177	
		328,153	2 4 3
6. General staff, Commander-in-Chief, officers	261	79,476	304 5 –
7. War Office, Secretary of State for War.....	1	5,000	5,000 – –
Other officers.....	715	163,177	226 6 5
8. Infantry of the line, officers and men.....	81,300	2,479,600	30 1 –
9. Cavalry of the line	10,826	448,980	41 9 8

FRENCH ARMY.

Effectives.	Number.	Cost.	Cost per Head.
		fr.	£ s. d.
Effective and non-effective services	400,000	434,624,010	43 11 10
Deduct dotation	—	63,310,000	
Effectives	400,000	371,284,010	37 2 6
Infantry pay	244,023		
Cavalry „	59,679		
Artillery „	37,873		
Engineers „	7,809		
Military train pay	3,655		
Veterans' pay	64		
	353,103	147,801,500	16 13 4
Administration central personal.....	—	1,910,538	
„ „ material.....	400,000	519,500	– 5 1
Depôt general of war	—	141,500	
		2,601,538	– 5 5
Etat-major or staff	400,000	21,280,287	2 2 6
Includes sub-officers and clerks	4,655	—	183 – –
Etat-major, 1st article, marshals of France, &c.	794	8,688,080	438 – –
War Office, Minister of War	1	130,000	5,200 – –
Other officers	479	1,643,998	137 6 8
Guard imperial, infantry.....	17,784		
Infantry of the line in France	199,992		
„ „ Algiers	26,247		
Total	244,023	90,629,169	14 17 6
Cavalry of the line	53,175	24,043,056	18 1 8

(XVIII.)—*Comparative*

ENGLISH ARMY.

Effectives.	Number.	Cost.	Cost per Head.
		£	£ s. d.
10. Engineers	4,906	277,142	56 9 9
11. Artillery, horse and foot, including 1,882 at the depôt	22,372	870,602	38 18 3
12. Military train	1,840	71,381	38 15 4
13. Army hospital corps	940	23,510	25 – 2
14. Medical establishment	148,242	281,260	1 17 11
15. Commissariat charges	148,242	1,223,036	8 5 2
Fuel and light for the barrack department	148,242	278,537	1 17 7
			10 2 9
16. Clothing, &c., and establishment	140,754	630,385	4 9 7
17. Barracks and establishment, &c.	148,242	635,637	4 5 4
18. Martial law	148,242	43,012	– 5 9
19. Manufacturing department	148,242	956,365	6 9 –¼
Warlike stores		838,369	5 13 6
			12 2 6¼
20. Small arms factory	148,242	181,944	
„ purchase and repair		105,769	
		287,713	1 18 9
21. Gunpowder factory	148,242	75,617	
Purchase ditto and saltpetre		133,658	
		209,275	1 8 2½

Table—Contd.

FRENCH ARMY.

Effectives.	Number.	Cost.	Cost per Head.
		fr.	£ s. d.
Engineers	6,968	2,937,936	16 18 4
Artillery, horse and foot	37,873	17,350,464	18 6 8
With subscriptions and indemnities the cost is	—	19,326,017	20 8 4
Military train	4,722	2,316,721	19 3 4
Military hospitals	4,573	4,921,884	43 – 10
Medical establishment	400,000	14,753,650	1 10 8
Commissariat, provisions, forage, light, and warming	400,000	68,772,140	6 18 4
Clothing and the establishment	336,626	16,157,700	1 19 11
Beds and bedding, furniture, &c.	400,000	6,576,961	– 13 6½
Infantry buildings, repairs, &c., &c.	—	10,536,090	
		17,113,051	1 15 7
Justice militaire	400,000	1,260,987	– 2 6
Manufacturing department and warlike stores	400,000	26,769,010	2 13 11½
Small arms for 1864	400,000	2,060,000	
„ repairs, purchase, &c.		1,449,230	
		3,509,230	– 7 3½
Gunpowder establishment and materials	400,000	8,391,365	– 17 6

(XVIII.)—*Comparative Table—Contd.*

ENGLISH ARMY.				FRENCH ARMY.			
Effectives.	Number.	Cost.	Cost per Head.	Effectives.	Number.	Cost.	Cost per Head.
		£	£ s. d.			fr.	£ s. d.
22. Royal gun factory for materials alone	148,242	127,280	– 17 2	Foundries	400,000	638,000	– 1 3
Purchase of iron ordnance, &c.	148,242	124,233		Forges		420,000	
		251,513	1 13 11			1,058,000	– 2 1
23. Purchase of horses: Veterinary establishment	Total horses 14,511	3,021		Cost of purchase of remount horses and mules	85,705	5,199,250	2 10 10
Horses and medicine		32,493					
		36,414	2 10 3				
24. Military education	148,242	172,201	1 3 2½	Military education	400,000	3,004,033	– 7 1
25. Barracks at home	148,242	635,637	4 5 9	Buildings and fortifications by the engineer corps and department	400,000	10,951,890	1 2 6½
Works and buildings, and barracks at home and abroad	148,242	810,911	5 9 4½				
		1,446,578	9 15 1½				
26. Non-effective services	148,242	2,127,838	14 7 1	Non-effective services, Hôtel des Invalides, compassionate allowances to old soldiers, widows and orphans, and to wounded soldiers	400,000	4,555,002	– 9 2½

(XIX.)—*Comparative Table of French and English Military Pay of Officers and Privates.*

FRENCH MILITARY PAY.*

	Guard Imperial, Grenadiers.			Chasseurs of the Line.			Infantry of the Line.			
	Yearly Pay.	Daily Pay when Stationary.	Daily Pay on the March.	Yearly Pay.	Daily Pay when Stationary.	Daily Pay when on the March.	Yearly Pay.	Daily Pay when Stationary.	Daily Pay on the March	
	fr.	fr. c. m.	fr. c. m.	fr.	fr. c. m.	fr. c. m.	fr.	fr. c. m.	fr. c. m	
Etat-major Colonel	7,975	22 15 2	27 15 2	—	—	—	5,500	15 27 7	20 27 7	Colonel
Lieut.-Colonel ..	6,235	17 31 9	22 31 9	—	—	—	4,300	11 94 4	16 01 4	Lieut.-Colonel
Chefde Bataillon, Major	5,220	14 50 –	18 50 –	3,600	10 – –	14 – –	3,600†	10 – –	14 – –	Major
Captain, 1st class	4,200	12 66 6	14 66 6	2,400	6 66 6	9 66 6	2,400	6 66 6	9 66 6	Captain
„ 2nd „	3,500	9 72 2	12 72 2	2,000	5 55 5	8 55 5	2,000	5 55 5	8 55 5	
Lieutenant, 1st class	2,930	8 13 8	10 63 8	1,600	4 44 4	6 94 4	1,600	4 44 4	6 94 4	Lieutenant
Lieutenant, 2nd class	2,655	7 37 5	9 87 5	1,450	4 2 7	6 52 7	1,450	4 2 7	6 52 7	
Sous-Lieutenant	2,475	6 87 5	9 37 3	1,350	3 75 –	6 25 –	1,350	3 75 –	6 25 –	Sub-Lieut. or Ensign
Serjeant	—	1 30 –	1 05 –	—	– 80 –	1 15 –	—	– 80 –	1 15 –	Serjeant
Corporal	—	– 86 –	1 41 –	—	– 46 – / – 41 –	71 –	—	– 46 –	– 71 –	Corporal
Private	—	– 65 –	1 10 –	—	– 30 – / – 25 –	55 –	—	– 30 –	– 55 –	Private
Boys under 14 ..	—	– 43 –	– 73 –	—	– 25 –	– 45 –	—	– 25 –	– 45 –	Boys under 14
„ above 14 ..	—	– 65 –	1 10 –	—	– 40 –	– 65 –	—	– 40 –	—	„ above 14
Surgeon-Major 1	6,525	18 82 5	22 12 5	1,500	12 50 –	16 50 –	1,500	12 50 –	16 50 –	Surgeon-Major 1
„ 2	4,900	13 61 1	16 61 1	2,950	8 19 4	11 19 4	2,950	8 19 4	11 19 4	„ 2
„ Aide 1	3,670	10 19 4	12 69 4	2,000	5 55 5	8 5 5	2,000	5 55 5	8 5 5	„ Assistant 1
„ „ 2	3,300	9 16 6	11 66 6	1,800	5 – 6	7 50 –	1,800	5 – –	7 50 –	„ 2

* From the "Aide-Mémoire," by V. Milet, Lieutenant, 38th regiment of the line, edition of 1860.

† All troops of the line have extra pay while in Paris.

Note.—The French military pay is in francs, centimes, and millièmes.

ENGLISH MILITARY PAY.

Grenadier Guards.				Regiments of the Line.				
Yearly Pay.	Yearly Pay.	Daily Pay.	Daily Pay.	Yearly Pay.	Yearly Pay.	Daily Pay.	Daily Pay.	
£	fr.	£ s. d.	fr. c.	£	fr.	£ s. d.	fr. c.	
2,200* – –	55,000	6 – 1	150 –	1,000 – –	25,000	2 14 9	68 50	Colonel
488 3 9	12,304	1 0 9	32 10	310 5 –	7,756	– 17 –	20 40	Lieut.-Colonel
419 15 –	10,475	1 3 –	27 60	292 – –	7,300	– 16 –	19 20	Major
282 17 6	6,808	– 15 6	18 60	211 7 11	5,300	– 11 7	13 90	Captain
132 16 –	3,175	– 7 4	8 80	118 12 6	2,965	– 6 6	7 80	Lieutenant
100 7 6	2,508	– 5 6	6 60	95 16 1	2,395	– 5 3	6 30	Sub-Lieut. or Ensign
—	—	– 2 2	2 60	—	—	– 2 –	2 40	Serjeant
—	—	– 1 5	1 70	—	—	– 1 4	1 60	Corporal
—	—	– 1 1	1 30	—	—	– 1 –	1 20	Private
—	—	—	—	—	—	—	—	Boys under 14
								„ above 14
401 10 –	10,017	1 2 –	26 40	273 15 –	6,843	– 15 –	18 –	Surgeon-Major 1
273 15 –	6,843	– 15 –	18 –	—	—	—	—	„ 2
182 10 –	4,562	– 10 –	12 –	182 10 –	4,562	– 10 –	12 –	„ Assistant 1
—	—	—	—	—	—	—	—	„ 2

* Besides table allowance—

	£	s.	d.
Grenadier Guards	1,333	6	8
Coldstream Guards	1,333	6	8
Scots Fusilier Guards	1,333	6	8

XX.—"*Statement of the Method of Applying Grants of Public Money in France to their appropriate objects, and of the System of Auditing the Public Accounts.*

"I have obtained, through the able aid of Sir John Bowring, some information since my arrival in Paris about the French financial system, especially that connected with the army, and the more I learn about it, the more satisfied am I that the healthy and efficient control which has for so many years been exercised over the military expenditure in detail has had a vast and, I think, beneficial influence on the political state of the country; I specially mention the military outlay because for many years the accounts of the war department were considered to be in a far more complete state than those of the other ministers, and their exactness, and order operated in effecting regularity in the accounts and business of the other branches of the Government.

"Do not mistake my meaning as to control over expenditure. I do not express any opinion as to the amounts drawn from the people, but merely refer to the strict control over the details of expenditure; the question as to whether 400,000,000 frs. shall be expended on the army is in a degree distinct from the examination into the way it is expended; now from the time of the first Napoleon, indeed during his reign, but specially since the Government of the present Emperor, the control over expenditure in detail in all branches of the service has been efficient and thoroughly searching.

"Various modes have been followed during the last sixty years in assigning credits for the departmental expenditure, and the variations have, I think, misled us in confounding the changes in the appropriation of money grants with the very strict examination continuously enforced of the way in which money has been expended. At one time the French people knew that the taxes collected were given over to the Sovereign to be by him appropriated between the several ministerial departments. Then the minister of the department had the total funds placed at his disposal to be paid away for the different budget purposes; at another time the appropriations to cover expenditure in excess of the detailed amounts specified in the budget could only be made with the sanction of the finance minister; then the money could only be used for purposes specified under the several chapters, and even subsidiary divisions of each budget; the surpluses on each chapter being yielded up at the close of the year's service. But since the present Emperor came to power, though there have been changes in the mode of voting the money, yet all measures have been calculated to establish order and exactness in drawing out the services in the budget.

"Now, though the mode of voting money has varied, and the discussions in the Chambers have frequently been warm in opposition to the total credits, nevertheless the specifications in the budgets very fully and clearly showed the objects to which they applied; and the examination into the actual expenditure has uniformly been the more searching consequent on this very distinctness; no account, however small, has been paid without being closely scrutinized by able and efficient local officers, its propriety ascertained, and its application in

a right way, according to the entries in the budget, fully established; and, owing to the final audit by the Cour des Comptes, in general, no monies have been applied in any doubtful form that have not been subject to scrutiny, and all bad or objectionable applications of funds exposed. If you take up the financial system of France for inquiry, you will, I think, see how powerfully this financial check has operated in preventing France from being deteriorated under the various changes of government.

"In addition to all this, I may mention the great and good effect of publicity. I do really think that there is more exact information obtainable about the financial affairs of France than we can readily procure about those of England; there is no secrecy and no desire to withhold information; indeed, the French authorities are only too proud to give information, and the clearness and exactness with which it is given in the printed reports is most praiseworthy, and might well serve as an example to England.

"The French system of requiring from each minister annual detailed reports, with his signature affixed, not only of the estimated amounts in minute detail, but also of the result of the expenditure operations under the same classified heads as set forth in the budget, is certainly a peculiarly important feature in the French administration; and the evident carefulness and clearness with which these reports are prepared well entitle them to be adopted as models. This very efficient financial control may be said to extend its healthy influence to all branches of administration and, being centralized in the Conseil d'Etat in respect to the budgets, and in the Cour des Comptes as regards the actual results of the expenditure, and being strictly applied, a uniformity of management throughout all the Government transactions is thereby fully established.

"This powerful check, over improper estimates and wasteful expenditure, by these two bodies is so fully known, that the Chamber of Deputies now abstain from criticizing the budget details; they content themselves by cutting down totals, and this year they have reduced the proposed expenditure for the army, leaving the Government to re-arrange the money totals under the proper and regular heads and sub-divisions of the budget, and the expenditure will eventually be examined by the Cour des Comptes as to whether it was laid out in accordance with the distribution in the revised estimates.

"There is another part of the French financial system which has confused us, and that is the additional votes of monies made to meet excesses of expenditure over, or changes from, the amounts estimated. Every year there have been extra grants to the military services, indeed to all branches; but mainly in order to carry out the French system of preventing expenditure in a way different from that in which it has been voted or estimated; as I before stated, although the appropriation of credits to ministers has varied at different periods, yet at all times the allocation of money and for specific purposes has invariably been clearly set forth under different heads of service, before being expended by any of the ministers; but the credits, whether ordinary or extra, have gradually been improved in fulness; for instance, in 1831 the divisions under which ordinary credits were voted were 116, and in 1853 as many as 382

divisions used, under which to be applied for the various branches of Government.

"The annual reports of the Cours des Comptes show that the utmost jealousy has at all times been evinced to prevent expenditure beyond the credit specified for each head, and even when ministers have had the power to use unexpended balances from some heads for others found deficient, still the formal declaration of such transfers of credits and for what services has invariably been publicly made, so that the control over such appropriations has been effectually exercised and the amounts known to, and fully reported on, by the Cour des Comptes. So that, even when the Legislative Assembly has been deprived of the power of voting specific sums for specific purposes, the responsibility of ministers has not been lessened; on the contrary, the exercise of the power by ministers of applying general credits has created greater responsibility, for it placed on the individual minister the duty which, if performed by the Chamber, would have freed the minister from further care.

"The power of entailing on a nation liabilities, or of ordering the money of a people to be spent is a great authority, and is exercised under great jealousy even in France; but this power should not be confounded with the mere paying away of monies, which is of far less political importance; to this part of the operations, however, I think attention might be drawn; the facility with which relief is obtained in France from pecuniary responsibilities by the parties who disburse, merely seeing to the regularity of the documents as vouchers, is a marked feature in the French financial system; the organizing genius of the French people reduce these to such exact models that there can be no difficulty in a man who actually disburses securing himself against loss. But the authority who gives the order to perform the service or to incur the liability is the responsible person, and from the ministers downward, such persons, known as 'ordonnateurs,' are held accountable; and, whether minister, deputy, or who ever exercises this power in a way not duly authorized, whether to incur a debt for which he has no authority, in ordering money to be disbursed for a purpose not sanctioned, or in excess of the money sanctioned, lays himself open to strict scrutiny; and the independent and judicial action of that remarkable and useful body, the Cour des Comptes, regenerated in 1807 by that able administrator Napoleon, faithfully exposes to the Sovereign of France and to the Legislative Chambers, all misapplication of funds, whether as respects purposes or amounts.

"The essential point in the French financial administration is in the ordering or in the incurring of the liability, and not in the mere paying away, as with us, of monies. Here I may mention the wide difference between the French and English systems. The former accepts the budget as containing obligations for the paying away of monies, and closely follows the expenditure until the service is performed and the liability closed. The English system makes the payments within the year represent the liabilities of the year, thereby vitiating that accurate comparison which the French strictly maintain between the actual and estimated payments for the entire services entered in the budget.

"This independent check gives rise to many extra grants for specific services, which have hitherto given the idea of inexactness in the preparation of French budgets; but the various kinds of extra grants, complementary, supplementary, and extraordinary, are all intended to enforce care in estimating, or to provide for the exact appropriation of the funds in such a clear and distinct manner as to allow of the audit by the Cour des Comptes being efficiently and completely performed from the recorded documentary evidence, without entailing the necessity of demanding further explanations from the 'ordonnateurs.'

"You may suppose that when a minister has to assign a reason for expending more money for any one of the many heads under which the service he controls is carried on, the officer who has to prepare the calculations for the minister, when he applies for 'la fixation primitive des crédits de chaque service,' will be exceedingly careful how he performs his duty before he obliges the minister to ask for or to expend more money than that estimated; the very designation affixed to the extra credits, as to whether it is the complement, the supplement, or the extraordinary grant that is needed, will, in a degree, indicate the cause of the application for additional funds, whether the demand is occasioned by unforeseen services, or from careless or inaccurate estimates. Now if you bear in mind how difficult it is for any one, even with the fullest departmental experience, to estimate exactly for a year's expenditure commencing eight months after the passing of the budget, as in France, you will see that where a service under many different heads requires special grants for each, then in proportion to the number of heads so will be the chance of errors in estimating be increased, and necessarily of having to ask for additional grants. And as the French military budgets are prepared in far greater detail than in England, especially under those heads of expenditure which are most difficult to control, it is not to be expected that complete exactness will invariably be obtained; but, I think, the French system would contrast favourably with that of England, if our military expenditure was estimated for, and the operations shown as fully and as distinctly under all heads as in France.

"But the order, regularity, and economy pervading all branches of the French military service prevent much of the evil which might result from this multiplication of grants if they were introduced into England with our disjointed and defective system. The 'conseil d'Etat,' formed by the present Emperor, composed of a number of able men, selected from all branches of the service, examine into many of the French measures before being submitted to the Legislative Assemblies, and thus the thorough overhauling which such measures undergo proves a useful check on all ministerial proposals; then, as respects the annual budgets, the ministers, as individual members of the Government, appear before the conseil d'Etat, and are subject to a strict examination on all money demands; even the subordinate chiefs of the department under him are called before the 'conseil' for examination, and I learn that one subordinate of the Minister of War had for twelve years been one of the 'conseil' and frequently opposed the estimated outlay of his chief the minister;

and even the Emperor himself has lately, on three several occasions, been opposed on important affairs in the 'conseil' and gave way to their views.

"It is owing to this great and thoroughly established freedom in the council, fully recognized and acted upon by the Emperor, and which is known to the people to prevail especially in respect to the financial control, which has, I think, a most efficient and salutary influence on the minds of the French; the people know and appreciate the economy in the detailed money assignments which flows from the control of the 'conseil,' and notwithstanding the large augmentations to the taxation of the country, and the excessive armaments maintained, they do not fail to perceive that the present Emperor has seen to the economical application of the revenues and immensely developed the resources of the Empire; whereby the incidence of taxation will in a few years be felt to be light as contrasted with that of the year 1848; and with the wonderful extension of the material prosperity of France there are many signs of the people of France being well to do, and with this result from the Empire there is amongst the mass great contentment.

"If you use the French military budget, I hope you will look in the library of the House for the following French reports, being one year's set of books, say for 1851, to give you a right idea of the French system. The French budget for 1851 (similar to the one for 1861, which you have), also 'Comptes Généraux présenté par le Ministre de la Guerre pour l'Exercice 1851,' also 'Rapport à l'Empereur et Déclarations Générales de la Cour des Comptes sur les Comptes de l'Exercice 1851,' will afford you an insight into the French financial system. Now the budget for 1851, passed in 1853, some months before the commencement of the year, fixed the army at 358,518 men, and 83,343 horses; but the 'Comptes Généraux,' at p. 1, shows that the strength actually maintained was 488,063 men, and 107,309 horses; large augmentations having been made to the force owing to the war with Russia; and at p. 2 you will see that the original credit for the army was increased from 307,686,046 frs. to 598,750,996 frs., all extra grants being fully detailed both as to amounts and for what purposes assigned; and p. 142 of the 'Rapport de la Cour des Comptes' shows the various heads under which the additions were made; p. 183 gives several useful comparisons; p. 38 of 'Comptes Généraux' gives a résumé of the credits and expenditure. The budget shows the peace establishment of the army and standard of expenditure which the Government desire to maintain, the 'Comptes Généraux' give the actual results; and the 'Rapport de la Cour des Comptes' the verified accounts, closely indicating in detail the expenditure on the liabilities stated in the budget, as well as of all subsequent credits. These three official reports will, if carefully compared with the English financial accounts, fully bear out the claim which the people, as well as the official administrators, make on behalf of France, that it has unreservedly accepted and comprehensively achieved, through the completeness of its budget, the regularity of the forms, and strictness of control of the public accountability, a financial work, the most liberal and the most favourable for the power and prosperity of the people.

"You will not fail to observe that the French Government publish to the nation that which England does not furnish, an exact statement of the strength of the army actually kept up during the year. Now though the establishment of the British army is the first vote of the army estimates, and is (erroneously) supposed to determine the propriety of all the money demands, yet in none of the annual accounts do we ever have any comparison of the actual with the voted strength.

"There is also another report published by the French Government, viz., 'Compte Général du Matériel de la Guerre,' which contains very complete information on the quantities and values of the stores, provisions, and cattle of the army, and, in the space of 178 pages, condenses from upwards of 6,000 accounts and 83,000 vouchers into an available form the accounts connected with fourteen branches of the army service to which stores belong; and when I mention the provision stores, clothing, camp equipage, remounts, ordnance and engineer stores, and that the quantities and values at the beginning of the year,—the receipts and issues in quantities and values during the year,—and, finally, the remains, quantities, and values at the end of the year, are very fully set forth, you will appreciate the vast utility of such a report in ensuring effectual control over the expenditure for stores. Now no such report has ever been prepared in England; but without it the check on our war material expenditure is useless; and this the most needed of all accounts is not obtainable as in France.

"The prominent features in the French military system may be briefly said to be, the admirable division of functions under efficient heads of the innumerable duties for which the minister of war is responsible; the clearness, fulness, and accuracy of the entries in the budget; the regularity and exactness of the monthly estimates of expenditure under the same heads, chapters, sections, and articles as in the annual budgets; the promptness with which the liabilities incurred for the service of the year are inquired into in the locality and at once settled, the money payments made, and the vouchers carefully and speedily audited by the intendance, then forwarded to the War Office, and thence sent on to be criticized by the Cour des Comptes. The annual report of the minister of war on the financial operations of the year, accounting for all differences between the estimates and actuals, and of all sums unpaid to clear off the liabilities. Finally, the strict scrutiny of the Cour des Comptes, their judicial declaration in open court, and their report to the Emperor as to the accuracy of the calculations, correctness of the vouchers, and propriety of the charges.

"These, then, are, I think, a few of the principal arrangements by which the economy, and with it the efficiency, of the French war system in all its branches are ensured. No doubt the heads of the administrative and executive departments, and the officers by whom the duties are conducted, are able and efficient, but they are not superior to those available and obtainable in our own service; but without the great excellence of the central control, and the useful publicity, fulness, and clearness given to the war office affairs, their labours would be seen to as little advantage and prove as barren of good financial results as those of our own war department."

On a Continuous Price *of* Wheat *for* 105 Years, *from* 1380 *to* 1484. *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, 15th December, 1863.]

The members of this Society are well aware that continuous series of prices of any commodity in high demand, when contrasted with the prices of labour, are the best evidence of the economical state of the community in which such data are to be found. Among such prices none is more suggestive in England than that of wheat, which has been from the earliest times the habitual food of the people of this country.

In order, however, to draw any exact inference it is essential that the price in question should be derived from the same locality, or from some so near to each other as to leave no doubt that the element of distance has not affected any of the variations in the scheme. And if two or more of such continuous annual records can be found, the subsidiary evidence of more remote localities will be useful as determining the mutual value of nearer places, and as reflecting on some other topics in economical history, particularly the facility of transit and the extent to which the conveniences of markets rendered prices tolerably uniform. And here I may observe that my investigations into the history of prices in the middle ages lead me to conclude that the means of communication were far easier and cheaper than is commonly supposed. The hasty reasoning which habitually leads careless thinkers into assigning a plurality of effects to a single cause has, I make no doubt, induced them to imagine that the time before the Reformation was one of social barbarism and economical wretchedness. But the facts lead to a far different conclusion. Whatever were the religious and political benefits of the Reformation, and I should be the last person to dispute either, there is not a shadow of doubt that the revolution of the sixteenth century was followed by enormous social evils and long social misery. The proof lies in the same premises, the relations of the price of labour to that of food.

The prices of wheat annexed to this paper are taken from a series of farming accounts of the estate of Heyford Warren in Oxfordshire.

The greater part of this parish has been the property of New College ever since the foundation of that corporation, and belonged previously to the family of Lisle, from whom it was purchased by William of Wykeham.

Out of this estate the prior and convent of Bicester derived a yearly rent of five quarters of wheat, payable on All Saints' Day (November 1), and paid by the society continually up to the end of the reign of Richard III. In the early years of their possession the college cultivated the estate by its own bailiff, according to the custom generally prevailing among landowners of the time. But at the beginning of the reign of Henry IV, that is, at the close of the fourteenth century, the society substituted, as most other corporations did contemporaneously, a system of leases for short terms in place of the old method. But the rent due to the prior was received, and, instead of paying, as before, a portion of the farm produce, the rent-collector purchases five quarters of wheat every All Saints' Day for the use of the convent, the formal receipt of the conventual officers being generally annexed to the yearly roll of account. In 1484 the college agreed to allow 5*s.* 6*d.* a quarter, and the annual notice ceases.

The Heyford series is complete, except for the years 1381, 1383, 1386, 1391. The price of wheat for those years is supplied from another series of accounts, that of Weedon, in Bucks, a place sufficiently near for all purposes of continuous comparison. Those years, marked w in the table, do not present any striking anomalies in money value, and could be fully sustained from other sources. It may be observed that the prices in Weedon series correspond very closely with those of Heyford for almost fifteen years.

It will be manifest at a glance that, during the whole of the period before us, prices of food, were, with few exceptions, remarkably low. They are far lower than those which prevailed during the fourteenth century and that part of the sixteenth during which accounts of farm produce have come under my inspection. The harvests during this time must have been exceedingly abundant; more so, in all likelihood, than *mutatis mutandis*, they were in the first half of the eighteenth century, a period which has always been cited as characteristically prosperous.

It is well known that the history of the greater part of the fifteenth century is very obscure and scanty. The age of monastic annals was passing away; that of chronicle writing by professed authors hardly begun. But there is general testimony to the fact that the condition of the labouring classes was good; and it is certain that, in some way or other, the great mass of the community was in this period raised from a state of villenage to the position of free labourers. The annexed table of wheat prices is strong

evidence that the condition of the English labourer was as prosperous as it is made out to be by Fortescue.

Of the one hundred and five years twenty-one alone can be called relatively dear; that is, in them a price is quoted above 6*s*. In one of those which I have selected, 1389, the price is 6*s*. only; but as it follows a year of exceptionable cheapness, it was probably a year of considerable dearth. These twenty-one years are 1389, 1390, 1400, 1401, 1402, 1408-9, 1416, 1418, 1428-29, 1432-33, 1437-38, 1460-61, 1477-78, 1486-81. And in only two of the years, 1390, 1438, was the price indicative of famine. The highest of these prices, however, is much below the amount at which wheat was sold during two or three of the years of Edward II, and some in those of the reign of Edward III.

Some low prices for this period are to be found in the works of Fleetwood and Macpherson. But they are evidently untrustworthy and derived from the loose statements of chroniclers. The evidence of a series like the present is sufficient to upset all these vague notions and the inferences gathered from them.

The coin of the time was of customary fineness, the pound of silver containing 11 oz. 2 dwts. pure metal, and 18 dwts. alloy. But during the period the currency was twice degraded. Up to 1412 the pound sterling, that is, 240 silver pennies, contained in modern value 2*l*. 6*s*. 6*d*.; in 1412 the amount was diminished to 1*l*. 18*s*. 9*d*., and again in 1464 to 1*l*. 11*s*. In consequence of the low price of corn, notwithstanding these degredations, Adam Smith concluded that silver was becoming scarcer during the whole of the fifteenth century. I should agree with this inference, had not the price of labour risen.

At the commencement of the period the price of common labour was generally 3*d*. a-day; of artizan's labour, as carpenters, masons, and sawyers, 4*d*. But at almost the end of the first quarter of the fifteenth century these kinds of labour rise respectively to 4*d*. and 6*d*., and remain at such rates till the close of Henry VIII's reign. On the other hand, the price of lead, wrought-iron, and brass slightly falls. These metals are generally sold by the pound at about the rate of $\frac{3}{4}d.$, $1\frac{1}{2}d.$, and 3*d*. respectively.

I may add that the earlier part of this period was the time in which English wool reached its highest price. The consequent extension of the stock on farms did not affect the produce of corn, nay, probably increased it by dressing the land. The staple of the wool seems to have been rather long and certainly coarse. I derive this from the quality of the cloth with which William of Wykeham's mitre case and travelling bag are lined, antiquities which are still preserved in New College. English wool was not so good in the middle ages, as all others were very bad.

Wheat was, I have no doubt, the habitual food of the people. The question, as to what the labourer in the middle ages lived on, has been occasionally mooted, and many persons have argued that the customary food was some inferior grain. But the facts of several thousand accounts for the thirteenth, fourteenth, and fifteenth centuries, which it has been my business to study, are conclusive against such an impression. Of all prices of grain the most abundant are those of wheat, barley, and oats; of these again the largest information is that which can be supplied for wheat. Barley is generally used for malting, oats for cattle. Labourers rarely use oats, except on occasions in their porridge. The breadth of wheat, barley, and oats, sown on the land from year to year, occupies by far the largest part of the acreage. Beans, peas, and vetches are grown, but they are almost invariably used as food for cattle.

Farm labourers had generally an allowance of wheat at the rate of a quarter every ten weeks. The bailiff had a quarter every eight weeks. This wheat was, in most cases, inferior, going under the name of cursal or scurril wheat. They had sometimes an allowance of mixtil, that is, a combination of different grains in fixed proportion, as wheat and barley; sometimes wheat, peas, and barley. Peas are white and black.

Malt was made of wheat, barley, and oats. The chief consumption of malt was in harvest time, when, as now, the rate of wages for day work was much higher than in ordinary times. Corn was reaped at from 1*s*. to 8*d*. the acre, that is, at least, at a rate proportioned to modern prices.

Rye was so rare a grain that I have not been able, though I have abundant evidence of the price of other cereals, to get a complete series of rye prices during the thirteenth, fourteenth, and fifteenth centuries.

I have annexed to the series given from Heyford Warren two others from Hornchurch, in Essex, and from Stert, in Wiltshire. The former of these is sufficiently near London to be affected by London prices, and will be found on the whole with the estimate of this variation included to correspond pretty nearly to the list from Heyford. As might be expected, the divergence is the greatest in cheap years. It is a well-known economical law, that prices of wheat, or of any other absolute necessary of life, decrease in plentiful years at a very different ratio from that at which they increase in dear ones. I should mention that prices of labour in London were at much higher rates than in country places. New College has possessed from its foundation some houses in Aldgate, the yearly rolls of which I have examined, and I find that labour was fully 25 per cent. higher in this city than it was in other estates of that corporation during the time before me.

On the other hand, there is a close correspondence between the prices of the short series from Stert, near Devizes, and those from Heyford. The conditions of both parishes are nearly the same; both are in remote country districts, and therefore both were exposed to the same local influences for cheapness and dearness. Unfortunately, the Hornchurch and Stert series are both short. The college abandoned farming on its own account at Hornchurch in 1422, and at Stert in 1430. The thirty-three years subsequent to this date in the Hornchurch series are supplied from an agreement entered into with the college to make the vicar a yearly allowance of wheat, barley, rye, and oats at market prices.

I have also added a table of the prices of wool, extracted from the accounts of Alton Barnes, near Malmesbury, in Wilts. It will be seen that the price of wool does not follow that of wheat. It was, however, determined by the course of the seasons, over dry summers affecting the produce of hay, over wet ones the health of the animal. Indeed, I know no index so suggestive of the seasons as the proportion of sheep which those accounts inform us perished yearly by murrain, the generic name by which all the diseases of animals are designated. The ravages of disease among flocks in the middle ages were frequently as high as 25 per cent. on the number kept.

It would not be to the purpose to lead this society into an antiquarian discussion as to the method of farming in the middle ages, still less to dilate on the social habits and conveniences of our ancestors from four to five hundred years ago. But there are a few economical facts and inferences which I venture to think are not irrelevant to the subjects ordinarily before the society. These are the rate of production, the cost of land, and the amount of the population. The fellows of this society are well aware of how closely these particulars are allied, and how it is possible to determine with some degree of certainty, at least, what might have been the sum of each of these quantities if the factors of the first, and perhaps of the second, are supplied. I shall not pretend to the accuracy which a mathematical investigation of these relative powers might collect, but only indicate in general terms what are the conclusions at which it seems reasonable to arrive. The dominant element in the calculation is the rate of production.

Our forefathers were far from ignorant of the advantages of laborious adaptation, and of the value of agricultural improvements. They ploughed their land repeatedly, were alive to the profit of sheep dressing, manured the soil diligently, drained and ditched it regularly, marled it when needed, and used lime largely to destroy weeds and divide stiff clays. They spent much labour in hoeing their crops, and, as is evidenced by the wages paid to sowers, and the rate of seed per acre, had a full sense of the significance of agricultural economy.

Half of their land was left, however, to unproductive fallow. Not that the arable acreage was probably much less than at present. No doubt some soil which is now under the plough was in those times poor pasture. But on the other hand, some land which has been for time out of mind only poor upland pasture was in past days brought under cultivation. I have seen myself on some of the Hampshire and Sussex downs the evidence of ancient culture. The arts of peace leave more durable signs on the surface of the earth than those of war, and the marks of the plough may still be traced on spots which tradition only declares to have been the scene of battle and destruction.

But the produce was very scanty. The seed was invariably or almost invariably two bushels to the acre, the produce rarely exceeded twelve bushels, even in the best years, and this, it may be concluded, is nearly the limit of unscientific—to use a phrase applicable to modern improvements—and uninstructed agriculture. Cicero tells us that eightfold was a good rate in Sicily, in his time the granary of Rome.* A crop of thirty-five bushels on average land under modern culture is by no means excessive. Land under tillage then, at the present time, yields 2½ times more than it did in the days of our forefathers.

But though much land was tilled then, very little was productive. Half the soil was in fallow, and the fallow was ploughed over and over again that it might recover its vigour. Add to the amount under fallow that which has been rendered available for crops at the present time, the downs, for instance, at Brighton and Eastbourne, and similar places, and we shall find that there is now probably 2½ times more wheat-bearing land than at that period.

But this is not all. Our forefathers had no winter roots, no artificial grasses. Turnips, carrots, parsnips, and I need not mention beet and potatoes, were things of the future. They had coarse cabbage and the unimproved kinds of onions. They flavoured their poor soups with "jack-by-the-edge," a weed known to most of us by its spike of white flowers, and coarse alliaceous smell. In spring they sold the nettles which grew in their gardens. It is said that nettles are wholesome and pleasant spring food; such an impression must be historical. They were, perhaps, in those days of salt meat, six months of herbless winter, and endemic scurvy. But the eagerness with which our forefathers gathered nettles and such wild herbs reminds one of the danger which the owners of those pastures run where the autumn crocus grows profusely, when their cattle fed all the winter on hay are turned loose among the spring meadows. Potatoes, the great remedy for scurvy, have occured to me as priced

* Cicero in Verrem, iii, 47.

in 1590, when they were bought at 2*s.* 6*d.* a-pound for Queen Elizabeth's table.

Clover, too, and the best of other artificial grasses were unknown. I am not botanist enough to determine what are the natural grasses of our country, but entertain a strong suspicion that they are of the least nutritive kind. It is not too much, at any rate, to think that the absence of these modern but familiar conveniences diminished the rate of production by 2½ times more.

Lastly. Cattle and sheep were poor, small, and long coming to perfection. Stunted by the winter's privation, they took double time to be eatable. We have often laughed at the story of the Irishman's plan of making his bacon streaked, by alternate starvation and plenty in the diet of his pig. With our forefathers the variation was a permanent necessity. I have before me the weights of oxen purchased by the Comptroller of Edward VI, and find that the average of thirty oxen was about 4 cwts. Besides, fat was six times the price of meat. Such causes may fairly diminish the rate of production by another unit. I am disposed, therefore, to conclude that the rate of production was about one-eighth of that which is customary at present. Now the population of England and Wales is about, in round numbers, at present twenty millions, of whom about fifteen millions are maintained on the agricultural produce of this country. If to those diminishing forces in population be added the insecurity of some regions, and the relatively backward state of others, as the condition of the Welch and Scotch marches, and that generally of the Principality, especially during the time of Owen Glendower, there is no great rashness, it may be conceded, in fixing the maximum of population in the fifteenth century, and indeed long after, at from one and a-half to two millions, and in inclining to the less rather than to the greater number.

Similar inferences can be gathered from the rent of land, taken concurrently with the price of labour and the price of food. It is the custom for political economists to assert that the rent of land depends on the difference between the produce of the best natural powers and that of the worst, the latter being such soil as will merely repay the capital and labour expended plus the market profit expected. It seems to me more natural to say that the cost of land depends on the cost of production from land corrected by the demand for the produce. In other words, if, to reduce the formula to the simplest numbers, the aggregate of labour, capital, and profit required to produce 100 quarters of wheat be 100*l.*, and the market value of the wheat be 40*s.* the quarter, the proportion paid for rent will be 100*l.*, and if by some agricultural improvement the cost of production falls to 80*l.*, the rent will rise sooner or later to 120*l.*

In the fourteenth and fifteenth centuries the ordinary rent of

arable land was from 4*d.* to 6*d.* the acre. The rioters of Blackheath demanded, and by the charter (afterwards annulled in 1381) procured, that the rent of land should not exceed 4*d.* an acre. It has been stated that our forefathers, as far as manual labour went, employed most of the modern arts of agriculture; that is, they developed the artificial fertilities of the soil. But the rent of the same parcels of land in purely agricultural districts, and where no virtual improvement has been induced, or what may be called the merely mechanical junctions of the earth, has risen eighty or one hundred times since the period which this paper deals with. In other words, while the nominal price of wheat has risen about twelve times, and labour generally about ten, the price of land has risen in a proportion far larger than the other economical forces. Nor would there be any necessary limit to this increase, except from the practices prevalent in this country, of securing political influence by precarious tenancies, instead of stimulating agricultural improvement by the "magic" of a term of years; and of protecting the landowner against his own vices and follies by the barbarous wastefulness of a strict settlement. We profess to have adopted the principles of free trade, and suffer seven-tenths probably of the land in England to be tied up by arrangements as alien to the genius of English law, which professes to abhor perpetuities, as they are to economical science, which, above all things, desires the free transfer of land, and to common sense, which has no great reverence for the morality and decorum which is guaranteed by the police of a conveyance.

The labour of procuring the means of subsistence then, with the appliances which the agriculture of the fifteenth century, afforded was so great that the rent of land, except under the compulsory service of villenage, absorbed but a small portion of the produce. But the continual recurrence of dearths and pestilences proves, among other evidence, that population pressed closely on the means of subsistence.

Villenage still subsisted; but the course of time, and the disposition of the law towards those persons who were held to predial servitude, but who were free to all others except their lords, had greatly mitigated the earlier theory of the bondsman's obligations and liabilities. Their tenure was secured on the terms of labour. Such labour, however, as was extorted from them was, as might be expected, unprofitable, as the labour of serfs was unprofitable in Russia. Hence it was the interest of the landlord to exempt them from personal labour on the payment of money rents, the incidents of villenage, valuable as liable to escheat, being retained This commutation of service for payment begins very early, and, I imagine, spread very rapidly. By the middle of Henry VI's reign, that is about 1440, labour rents had, I am convinced, altogether ceased, and some of the

claims of the rioters of Blackheath were silently accorded to the operations of economical causes. In so unnoticed a change as this, which transformed a great part of the community from serfs to occupiers of land held to low fee farm rents, we must not, I am convinced, look for any exceptional cause. The most natural and sufficient reason for the change was the greater convenience of fixed payments compared with a service or labour rent. Of the same stock with the small landowner near them, engaged in similar occupations, and possessed, except in the single particular of personal dependence, of the same rights with freemen, there was no room for the antipathies of race, or the discredit which enforced labour brings on labour itself.

It was certainly during this time that the class of small freeholders arose. The fact is traceable, not only in the suggestions of legislation and history, but in the change made by the owners of land in the management of their estates. In the fourteenth century the landlord invariably cultivated his own estate by a bailiff. It is from the numerous records of such farming, the account being presented annually to the employer, that the greater part of the facts which I have gathered about prices in the early part of the middle ages are derived. Between the last thirty years of the fourteenth and the first forty of the fifteenth centuries this practice is almost universally abandoned. The landlord ceases to cultivate his own land, and two persons appear on his estate, one, a collector of rents from the tenants, free and copyhold, the other, a farmer who cultivates the soil for his own profit, at a fixed rate, sometimes for a long term, but with his landlord's stock, which he is pledged to restore, or its equivalent in money (the amount of such liabilities being annually endorsed on the account rendered at the expiration of his tenancy). After a short time, however, this practice ceases; the tenant finds stock himself, and occupies an estate, either under a lease or very often by purchase. In the estates with which I am most familiar it was not to be expected that those who held to their successors would finally alienate their lands, but it was the case beyond doubt with those who had lay tenures.

That the tenant, at will or on lease, should become an owner in fee, could, I think, only take place under such favourable circumcumstances as those which affected the great mass of society at this time. Food, during the greater part of the period before me, was more abundant and cheap than it had been before, or than it was afterwards, except at the commencement of the eighteenth century, when, as is well known, there was a long succession of abundant harvests. And the exigencies of the great lords who were involved in the civil wars of the period must have disposed them to part with portions of their lands to husbandmen on advantageous terms.

The Wars of the Roses almost exterminated the nobility, but hardly affected the great mass of the community. In the accounts of the fifteenth centuries, hundreds of which it has been my fortune to consult, I have never yet met with the least allusion to the strife which was raging, or with any complaint of loss from the ravages of war. The violence of the storm burst in a region far above the heads of the people, and did not generally affect them except as a means for fertilizing their labour. The barons and their retainers were worsted in the struggle, and the husbandmen reaped the profit of his exceptional position.

NOTE.—*Statement of the Weight of Silver contained in the Shilling during the Fifteenth Century, in illustration of the following Tables.*

In deference to a wish expressed at the time of reading this paper, to the effect that information should be given as to the amounts of silver indicated by the prices in the tables annexed, it may be observed—

1. The silver was of the same fineness as at present, that is, it was sterling, or $\frac{37}{40}$ths fine.

2. The largest coin in circulation was the groat. The shilling was only money of account. Had there, however, been such a coin, it would have contained, according to the regulations of the Mint up to 1412, 216 grs.; from 1412 to 1469, 180 grs.; from 1469, 144 grs.; or, in pure silver, about 200, 167, and 133 grs. respectively. Very few existing coins, however, represent this proportion exactly.

3. Did the modern shilling represent a market ratio to gold, it would contain 96 grs. In reality it contains $87\frac{1}{2}$ grs. only. But, as is well known, the silver currency of this country is purposely overvalued.

It must be remembered, however, that inferences from the weight of silver in coins of a certain date have only a general significance when applied to prices A currency may be actually depreciated to a considerable extent before it sensibly falls in value, though the process by which a debasement is detected is generally far more rapid. The depreciation of course will be ultimately felt, but not simultaneously with the issue. Nay, the natural process by which an undervalued metallic currency is diminished may have the effect of retarding the fall in the estimate of a new denomination, by creating a temporary scarcity.

APPENDIX.

I.—*Statement of the Prices of Wheat per Quarter at Heyford Warren, near Bicester, Oxford, from* 1380 *to* 1484; *at Hornchurch, Essex, from* 1392 *to* 1454; *and at Stert, near Devizes, Wilts, from* 1393 *to* 1430.

Years.	Price of Wheat per Quarter. Heyford Warren, Oxon.	Hornchurch, Essex.	Stert, Wilts.
	s. d.	*s. d.*	*s. d.*
1380	4 –	—	—
1381	5 – w	—	—
'82	4 –	—	—
'83	4 – w	—	—
'84	4 4	—	—
'85	3 –	—	—
1386	3 4 w	—	—
'87	3 4	—	—
'88	2 10	—	—
'89	6 –	—	—
'90	10 –	—	—
1391	4 – w	—	—
'92	3 4	3 10	—
'93	3 –	4 –	4 –
'94	2 8	3 8	3 4
'95	3 –	5 –	4 8
1396	5 –	7 –	6 8
'97	6 –	6 –	5 5
'98	5 4	5 4	5 –
'99	6 –	6 4	5 4
1400	7 –	7 4	6 –
1401	10 –	10 6	10 3
'02	8 –	7 6	6 4
'03	5 4	5 –	4 8
'04	4 –	5 –	3 10
'05	4 –	4 4	3 2
1406	4 –	6 –	4 5
'07	4 –	5 4	4 4
'08	8 –	8 10	6 4
'09	8 8	10 –	10 –
'10	4 8	4 10	5 6
1411	4 4	4 8	4 6
'12	4 8	6 8	4 4
'13	4 4	6 2	3 10
'14	4 4	4 9	3 11
'15	6 –	7 1	6 –
1416	8 –	11 –	7 10
'17	5 –	5 4	4 4
'18	6 8	7 –	8 4
'19	4 –	5 –	4 –
'20	4 –	6 –	6 –
1421	4 –	6 2	4 4
'22	4 –	5 –	4 –
'23	4 –	6 8	4 8
'24	4 –	6 8	4 6
'25	3 4	5 4	3 10
1426	3 2	4 8	3 2
'27	3 4	4 8	4 –
'28	6 8	6 8	9 8
'29	6 8	10 –	7 4
'30	6 –	8 –	6 8
1431	6 –	6 –	—
'32	6 8	9 –	—
'33	6 8	8 –	—
'34	4 –	6 8	—
'35	5 –	6 8	—
1436	4 –	7 4	—
'37	8 –	13 4	—
'38	13 4	18 –	—
'39	4 –	—	—
'40	3 4	4 6	—
1441	3 4	5 2	—
'42	2 8	5 2	—
'43	2 10	5 4	—
'44	2 8	5 10	—
'45	3 –	6 –	—
1446	5 4	7 6	—
'47	4 9½	5 –	—
'48	5 –	5 –	—
'49	3 4	6 8	—
'50	4 –	8 –	—
1451	4 10	—	—
'52	4 4	6 4	—
'53	4 8	5 4	—
'54	3 –	5 4	—
'55	4 –	—	—
1456	4 –	—	—
'57	5 8	—	—
'58	6 –	—	—
'59	5 –	—	—
'60	8 –	—	—

Statement of the Prices of Wheat per Quarter—Contd.

Years.	Price of Wheat per Quarter. Heyford Warren, Oxon.	Hornchurch, Essex.	Stert, Wilts.
	s. d.		
1461	8 –	—	—
'62	3 1	—	—
'63	2 1	—	—
'64	3 –	—	—
'65	3 –	—	—
1466	3 5	—	—
'67	4 10	—	—
'68	5 –	—	—
'69	5 4	—	—
'70	5 8	—	—
1471	5 2	—	—
'72	3 4	—	—
'73	3 6	—	—
'74	3 4	—	—
'75	4 6	—	—
1476	4 –	—	—
'77	6 8	—	—
'78	7 –	—	—
'79	5 4	—	—
'80	7 –	—	—
1481	8 –	—	—
'82	10 –	—	—
'83	5 4	—	—
'84	5 4	—	—

Note.—The letter (w) in the first column means that the prices for the years to which it is annexed are taken from farm accounts at Weedon, in Buckinghamshire.

II.—*Statement of the Price of Wool per Tod of* 21 *lbs. at Alton Barnes, Wilts, from* 1376 *to* 1432.

Years.	Price of Wool per Tod of 21 lbs. at Alton Barnes, Wilts.	Years.	Price of Wool per Tod of 21 lbs. at Alton Barnes, Wilts.	Years.	Price of Wool per Tod of 21 lbs. at Alton Barnes, Wilts.
	s. d.		*s. d.*		*s. d.*
1376	7 6	1396	5 2	1416	6 –
77	—	'97	5 4	'17	5 –
'78	7 –	'98	5 2	'18	5 –
'79	7 –	'99	5 6	'19	6 –
'80	—	1400	5 6	'20	6 –
1381	—	1401	5 10		
'82	6 –	'02	6 1	1421	5 4
'83	—	'03	6 8	'22	5 –
'84	—	'04	6 9	'23	5 9
'85	6 –	'05	5 9	'24	6 6
				'25	5 6
1386	4 –	1406	7 4		
'87	5 –	'07	8 –		
'88	5 3	'08	7 8	1426	5 4
'89	—	'09	7 –	'27	5 6
'90	3 11½	'10	7 2	'28	6 4
				'29	6 6
1391	—	1411	6 4	'30	5 9
'92	5 5	'12	6 8		
'93	5 6	'13	6 8		
'94	5 6	'14	6 2	1431	5 10
'95	4 6	'15	6 2	'32	6 –

On the Commercial Progress *and* Resources *of* Central British America; *the* Lake Winnipeg *and* Saskatchewan Districts.

By Henry Youle Hind, M.A., F.R.G.S., *Trinity College, Toronto.*

[Read before the Statistical Society, 10th January, 1861.]

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I.—*Résumé of the History of Central British America to the Year* 1858.

A century and a quarter has elapsed since the French Government sent an expedition from Canada through the interior of the American continent, with a view to reach the Pacific Ocean by an overland route.

M. de la Verandèrie, the chief of the expedition, did not succeed in getting as far westward as the Rocky Mountains, but he and his successors constructed a fort three hundred miles west of Lake Winnipeg for the purposes of trade; and about the same time other fortified trading posts were established by the French, still further to the west, the most remote of which was situated near the junction of the north and south Saskatchewan, in long. 103° W.

Prior to this occupation of the Saskatchewan valley, the French had, successfully, attempted to reach Hudson's Bay overland, both from the St. Lawrence and Lake Superior. These expeditions were undertaken when the population of the whole of Canada was ess than one-fifth part of the present population of Montreal, and, consequently, less than one-half the population of Toronto.

That the early French colonists were pre-eminently distinguished by their desire for the extension of their territory, the following extracts from the Paris documents will establish beyond doubt, and at the same time convey some idea of their activity and enterprise in the infancy of Canadian history, and also of the projects they formed, and the conceptions they entertained of the extent of the country they intended to colonize as new France, north of the great lakes, more than one hundred years ago.

As early as 1616, we read that Sieur Bourdon, with three Frenchmen, was sent overland from Quebec to take possession of Hudson's Bay for France. The French had already established a trade with the Indians of Hudson's Bay, and in a few years induced them to come to Quebec to barter their furs.

In 1661 the Rev. Claude Dablon set out overland for Hudson's Bay *viâ* the Saugenay, but he succeeded in reaching only the head waters of the Nebouka, 300 miles from Lake St. John.

In 1663 the Indians of the Bay du Nord (Hudson's Bay) returned to Quebec in further quest of Frenchmen, and M. Davaugour sent thither Sieur de la Couture with five men, who proceeded *overland* to the said bay, possession whereof he took in the King's name, noted the latitude, planted a cross, and deposited at the foot of a large tree his Majesty's arms engraved on copper, and laid between two sheets of lead, the whole being covered with some bark of trees.

In 1671 Père Albanel was despatched overland to Hudson's Bay by the Intendant Talon (*viâ* the Saugenay river); and in the same year (1671) Sieur de St. Lusson was sent by M. Talon to Sault St. Marie, where he made a treaty with "seventeen Indian nations." The Intendant in his report states that the place Sieur de St. Lusson reached is not supposed to be 300 leagues from the extremities of the countries bordering on the Vermilion or South Sea. He continues: "The countries bordering on the Western Ocean appear to "be no farther from those discovered by the French, according to "the calculation of the distance made from the reports of the "Indians; and by the maps there does not appear to be more than "1,500 leagues of navigation remaining to Tartary, China, and "Japan." Even at so early a period in the history of Canada did the French look forward to establishing communication, overland, with the "South Seas," to command the trade of Western Asia; and in another half century the French Government were so impressed with the idea of an overland route to the Pacific that they sent instructions to Quebec to have the exploration effected.

Du Chesneau writes in 1681: "They (the English) are still at "Hudson's Bay, on the north, and do great damage to our fur "trade."

In 1683 M. de la Barre writes to M. de Seignelay: "The English

"of Hudson's Bay have this year attracted many of our northern "Indians, who for this reason have not come to trade to Montreal. "When they learned by expresses, sent them by Du L'hut on his "arrival at Missilimakinak,* that he was coming, they sent him word "to come quickly, and they would unite with him to prevent all the "others going thither any more. If I stop that pass (Lake Superior "to James Bay), as I hope, and as it is necessary to do, as the "English of that Bay excite against us the savages, whom Sieur du "L'hut alone can quieten, I shall enter into arrangements with those "of New York for the surrender to me of any guilty fugitives, but "we are desirous to obtain an order to that effect from the Duke of "York."

And in the same year (1683) M. de la Barre writes to M. de Seignelay as follows: "A small vessel has just arrived from Hudson's "Gulf, 200 leagues further north than the Bay. * * * It is "proper that you let me know early whether the King desire to "retain that post, so that it may be done, or the withdrawal of the "French, for which purpose I shall dispose matters in order to aid "them overland beyond Lake Superior, through Sieur du L'hut, "and to send to them by sea to bring back the merchandise and "peltries."

In Governor Dongan's Report on the State of the Province, in 1687, we find a notice of the Hudson's Bay in the New York Colonial Manuscripts:† "Last spring he (the Governor of Canada) sent "one De la Croa with fifty soldiers and one hundred young men of "Canada to the North-West Passage, where, I am certainly informed "from Canada, they have taken three forts."‡ In Mr. Nelson's memorial about the state of the Northern Colonies of America, dated 1696, he says, "there are actually, this instant, now at "Versailles, six Sagamoes, or chiefs, sent from Canada, Hudson's "Bay, and Nova Scotia, to solicit such help and assistance against "us," &c., &c.

M. de la Verandèrie was sent on an overland expedition by the desire of Count Maurepas, in the year 1738, to discover the Pacific Ocean. He set out with his party from Montreal, passed through Lake Superior, and, proceeding nearly due west, ascended the Assiniboine river, and directed his course towards the Rocky Mountains. Without reaching the Rocky Mountains, M. de la Verandèrie was obliged to abandon the prosecution of his expedition. Three hundred miles west of Lake Winnipeg, on the Assiniboine river, the French erected Fort la Reine. Three others were built further

* Michillimakinak, Green Bay, and Lake Huron.

† Documents relating to the Colonial History of the State of New York.

‡ Governor Dongan refers to Chevalier de la Troye—an account of whose expedition to Hudson's Bay, in 1686, is contained in Charlevoix's History.

west, the most remote of which stood on the bank of the River Paskoyac.*

Mackenzie speaks of Canadian missionaries who penetrated "2,800 miles from the civilized parts of the continent long before "the cession of the country to the English in 1763!"

The names of several lakes and prominent hill ranges date from the occupation of the country west of Lake Winnipeg by the French, prior to the conquest. Such as Dauphin Lake, Dauphin Mountains, Fort Bourbon, on the Saskatchewan, near the west end of Cedar Lake. The most remote of the French settlements on the Saskatchewan appears to have been "at Nipawee, in lat. 53½, "long. 103."†

When we consider these great enterprises in connection with the population of Canada at the time, we cannot fail to be astonished at the energy of the French colonists, and the desire they exhibited to extend their empire even to the frozen north, and to secure the overland trade with Hudson's Bay and the far unknown west—even to "South Seas."

During the period when they were undertaken, the population of Canada, from 1666 to 1738,‡ was as follows:—

1666	3,418 total population. 1,344 men bearing arms.
'67	4,312 total population. 1,566 men capable of bearing arms.
'68	5,870 total population. 2,000 men capable of bearing arms.
'79	9,400 total population.
'85	17,100 French inhabitants, men, women, and children. 3,000 men capable of bearing arms.
1738	45,000 population: the year M. de la Verandèrie was sent overland to discover the Pacific Ocean.

At this period Upper Canada and a large portion of Lower Canada was a wilderness, and yet the French sought to extend their territorial jurisdiction to the shores of Hudson's Bay; and some years later had visions of grasping the Indian and China trade from the shores of the Pacific, which they hoped to reach overland from Canada.

The most important particulars of the history of Central British America, from the date of the formation of the North-West Company

* Foot note to New York Colonial Manuscripts; Paris Doc.

† The name "Nipawee" is perhaps the same as Nepowewin or "The Stand-"ing Place," the present name of the mission opposite Fort à la Corne. Before the conquest the French had settlements at Dauphin Lake, the Pasquia (near Carrot river or Root river), and at Nipawi, "where they had agricultural instru-"ments and wheel carriages, marks of both being found about the settlements."—"Mackenzie's Voyages."

‡ Paris Documents.

of Montreal in 1783 to its union with the Hudson's Bay Company in 1821, are related in the Blue Book containing the Report of the Committee of the House of Commons on the Hudson's Bay Company's Affairs, published in 1858, and in other accessible documents. It is also well known that partially successful efforts were made by Lord Selkirk to establish an immigrant agricultural colony on the Red River of the North, which, in the year 1857, numbered 7,000 souls, by the natural increase of the population and the settlement of the servants of the Company. Up to this period, however, namely, the appearance of the Report of the Committee of the House of Commons, in 1858, no other future was admitted to be possible for this vast central region of British America than that of a preserve for the interests of the fur trade.

II.—*Action of the United States' Government, the State of Minnesota, the British and Canadian Governments, and the People of Red River up to* 1863.

In the winter of 1858-59 the machinery, furniture, and timbers of a steamer were transported by American citizens from Crow Wing, on the Upper Mississipi, to Fort Abercrombie, on the Red River of the North, where the vessel was built; and in 1859, the first steamer reached Fort Garry.

Eighteen months after the publication of the Parliamentary inquiry, and the preliminary reports of the British and Canadian Exploring Expeditions of 1857 and 1858, the New York Chamber of Commerce turned its attention to Central British America, and published a brief description, slightly coloured, of the advantages it possessed. An extract from this report is embodied in an executive document recently published by the United States' Government, entitled "Relations between the United States and North-West "British America." The first voyage of the American steamer was made in June, 1859, from Fort Abercrombie to Fort Garry. Fort Abercrombie is about 200 miles north-west of St. Paul. In the executive document, to which allusion has just been made, the following brief résumé is given of what has been done in the United States with respect to Central British America. "This incident" the voyage of the steamer to Fort Garry, "was the legitimate "sequel to events in Minnesota which had transpired during a "period of ten years. Organized as a territory in 1849, a single "decade had brought the population, the resources, and the public "recognition of an American State. A railroad system connecting "the lines of the Lake States and provinces at La Crosse, with the "international frontier on the Red River at Pembina, was not only "projected, but had secured in aid of its construction, a grant by "the Congress of the United States of 3,840 acres a mile, and a

"loan of state credit to the amount of 20,000 dollars a mile, not "exceeding an aggregate of 5,000,000 dollars. Different sections of "this important extension of the Canadian and American railways "were under contract and in process of construction. In addition "the land surveys of the Federal Government had reached the "navigable channel of Red River; and the line of frontier settle- "ment, attended by a weekly mail, had advanced to the same point. "Thus the Government of the United States, no less than the people "and authorities of Minnesota, were represented in the north-west "movement.

"The foregoing statement of the condition of things at the "beginning of 1860 is not materially changed. The Palmerston "Ministry has not prosecuted to effect the masterly and compre- "hensive policy of Sir E. B. Lytton. The commerce of Minnesota "with Selkirk and the Saskatchewan valley has increased, being "double in 1861 what was transported in 1860. Selkirk settlement "is still unrecognized as a province of England, its population not "materially enlarged, and mostly by American emigrants."*

The resolution of the House of Representatives of the 20th May, 1862, is well worthy of attention. It is as follows:—

"*Resolved*,—That the Secretary of the Treasury be, and he hereby is requested, to communicate to this house any information in the possession of his department which he may judge to be in a form suitable for the consideration of the House of Representatives upon the relations between the United States and North-West British America, particularly the central districts of the Red River of the North and the Saskatchewan."

Mr. Chase replies,—"In compliance with the spirit and terms of "this resolution, I have caused to be prepared an abstract of the "reports of James W. Taylor, Esq., special agent of the Treasury "Department, and of other papers on file relating to the subject, "which abstract, together with the papers referred to, I have the "honour to transmit herewith."

These papers, occupying eighty-seven pages of print in octavo form, close with the recommendation, emanating from Mr. Taylor, that "it would be an instance of well directed legislation for the Congress "of the United States and the Parliament of England to unite in a "liberal subsidy, say of $200,000 by each government, for the trans- "mission of a weekly mail from the limits of navigation on the Mis- "sissippi river, and the British coast of Lake Superior by an interna- "tional route to the centres of the gold districts of British Columbia "and Washington Territory." "Similar reciprocity of action has led "to unity of interests and sentiments on the opposite coasts of the

* "Relations between the United States and North-West British America." Executive Document, House of Representatives, 1862.

"St. Lawrence and the Great Lakes, itself an effective bond of "peace. Why not disarm the whole frontier of the North by "constant multiplication of such ties and guarantees of interna- "tional concord?"

In Canada, the charter of the North-West Transit Company has not yet expired, and it is in contemplation to obtain a renewal with increased powers during the approaching session of the Provincial Parliament.

The magnificent and eminently patriotic plans of the New Hudson's Bay Company, as described in their prospectus, for the construction of a telegraph and the establishment of a postal communication across the continent within the limits of British America, and to open for settlement the rich agricultural areas drained by Red River, the Assinniboine, and the Saskatchewan are well known here, and require no reference at present.

In 1863, the people of Red River Settlement presented a "Memorial to the British and Canadian Governments," praying for the opening of communication between Canada and British Columbia entirely within British territory. This memorial, with remarks on the colonization of Central British America, and the establishment of a "great territorial road," by Mr. Sandford Fleming, C.E., was printed by order of the Legislative Assembly of Canada in 1863.

It will thus be seen that great projects relating to Central British America are proposed by the Congress of the United States, the State Government of Minnesota, the Canadian Government, and the Hudson's Bay Company, and it now remains to consider the natural resources of that distant region which it is intended to bring within reach of the great commercial centres.

III.—*The Agricultural Capabilities of the Red River and Saskatchewan Districts.*

In estimating the agricultural capabilities of the basin of Lake Winnipeg, I bring to bear on the subject the result of personal observation from the head waters of the Winnipeg river, 104 miles west of Lake Superior, to the elbow of the south branch of the Saskatchewan (long. 108 W.) a distance, measured along the centre of the fertile belt of land which crosses the basin of the Winnipeg from the Lake of the Woods to the foot of the Rocky Mountains, of about 750 miles. West of the forks of the Saskatchewan to the Rocky Mountains, about 300 miles, I have based my estimate upon the reports of Captain Palliser and his associates and upon other reliable sources. A residence of many years in Canada has afforded me, I venture to believe, sufficient experience to admit of my forming a tolerably correct opinion respecting the general features of soil, its fitness for cultivation, and the amount of labour required to make its cultivation remunerative. But

when I say that there exists within the basin of Lake Winnipeg an area of cultivable land greater than that which can be found within the province of Canada, I have in view the expenditure over a considerable area of an equal amount of manual labour, in one form or another, to bring it into a proper state for cultivation; the labour in Canada being devoted to clearing away the forests, in the basin of Lake Winnipeg to drainage. But there are many thousand square miles in the fertile belt of Central British America fitted for the plough in their present natural condition. Those great advantages which belong to a wide extent of immediately available prairie lands of the richest description, which have led to the rapid peopling of Illinois State, belong also to the Winnipeg and Saskatchewan districts, and the climate of those districts is in no way inferior to that of the central portions of Canada, where winter wheat is successfully grown.*

The agricultural capabilities of the basin of Lake Winnipeg may be summed up as follows:—

	Acres.
On the route from Fort William, Lake Superior, to the Lake of the Woods, including the valley of Rainy river	200,000
The fertile belt, stretching from the Lake of the Woods to the flanks of the Rocky Mountains, and as far north as the 54th parallel, on the Athabaska, west of McLeod's river (80,000 square miles	51,200,000
Isolated areas in the prairie plateau, south of the Assinniboine	2,000,000
Isolated areas in the great plain plateau, the extension northwards of the great American desert, and in the valleys of the rivers flowing through it	1,000,000
Total area of land available for agricultural purposes	54,400,000
Approximate area suitable for grazing purposes	30,000,000
Total approximate area fitted for the abode of civilized man	84,400,000
Approximate area of the basin of Lake Winnipeg, within British territory	199,680,000
Area fitted for the abode of civilized man	84,400,000
Desert area unsuitable for the permanent abode of man	115,280,000

Comparing this extent of surface with Canada, we arrive at the following results:—

	Acres.
Area of the province of Canada (340,000 square miles)	217,600,000
„ occupied by the sedimentary rocks (80,000 square miles)	51,200,000
„ „ crystalline rocks	166,400,000
If we suppose that one-sixth of the area occupied by the crystalline rocks is capable of cultivation, as regards soil and climate (an estimate probably in excess), the total amount of land in Canada available for the purpose of settlement will be approximately	78,900,000
Showing an excess of land fitted for the permanent abode of man, in favour of the basin of Lake Winnipeg over the province of Canada, of	5,500,000

* Winter wheat has been grown at Red River settlement with success, 1862.

In Upper Canada, with a population of 1,396,091, there are 13,354,907 acres held by proprietors, of which only 6,052,619 acres are under cultivation, cropped, or in pasture. If the whole quantity of land fit for cultivation were occupied in the same proportion, the population of Canada would exceed eighteen millions. At the same ratio of inhabitants to cultivable and grazing land, the basin of Lake Winnipeg would sustain a population exceeding 19,000,000, or leaving out of consideration the land suitable to grazing purposes, its capabilities would be adapted to support 12,000,000 people. If European countries, such as France and Great Britain, were taken as the standard of comparison, or even many of the States of the American Union, the number would be vastly greater.

With reference to the climate of a large part of the Saskatchewan district, M. Bourgeau, the accomplished botanist who accompanied Captain Palliser's expedition, says:—"In effect, the few attempts at "the culture of the cereals already made in the vicinity of the "Hudson's Bay Company's trading ports demonstrate by their "success how easy it would be to obtain products sufficiently abun- "dant to largely remunerate the efforts of the agriculturists. *There*, "in order to put the land under cultivation, it would be necessary "only to till the better portions of the soil. The prairies offer "natural pasturage as favourable for the maintenance of numerous "herds *as if they had been artificially created*."

IV.—*Their Mineral Wealth.*

I now proceed to glance at the mineral wealth of this central region of British America. The little that is known of it already establishes the great fact that within 100 miles of the entire length of Lake Winnipeg, on the west side, there are salt springs sufficient to produce as much of that important material, at a very small cost, as will be required for generations to come. Iron ores of the best description for common purposes are distributed over vast areas adjacent to workable beds of lignite coal. Some of the beds of coal are 12 feet in thickness, and have been recognized in the western part of the basin of Lake Winnipeg over several degrees of latitude and longitude.

It is important to bear in mind that with the lignite coal the vast deposits of clay iron-stone are associated. These extend much further east than the lignite layers, which have been removed by denudation, and form a very peculiar and important feature in the rocks west and south of the Assinniboine, after it makes its north-westerly bend.*

* The vast deposits of iron ore belonging to the cretaceous series of the basin of Lake Winnipeg, acquire especial importance in consequence of their being associated with equally widely distributed deposits of lignite, and are found not very remote from apparently inexhaustible stores of bitumen and petroleum (on Clear Water River), which as a fuel adapted to raising elevated temperatures in a regenerating furnace has no equal.

A large part of the region drained by the north and south branches of the Saskatchewan is underlaid by a variety of coal or lignite. On the North Saskatchewan coal occurs below Edmonton in workable seams.

A section of the river bank in that neighbourhood shows in a vertical space of 60 feet three seams of lignite; the first, 1 foot thick, the second, 2 feet, and the third, 6 feet thick. Dr. Hector, who made the section, states that the 6-foot seam is pure and compact.* Fifteen miles below the Brazeau river, a large tributary to the North Saskatchewan from the west, the lignite bearing strata again come into view, and from this point they were traced to the foot of the Rocky Mountains. On the Red Deer River the lignite formation was observed at various points. It forms beds of great thickness; one group of seams measured 20 feet, "of which 12 feet consisted of "pure compact coal."—(Dr. Hector.) These coal beds were traced for ten miles on Red Deer River. A great lignite formation of cretaceous age, containing valuable beds of coal, has a very extensive development on the upper waters of the North and South Saskatchewan, the Missouri, and far to the north in the valley of the Mackenzie. Colonel Lefroy observed this lignite on Peace River, and Dr. Hector recognized it on Smoking River, a tributary of Peace River, also on the Athabaska, McLeod River and Pembina River, all to the north of the Saskatchewan, "thus proving the range of this "formation over a slope rising from 500 to 2,300 feet above the sea, "and yet preserving on the whole the same characters, and showing "no evidence of recent local disturbance beyond the gentle uplift "which has effected this inclination."†

V.—*The Winnipeg Gold Field and the Saskatchewan Gold Field.*

I now approach a subject of especial interest, and I may be pardoned if I dwell upon it with some degree of minuteness, and an appearance of individual interest in the distribution and probable extent of the gold-bearing rocks of the Winnipeg basin. In 1857, on my return from the Red River Settlements, I brought with me a small nugget and some particles of gold, which were given to me by a half-breed, who stated that they had been found in the bed of Sturgeon creek, a small tributary of the Assinniboine.

I submitted these specimens of gold to the proper authorities in Canada, stating, however, at the time that I had no geological grounds for the belief that they were found, as alleged, in the vicinity of Fort Garry.

* "Proceedings of the Geological Society, 1861," p. 421.

† *Ibid.*, p. 420.

On my return to Red River, in 1858, in charge of the Assiniboine and Saskatchewan expedition, I had the possible existence of gold-bearing rocks near Lake Winnipeg in view, and on the 28th September of the same year quartz veins penetrating palæozoic rocks (Silurian) were discovered by me, forming islands in St. Martin's lake, some thirty miles west of Lake Winnipeg. Struck with their importance, I made a short but ineffectual search for gold, the season being too far advanced to admit of a prolonged investigation. I named these islands St. Martin's Rocks, and gave a tolerably minute description of them in my report, which was first published in Canada in 1859, again in London in 1860, in the form of a Blue Book, and also embodied in my narrative of the Canadian expedition, published by Longman, in the same year.

In 1862 several members of the Canadian emigrant party, which left Fort Garry in June, 150 strong, traversed the valley of the Saskatchewan, crossed the Rocky Mountains by the Leather Pass, descended the Frazer, and reached New Westminster in the autumn of the same year, discovered gold in fine particles on the Assiniboine, the Qu'appelle river, near the Touchwood hills, on numerous tributaries of the North Saskatchewan, and in the flats of the great river itself.

Having received information respecting these discoveries, on which I thought reliance could be placed, I drew up a paper with illustrative maps, in June last, and submitted it to a member of the Canadian Government, explaining to him verbally my views respecting the origin of the gold on the Assiniboine river.

In July last I was informed by a gentleman holding a high and responsible office in the Hudson Bay Company, and who had just arrived from Fort Garry, that gold in *scales* had been discovered near Fort Ellice, a few miles from the spot where it had been found in fine particles by the Canadian emigrants. This additional evidence from an unimpeachable authority led me to append a note to the paper previously prepared, to the effect that I considered the discovery of gold in scales, near Fort Ellice, afforded complete scientific proof that there existed an eastern or Winnipeg gold-bearing area, wholly distinct from the Rocky Mountain gold fields; that the St. Martin's Rocks formed part of this area, and that it extended in a north-westerly direction towards Lake Athabaska, in the form of a narrow belt of intrusive gold-bearing quartz veins penetrating Silurian and probably also Devonian rocks, and resembling, in some important particulars, the auriferous region in Victoria, as described by the Government geologist of that colony. It is proper to state that the gold hitherto found over wide areas in the basin of Lake Winnipeg has been obtained solely from the drift, but the drift covering the valley of the Saskatchewan, west of Lake Winnipeg, even as far as

100 miles from the Rocky Mountains,* has travelled in a south-westerly direction, and was derived originally from the eastern side of the Lake Winnipeg basin.

Some of the gold found at Edmonton, also in many of the tributaries of the North Saskatchewan, has a Rocky Mountain origin; and auriferous alluvium on the banks of the rivers coming from that range penetrates and overlaps the auriferous drift derived from the Winnipeg gold field. Already numbers of young men have left the Red River Settlements and established themselves near Edmonton, where I have been informed, from a reliable private source, they were obtaining, in July last, $15 a-day in fine gold, by simply washing the alluvial mud of the River Saskatchewan.

The existence of a Winnipeg gold field acquires particular importance at the present time for several reasons, prominent among which is the certainty of American progress, westward of the 100th degree of longitude, being arrested by conditions of soil and climate, and its diversion northwards, towards and into the basin of Lake Winnipeg.

VI.—*Communication with Central British America.*

The questions which relate to the facilities for communication between the Lake Winnipeg basin and this country, through British or American territory, and the extension of that communication across the Continent to the Pacific, may now be discussed.

It has already been stated that, with the single exception of 200 miles of road traversed by well appointed stage coaches, the communication from Liverpool to Fort Garry, or indeed the grand falls of the Saskatchewan, can be made by steam.

The successive steps in this route are as follows:—

	Days.
1. Liverpool to Quebec, steamer	10
2. Quebec to La Crosse, railway	3
3. La Crosse to St. Paul, steamer	1½
4. St. Paul to Fort Abercrombie, stages	3½
5. Fort Abercrombie to Fort Garry, steamer	4
	22

The following route is also practicable:—

1. Liverpool to Superior City by steamer.
2. Superior City to Fort Abercrombie, road.
3. Fort Abercrombie to Fort Garry, steamer.

The present difficulty of this route is the nature of the road between Superior City and Crow Wing, which, being cut through a

* Dr. Hector.

wooded country, is still, in the language of the country, rather "rough" as yet.

The next link in a route across the Continent is from Fort Garry to the New Westminster, in British Columbia. And in order to illustrate the singular and wholly unexpected topographical facilities which exist in the basin of Lake Winnipeg, the Rocky Mountains, and British Columbia for commercial intercourse, I shall venture to describe, in as brief a manner as possible, the journey of the Canadian emigrants of 1862 through that vast extent of country. My brother, Mr William Hind, who accompanied me on an exploration into the interior of the Labrador Peninsula in 1861, went with this party for the express purpose of sketching the passes through the Rocky Mountains and all natural features of interest on the line of route.

VII.—*The Canadian Emigrant Route across the Continent.*

The Canadian emigrant party assembled at Fort Garry in June, 1862, travelling thither by Detroit, La Crosse, St. Paul, and Fort Abercrombie, by rail, stage, and steamer. At Fort Garry they separated into two parties; the first division contained about one hundred emigrants, the second division, sixty-five persons in all. The first party took the northern route, by Carlton to Edmonton, the second, the southern trail. At Edmonton they all changed their carts for horses and oxen, and went thence in a straight line to the Leather Pass (lat. 54°), through which they took 130 oxen and about 70 horses. They suddenly found themselves on the head waters of the Frazer river, and so gentle was the ascent that the only means they had of knowing they had passed the dividing ridge of the Rocky Mountains was by unexpectedly observing the waters of the rivers flowing to the westward. When in the mountains, they killed a few oxen for provisions; others were sold to the Indians at Tête Jaune Câche, on the Frazer, and others were *rafted* down the Frazer to the forks of the Quesnelle.

At Tête Jaune Câche a portion of the party separated from the rest, and, with fourteen horses, went across the country, by an old well-worn trail, to Thompson's River, and thus succeeded in taking their horses from Fort Garry, through the Rocky Mountains, through a supposed impassible part of British Columbia, to the wintering station on Thompson's River for the pack animals of the British Columbia gold seekers. With this party of more than 150 people were a woman and three little children. The little children were well cared for, for the emigrants took a cow with them, and these infant travellers were supplied with milk all the way on their long journey to the Leather Pass in the Rocky Mountains. I look upon the successful journey of the Canadian emigrants of 1862, across the

Continent, as an event in the history of Central British America of unexampled importance. It cannot fail to open the eyes of all thinking men to the singular natural features of the country which formed the scene of this remarkable journey. Probably there is no other continuous stretch of country in the world, exceeding 1,600 miles in length, and wholly in a state of nature, which it would be possible for 150 people, including a woman and three children, to traverse during a single short season, and successfully, and, indeed, easily overcome such apparently formidable obstacles as the Rocky Mountains have been supposed to present.

The Leather or Miette Pass lies in latitude 54°, and has long been known to the employés of the Hudson's Bay Company, and is called by them the "Old Columbia Trail" or "Jasper Pass." It will be observed that it forms an immediate and direct connection with the great artery of British Columbia, namely, the Frazer river. The other passes to the south connect with the Columbia river, which flows for many hundred miles through Washington territory. It will not fail to be noticed, too, that the existence of this route, *viâ* the Leather Pass, has only very recently appeared on published maps. It is shown on Arrowsmith's map of British Columbia, published in 1860, but the success with which its long established connection with the Frazer was concealed by the late Hudson's Bay Company is a singular instance of the unity of purpose which has pervaded all the actions of that powerful corporation, during their long tenure of absolute control over a portion of British America, containing more land suitable for the abode of man than the province of Canada itself, and which has already cost in its defence from aggression many millions of money and many thousands of lives. It seems remarkable that the Leather Pass, and its easy connection with the Frazer river, escaped the attention of the exploring party sent by the British Government, under Captain Palliser, in 1857, 1858, and 1859. If the existence of this unobstructed communication between the Athabaska valley and British Columbia had been made known to the world as one of the results of that expedition, probably long ere this the British Government would have taken measures to establish a separate Government in Central British America, and open a communication across the Continent through British territory. Dr. Hector actually passed the "Old Columbia "Trail," but neither his guides nor the people at St. Ann's or Edmonton appear to have informed him of its existence. Fortunately the Leather Pass has now been traversed by men, a woman, children, and numerous oxen and horses. The Frazer river has been safely descended for 400 miles from its source, in canoes and on rafts, by a very numerous party, and it has been *ascended* in a boat from Cariboo to the Tête Jaune Câche; and from this last-

named place there is a well-known trail for horses to the Thompson's River, and thence to New Westminster, which has also been traversed by Canadian emigrants with horses; and more recently, according to Victoria papers, by Lord Milton, with thirteen horses. The difficulties of the Rocky Mountains have, in great part, melted away, and the "impossibilities" of the overland route have vanished, just as the "uninhabitable deserts and swamps" of the Saskatchewan have given place to boundless fertile prairies, which will probably become—even in our generation—the seat of an enterprising and prosperous people.

VIII.—*Comparison between British and United States Routes across the Continent.*

Not only is the track of the Canadian emigrants suggestive as to the nature of the country they traversed so easily, but in comparison with the explored routes for a Pacific railway within the limits of the United States it assumes a new importance. The present President of the Southern States, when Mr. Secretary Davis, summed up the comparisons of the different routes in the United States, as regards the character of the country they traverse. The following is an abbreviation of the summary:—

	Miles.
Route near the 47th and 49th parallels, from St. Paul to Vancouver	1,864
Number of miles through arable land	374
Number of miles through land generally uncultivable, arable soil being found in small areas	1,490

The greatest number of miles of route through arable land on any one of the lines surveyed is 670 miles, in a distance of 2,290 miles. The least number of miles of route through generally uncultivable soil is 1,210, on a line of 1,618 miles in length, near the 32nd parallel.

From the Lake of the Woods, or from Pembina, a line in British territory instead of passing through a desert incapable of supporting human life, would traverse a fertile belt of country, averaging 100 miles in breadth, fully able to sustain five times as many people as Canada now possesses, and leading directly towards the lowest and by far the most facile pass in the Rocky Mountains.

The arid region of the Missouri valley commences west of the 100th degree of longitude, but the 100th degree of longitude divides the United States into two nearly equal parts on the 40th parallel of latitude. The eastern half is the present fertile and peopled part of the country. The western half is a comparative desert all the way to the Pacific.* It is in comparison with this immense desert that the

* The cause of the aridity and unfitness for settlement of fully one-third of the United States has been ably discussed by distinguished meteorologists. This

fertile belt at the edge of the woods, stretching in the Saskatchewan valley from the Lake of the Woods to the Rocky Mountains, stands out in such surprising contrast. The cause of this exceptional character is, in great part, due to the drift deposits which cover the fertile belt. There is, therefore, a geological as well as a climatological reason. Sixty thousand square miles of arable land in Central British America mark out the true pathway across the continent, which alone is capable of sustaining an efficient means of communication, whether in the form of a stage road or ultimately of a railway, by the growth of a local population. But the favourable comparison does not rest here. The mountain region,

remarkable feature, extending over a portion of the American continent within the limits of the United States of more than 1,000,000 square miles in area, is highly important in relation to the valley of the south branch of the Saskatchewan, to a large part of which the same peculiarity belongs. The physical geography of the arid region in the United States has been very admirably described by Dr. Joseph Henry.*

"The general character of the soil between the Mississippi river and the Atlantic is that of great fertility, and as a whole, in its natural condition, with some exceptions at the west, is well supplied with timber. The portion also on the western side of the Mississippi, as far as the 98th meridian, including the States of Texas, Louisiana, Arkansas, Missouri, Iowa, and Minnesota, and portions of the territory of Kansas and Nebraska, are fertile, though abounding in prairies and subject occasionally to droughts. But the whole space to the west, between the 98th meridian and the Rocky Mountains, denominated the Great American plains, is a barren waste, over which the eye may roam to the extent of the visible horizon with scarcely an object to break the monotony.

"From the Rocky Mountains to the Pacific, with the exception of the rich but narrow belt along the ocean, the country may also be considered, in comparison with other portions of the United States, a wilderness unfitted for the uses of the husbandman; although in some of the mountain valleys, as at Salt lake, by means of irrigation, a precarious supply of food may be obtained sufficient to sustain a considerable population, provided they can be induced to submit to privations from which American citizens generally would shrink. The portions of the mountain system further south are equally inhospitable, though they have been represented to be of a different character. In traversing this region, whole days are frequently passed without meeting a rivulet or spring of water to slake the thirst of the weary traveller.

"We have stated that the entire region west of the 98th degree of west longitude, with the exception of a small portion of Western Texas and the narrow border along the Pacific, is a country of comparatively little value to the agriculturist; and, perhaps, it will astonish the reader if we direct his attention to the fact that this line, which passes southward from Lake Winnipeg to the Gulf of Mexico, will divide the whole surface of the United States into two nearly equal parts. This statement, when fully appreciated, will serve to dissipate some of the dreams which have been considered as realities as to the destiny of the western part of the North American continent. Truth, however, transcends even the laudable feelings of pride of country; and in order properly to direct the policy of this great confederacy, it is necessary to be well acquainted with the theatre on which its future history is to be enacted, and by whose character it will mainly be shaped."

* "'Meteorology in its Connection with Agriculture,' by Professor Joseph Henry, Secretary of the Smithsonian Institution.

which offers such a difficult barrier to communication between the Pacific and the valley of the Mississippi, possesses peculiarities in British America which are in themselves of a very striking character, and quite sufficient to establish the line of route, cutting diagonally the 50th, 51st, 52nd and 53rd parallels, as far superior in point of physical conformation to any other lines of route which have been explored in British America or the United States.*

The candid opinion of Professor Joseph Henry regarding the adaptation of a large portion of the United States for settlement is confirmed and strengthened by the following excellent summary, from the pen of Major Emory of the United States and Mexican Boundary Commission. It will at once occur to the reader that a knowledge of these facts gives great additional value to the truly fertile valleys of Red River, the Assiniboine, part of the Qu'appelle, and portions of the south and north branches of the Saskatchewan. It determines also the direction in which efforts should be made to people this great wilderness, and guide the progress of settlement in such a manner as will render the country available for that grand desideratum, a route across the continent:—

"In the fanciful and exaggerated description given by many of the character of the western half of the continent, some have no doubt been influenced by a

* Table of comparison between the different passes in the Rocky Mountains, in the United States and in British territory, north of latitude 38°:—

	Altitude of Pass. Feet.
United States—	
Surveyed route between the 38th and 39th parallels of latitude	10,032
Route between the 41st and 42nd parallels	8,373
" 47th and 49th "	6,044
British territory—	
Kananaski Pass, from the South Saskatchewan to the Kootanie river	5,985
Kicking Horse Pass, from South Saskatchewan to the Columbia	5,420
Vermillion Pass, from the South Saskatchewan to the Kootanie River	4,944
"Old Columbia Trail," or Leather Pass, from the Athabaska to the Frazer—the Canadian emigrant route—probably below	4,500

The breadth of country forming a continuous mountain region is far greater in the United States than in British America. The United States is crossed by three great systems of mountains, extending generally from north to south. The first system, beginning with the Sierra Madre, and terminating in the Black Hills of Nebraska territory, is partially gorged by the Rio Grande, completely cut through by the North Platte and the Sweet Water Rivers, and turned by the Missouri. It does not extend into British America. The total breadth of mountainous country, in the proper acceptation of the term, within the limits of the United States, varies from 500 to 900 miles. In British Columbia, the distance is not more than 380 miles from the Leather Portage to the Pacific; and the distance, in an air line from the Leather Portage to the extremity of Belhoula inlet, the possible terminus, of a route, does not exceed 400 miles.

desire to favour particular routes of travel for the emigrants to follow; others by a desire to commend themselves to the political favour of those interested in the settlement and sale of the lands; but much the greater portion by estimating the soil alone, which is generally good, without giving due weight to the infrequency of rains, or the absence of the necessary humidity in the atmosphere, to produce a profitable vegetation. But be the motive what it may, the influence has been equally unfortunate by directing legislation and the military occupation of the country, as if it were susceptible of continuous settlement from the peaks of the Alleghannies to the shores of the Pacific.

"Hypothetical geography has proceeded far enough in the United States. In no country has it been carried to such an extent, or been attended with more disastrous consequences. This pernicious system was commenced under the eminent auspices of Baron Humboldt, who, from a few excursions into Mexico, attempted to figure the whole North American continent. It has been followed by individuals to carry out objects of their own. In this way it has come to pass that, with no other evidence than that furnished by a party of persons travelling on mule back, at the top of their speed, across the continent, the opinion of the country has been held in suspense upon the subject of the proper route for a railway, and even a preference created in the public mind in favour of a route which actual survey has demonstrated to be the most impracticable of all the routes between the 49th and 32nd parallels of latitude. On the same kind of unsubstantial information, maps of the whole continent have been produced and engraved in the highest style of art, and sent forth to receive the patronage of Congress, and the applause of geographical societies at home and abroad, while the substantial contributors to accurate geography have seen their works pilfered and distorted, and themselves overlooked and forgotten. * * *

"The plains or basins which I have described as occurring in the mountain system, are not the great plains of North America which are referred to so often in the newspaper literature of the day, in the expressions, 'News from the Plains,' 'Indian Depredations on the Plains,' &c.

"The term 'plains,' is applied to the extensive inclined surface reaching from the base of the Rocky Mountains to the shores of the Gulf of Mexico and the valley of the Mississippi, and form a feature in the geography of the western country as notable as any other. Except on the borders of the streams which traverse the plains in their course to the Valley of the Mississipi, scarcely anything exists deserving the name of vegetation. The soil is composed of disintegrated rocks, covered by a loam an inch or two in thickness, which is composed of the exuviæ of animals and decayed vegetable matter.

"The growth on them is principally a short but nutritious grass, called buffalo grass (*Systeria dyctaloides*). A narrow strip of alluvial soil, supporting a coarse grass and a few cotton-wood trees, marks the line of the watercourses, which are themselves sufficiently few and far between.

"Whatever may be said to the contrary, these plains west of the 100th meridian are wholly unsusceptible of sustaining an agricultural population, until you reach sufficiently far south to encounter the rains from the tropics.

"The precise limits of these rains I am not prepared to give, but think the Red River (of Louisiana) is, perhaps, as far north as they extend. South of that river the plains are covered with grass of larger and more vigorous growth. That which is most widely spread over the face of the country is the grama or mezquite grass, of which there are many varieties. This is incomparably the most nutritious grass known."*

* "'Report on the United States and Mexican Boundary Survey, made under the direction of the Secretary of the Interior,' by William H. Emory, Major First Cavalry and United States' Commissioner. Washington, 1846, pp. 43—47.

IX.—*Communication between Canada and Central British America.*

In Canada we are separated from the fertile part of Central British America by six degrees of longitude, which must be traversed before we can reach the edge of the fertile belt. This barrier has frequently been upheld as an insuperable objection to a practicable commercial communication between Canada and Central British America, in the absence of correct knowledge of the physical features of the country. The utmost length of the barrier which requires the construction of a road scarcely exceeds 200 miles. From its western extremity there is an unobstructed navigation, with but one break, to the edge of the fertile prairies of Central British America *vid* Rainy River and the Lake of the Woods; and its eastern extremity is connected uninterruptedly with the sea by the great lakes and the St. Lawrence. The highest point over which the road from Lake Superior to the northern indent of Rainy Lake must pass is not 900 feet above Lake Superior; and for the first 30 miles it would traverse a country susceptible of tillage for several miles on either side, and part of it already occupied by settlers. Then follows a sudden rise, marked by the great drift bank of Dog Lake, which forms the eastern limit of a drift-covered country stretching in a north-east and south-west direction, and having a breadth of about 90 miles where the road would cross it. This accumulation of drift covers the height of land to a depth certainly exceeding 150 feet, as shown by the hills at the summit level at Prairie Portage, 885 feet above Lake Superior, and the highest point on the line of road. There are no serious physical impediments to overcome between Lake Superior and the northern indent of Rainy Lake, either for a waggon road or a railway; and this short link of 200 miles completed, the distance between Fort William on Lake Superior and the commencement of the arable prairies of the valley of Red River would be reduced to 200 miles of road or railroad, and 180 miles of steam navigation. Here, then, we see no formidable impediments, which an impression derived from the custom of traversing the country in canoes through the rocky channels of rapid rivers or hill-embosomed lakes had created in the minds of the few who have traversed that region;—impressions which have been too readily accepted by the public at a time when no particular commercial interests were at stake, except those of the fur trade, and when a policy diametrically opposed to that now entertained by the existing Hudson's Bay Company was pursued with singular success by their predecessors.

X.—*Communication vid Husdson's Bay.*

In contemplating the future of Central British America one important feature appears to be neglected, if not entirely overlooked.

While Lake Winnipeg is 2,500 miles from the sea board of the Gulf of St. Lawrence, and lies exactly in the centre of the American continent under the 51st parallel, its northern extremity is only 380 miles from the tide waters of Hudson's Bay.

The mouth of the Saskatchewan is as near to the open sea as Fort Garry is to the western extremity of Lake Superior. The passage from Norway House, at the northern extremity of Lake Winnipeg, to Hudson's Bay is made in nine days with loaded boats. It is not unreasonable to suppose that by the introduction of tramways over the portages the journey may be made in four days, thus bringing Lake Winnipeg within four days of the sea, yet the nature of the communication now followed is such that it would not admit of vessels much larger than freighters' boats being employed. The navigation of Hudson's Bay for sailing vessels is safe for a period not exceeding six weeks—for steamers it may be double that time. Hitherto the mode of communication adopted by the fur traders between Norway House and Hudson's Bay has been sufficient for the exigencies of the fur trade; it is not at all improbable that more easy means of communication with the sea board exists than those which are now pursued. Under any circumstances it is a fact of the highest importance that Lake Winnipeg is actually within a week's journey of the ocean, over a natural road by which troops have already entered and departed from Central British America. It is more than probable that whenever the necessity arises, the communication between Lake Winnipeg and Hudson's Bay, and thence to the Atlantic, by the aid of steamers, will be made easy and speedy for at least three months in the year.

The outlet by which the waters of the Saskatchewan and Lake Winnipeg reach the sea is Nelson River. The chief reason which induces the Hudson's Bay Company to send their cargoes of furs to York Factory by Hayes River is stated to be the difficulties and dangers of the tracking ground on the banks of Nelson River, arising from impending masses of ice on the precipitous banks. The head of tide-water in Nelson River may yet become the seat of the Archangel of Central British America, and the great and ancient Russian northern port—at one time the sole outlet of that vast empire—find its parallel in Hudson's Bay.

XI.—*No other Area suitable for Extensive Settlement in British America besides the Lake Winnipeg and Saskatchewan Districts.*

Let it be observed that one great fact can be no longer overlooked, viz., that there is no other unoccupied part of North America, "whatever may be said to the contrary," other than the Lake Winnipeg and the Saskatchewan districts, where the establishment and growth of a new nation is possible. The same aridity

which renders the United States a desert west of the 100th degree of longitude converts many of their great rivers, so prominently marked on the maps, into detached ponds during the summer season,* while the Saskatchewan, which flows from west to east across the basin of Lake Winnipeg, is navigable far above Carlton during six weeks in the year for steamers of shallow draught; in spring and autumn it is not navigable further than Carlton. It is important to bear in mind that the Saskatchewan attains its maximum in July, and before and after that month its waters are considerably lower than during its "summer rise." This fact will account for the difficulties in navigating the Saskatchewan, which have been described by travellers as occurring in the spring or autumn, *before* the melting snows of the mountains reach Edmonton, or *after* they have passed it on their way to the sea.

XII.—*The Progress of Minnesota, Dakotah, and Nebraska.*

The State of Minnesota and the territories of Dakotah and Nebraska border on the districts of Lake Winnipeg and the Saskatchewan. Minnesota was organized as a territory in 1849, admitted into the Union as a State in 1857, and, with an area of 83,531 square miles, it has now a population exceeding 200,000 souls.† The census valuation of the real and personal property in the State in 1860 was $52,294,413. The State income for eleven months in 1861 was $106,462, and the expenditure for the same period was $110,732.

In 1863 the projected railroads in this frontier State extended over 1,167 miles, and the sum already expended on them at that date (1st January, 1863), was $3,200,000.‡ The quantity of wheat produced in 1860 was 5,101,432 bushels, nearly 3,000,000 bushels of oats, and 3,143,577 bushels of Indian corn.

The contribution of Minnesota to the volunteer army has already reached the following large numbers:—

	Number of Men.
10 regiments of infantry	9,065
1 regiment and 3 companies of cavalry	1,485
2 batteries of artillery	212
2 companies of sharpshooters	195
Total	10,957

* See papers by Dr. Joseph Henry, Secretary of Smithsonian Institution, and by Major Emory, of the Mexican Boundary Survey, on this subject. These papers are published in the "Transactions of the Smithsonian Institute," and in the "Report of the Mexican Boundary Survey." See also Reports of the Pacific Railway, and Lieutenant Warren's exploration in Nebraska and Dakotah.

† 173,855 by the census of 1860.

‡ "American Railroad Journal."

These men have all engaged for three years, or for the war. The total number of forces Minnesota has sent into the field since the commencement of the war amounts to 11,887 men. Such are the resources of the new State of Minnesota, bordering on the Lake Winnipeg district. Twelve years since it was for the most part an uninhabited wilderness; now it has sent an army of nearly 12,000 men into the field.

Dakotah territory, which lies west of Minnesota and whose northern boundary is conterminous with part of the districts in British America referred to in this paper, was organized in 1861, Its area is 325,000 square miles. Much of it lies within the limits of the American desert, and will never be peopled with white men. It contains a population of 44,501, of which 39,664 are Indians.

Nebraska territory lies west of Dakotah; in 1860 its population was 28,841, besides 5,072 Indians. The aridity of this territory will for ever prevent it from assuming any great commercial or political importance.

XIII.—*Indian Population in Central British America.*

Great misapprehension exists as to the numbers of the Indian population of Rupert's Land. They do not exceed 40,000 in all. The number inhabiting the prairies and plains of the Lake Winnipeg and Saskatchewan districts do not exceed 20,000 at the present time. Under proper management the Indian would become the most useful and tractable protectors of a telegraph line. Once impressed with the idea that it is something supernatural, they would cherish it, protect it, and reverence it as a "manitou," or superior spirit, exercising a control over their fortunes and even lives.

XIV.—*General View of British America.*

The total population of British America at the present moment approaches four millions, and the quantity of land *available for agricultural purposes* is approximately 267,000 square miles—or more than twice the area of the United Kingdom of Great Britain and Ireland; and equal to France (including Corsica), Belgium, Holland, and Portugal combined.

		Area in Square Miles.	Estimated Population, January, 1864.
New Brunswick	—	27,620	295,000
Nova Scotia and the Island of Cape Breton	—	18,600	352,000
Newfoundland	—	36,000	140,000
Prince Edward Island	—	2,133	95,000
Total area	—	84,353	882,000
Estimated area available for agricultural purposes	52,000	—	—
Upper Canada	—	140,000	1,520,000
Lower „	—	200,000	1,200,000
Estimated area available for agricultural settlement	90,000	—	—
Basin of Lake Winnipeg and Valley of the River Athabaska [Exclusive of Indian population, 10,000]	—	400,000	15,000
Estimated area available for agricultural settlement	95,000	—	—
British Columbia and Vancouver's Island [Exclusive of Indian population, 60,000]	—	210,000	50,000
Assumed area suitable for agricultural purposes	30,000	—	—
Total area	—	1,034,353	3,667,800
Estimated area available for agricultural purposes	267,000	—	—

Or about nine times the area of Great Britain and Ireland. But throwing out what may be called the inferior and desert portion of this immense territory, we find the area of the agricultural portion to be approximately 267,000 square miles, or as large as France, Holland, and Denmark put together, with an aggregate population approaching *four millions*.

Six years only have elapsed since public attention in England and America was first directed to the Lake Winnipeg and Saskatchewan districts. During that period not only has satisfactory evidence been obtained of the existence of mineral wealth, in the form of coal, iron ores, salt, and gold, but there are good scientific grounds for the belief that the original matrix of the auriferous drift will be found to extend far north of the Saskatchewan district, towards and perhaps beyond Lake Athabaska. The Hudson's Bay Company, in the recent report of the committee, state that "they are prepared to "meet the wishes of Her Majesty's Government and the spirit of "the times, by assisting in the settlement of any portion of the "territory which may be fit for it, or by facilitating the transmission

"of intelligence by post or telegraph, and aiding general communi-"cation where it may be practicable to do so."

Who can foresee the importance, or estimate the value of telegraphic communication with our Pacific posts, now that the British Pacific fleet finds a suitable station in our own territory? Now that British Columbia has assumed the position of a gold-exporting colony, and that numerous parties of gold-seekers from the Pacific Slope have already passed to the east side of the Rocky Mountains, and invaded the Saskatchewan valley, like the Indian of American pre-historic times, coming from the west.

From private inquiries which have been made to me recently, I am impressed with the conviction that many of the most prominent citizens in Minnesota are fully alive to the vast importance of the Winnipeg and Saskatchewan districts, and they will spare neither energy or money to continue and increase their commercial intercourse with them. On the boundary line, their military post, Pembina, 65 miles from Fort Garry, is now occupied with United States troops, numbering 350 men. While these will insure the preservation of order among the Indian tribes which have so recently disturbed the frontier settlements in Minnesota, they will familiarize the Red River people, now numbering 10,000 souls, with all the advantages of commercial intercourse.

I have refrained from making any allusion to the fur trade, which has so long been a source of wealth to the Hudson's Bay Company. The districts in which that lucrative trade can be carried on with increasing profit under judicious management, lie wholly beyond the area whose resources form the subject of this paper. With prompt and energetic action on the part of those who in a measure rule the destinies of this valuable portion of the empire, Central British America will rapidly acquire an important commercial and political status, independently of its being the high road for postal and telegraphic communication between the Atlantic and the Pacific, lying wholly within the jurisdiction and influence of British rule.

On the Opening *and* Extension *of* Durham University Academical Endowments. *By* James Heywood, M.A., F.R.S.

[Read to the Statistical Section of the British Association, at Newcastle, 1863.]

Thirty-one years ago, an Act was passed, vesting in the Dean and Chapter of Durham, with the consent of the Bishop of that diocese, the formation and maintenance of a University for the advancement of learning in connection with the cathedral church of Durham.

It was the era of the Reform Bill of 1832; the time had arrived when public opinion sanctioned a revision of the system of English ecclesiastical revenues, and from the large amount of property connected with the church establishment at Durham, an estate, now yielding an annual sum of about 2,361*l.*, was set apart for the establishment of the new seat of learning in that city.

In 1837, a Royal charter was granted to the University of Durham; and in 1840, the Ecclesiastical Commissioners were empowered by an act of parliament to prepare and lay before Her Majesty in Council a scheme for maintaining the University of Durham in a state of respectability and efficiency.

The office of Warden of the University was proposed to be annexed, on the first vacancy, to the Deanery of Durham; a canonry of Durham was to be annexed to the professorship of Divinity, and another canonry to the professorship of Greek.

Her Majesty in Council ratified the scheme of the Ecclesiastical Commissioners, by which an estate, whose income amounts at the present time to about 4,983*l.*, was transferred to the University of Durham. From this Order in Council estate, a professorship of mathematics and astronomy, with a stipend of 700*l.* a-year, was endowed; twenty-four fellowships of 120*l.* a-year each were established, with a further sum of 30*l.* a-year to each of the ten senior clerical fellows.

The Durham University estates are let on a system of fines, the annual amount of which varies so much that in one year the produce of the fines received on the original estate did not exceed 300*l.*, whilst in another year the fines on the same estate yielded 3,000*l.*

During the last four years, the average of the—

	£
Gross income of the original estate has been	2,240
And of the Order in Council estate	4,930
	7,170

During the same period, the average of the—

	£
Net income of the original estate has been	1,710
And of the Order in Council estate	3,700
	5,410

The difference between these two sums,

	£
Gross income	7,170
Net „	5,410
	1,760

shows the average out-goings, which amount to nearly one-fourth of the gross rental, and are so excessive that advantage would be derived by an appeal to the attorney-general, to inquire by means of the agency under his control into the cost of the management of the landed estates of the University of Durham, considered as charitable property.

In 1861, commissioners were appointed under a new Durham University Act, who observe that the financial arrangements of Durham university have been conducted with little system or success; the commissioners further remark that there has been no sufficient encouragement given to the study of physical science, and that the University of Durham has failed to do for the industry of the north all that it might reasonably have been expected to perform.

Among the remedies suggested by the Commissioners of 1861 is the recommendation that there should be an annual audit and report made by a professional auditor, to be nominated by the visitor.

The Commissioners under the Act of 1861 were the Right Rev. Dr. Baring, Bishop of Durham, the Right Hon. Robert Lowe, M.P., Vice-president of the Committe of Council on Education; the Right Hon. C. B. Adderley, M.P.; the Hon. H. G. Liddell, M.P. for South Northumberland; the Rev. Dr. Vaughan, Vicar of Doncaster; and Robert Ingham, Esq., M.P. for South Shields; they proposed that the Bishop of Durham should be the visitor of that university, and that he should have the appointment of the professors of Divinity and of Greek.

University scholarships were proposed by the commissioners to be distributed among three university schools or departments:—

1. Arts, including classics and mathemics;
2. Theology;
3. Physical science.

The distribution was to be made according to the numbers of students in each department respectively, provided that not more than one-third in number and value of the scholarships should be held at any one time, by the scholars in the School of Physical Science.

The commissioners propose to stop any further election or appointment to any of the existing twenty Church of England scholarships, as well as to any of the four medical scholarships and to any of the twenty-four Church of England fellowships of the university.

In the place of these fellowships and scholarships, and of various useless offices, the commissioners propose to create forty open scholarships of 30*l.* a-year each, to be competed for by any persons, whether members of the university or not, and to be tenable for two years.

Forty open scholarships of 50*l.* a-year each are also proposed by the commissioners to be competed for by any students commencing their second year, and to be tenable for one year. These last-mentioned scholarships may also be tenable for a second year, if a student having taken a degree in one school, such as arts, should become a student in some other school, such as divinity or physical science.

According to the average yearly expenditure of the University of Durham, during the years 1859-61, as given by the commissioners, 2,916*l.* were annually devoted to the fellowships; and during the year 1862, the officers and fellows received 7,703*l.*, whilst the university scholars only received 740*l.*, *or about one-tenth* of the sum paid to the older members, who formed the larger portion of the resident governing body of the university.

Examinations for the new scholarships would be adapted to subjects of study carried on in the schools of arts, divinity, and physical science respectively.

Three professors were proposed for the school of physical science, namely, of chemistry and metallurgy, geology and mineralogy, and mining and machinery, each professor to receive a salary of 300*l.* a-year each.

New degrees, such as those of Bachelor of Theology (B.T.), and Bachelor of Science (B.S.), were proposed to be created, but the progress of reform was checked by petitions from the Dean and Chapter of Durham, and other persons, to Her Majesty in Council, against the ordinances drawn up by the commissioners. The

petitioners appeared by barristers, before a Committee of the Privy Council, and the ordinances of the commissioners have been disallowed by the Privy Council. The special committee of the Privy Council declared their opinion that the Act of Parliament of 1861, for making provision for the good government and extension of the University of Durham (24 and 25 Vict., cap. 82), did not contemplate such changes as the creation of new degrees, or warrant their being carried into effect.

The commissioners, in concluding their report, decline to frame fresh ordinances in the place of those which have been disallowed, and the task of reconstituting the University of Durham is left for the present to the Dean and Chapter of Durham.

The Dean and Chapter of Durham are, for the most part, exempt from all special duties connected with the university in that city; but under their control, all the students are required to attend the services of the Church of England; scholarships and fellowships are confined to members of that church, and every person who takes a degree in arts is required to subscribe the three articles of the thirty-sixth canon, on Royal supremacy, the thirty-nine articles, and the Book of Common Prayer.

Universities and colleges in modern times ought to be national institutions; their endowments cannot any longer be wisely administered in accordance with the ideas of lawmakers of the seventeenth century.

The Durham University Commissioners observe that the Dean and Chapter of Durham, by requiring the attendance of all the university students at the services of the Church of England, have virtually excluded Dissenters from becoming members of the university.

In the University of Durham, where the exclusive system has been acted upon, the numbers of the students has been almost constantly declining, until, in 1862-63, there were—

Only	23	students	in arts
And	23	„	divinity
Total	46	„	

Vainly has an endowed seat of learning been formed under the shadow of the cathedral church of Durham, if the number of the students in arts be found on the whole to diminish, in that university, from 76 in 1850, to 28 in 1860, and 23 in 1863; whilst the number of the Durham students in divinity has decreased on the whole from 40 in 1850, to 20 in 1862, and 23 in 1863.

Occasionally the University of Durham has one or two medical

students, who, having passed through their medical course at the Newcastle-upon-Tyne College of Medicine, reside one academical year at Durham, with a view to obtain the degree of bachelor in medicine in that university.

The average number of students who attend the lectures of the professor of mathematics, at Durham, amounts to four; and the reader in history and polite literature, in a recent year, was not required to give lectures.

The proposed suppression of fellowships in the University of Durham would probably diminish the number of resident clerical members of convocation in that seat of learning, and the interference of the academical convocation in university business might, under these circumstances, gradually become unnecessary.

The governing body of the University of Durham is proposed by the commissioners to consist:—

1. Of a senate, comprising the warden, who is to be the Dean of Durham for the time being, with the professors and tutors. All future university statutes are to be originated by the senate; and

2. Of a convocation, comprising the warden, the professors and tutors, and all persons who are at present members of the existing convocation, as well as future graduates, who have proceeded to their second degree in arts, divinity, or physical science. The power, either of confirming or rejecting measures proposed to them by the senate, is to be vested in the convocation, or assembly of superior graduates.

It rarely occurs that any academical degree is taken by the students in divinity at Durham; some, however, pass through the school of arts, and graduate as bachelors of arts.

For a degree in arts, a course of study during three years is requisite, each year comprising three terms, amounting in all to twenty-four weeks in a year. Two years only of interval after matriculation is requisite in the University of London for the degree of bachelor of arts, and the third year of study ought to be dispensed with in the University of Durham.

Bishop Ellicott strongly recommends a period limited to two years for the studies in arts of the University of Oxford; and a similar result may have been in view, when the Durham Commissioners under the Act of 1861 recommended short periods of two years each for the holding of undergraduate scholarships in the University of Durham.

Parliament would probably sanction with readiness well devised plans for the advancement of the higher education of the country, if more public interest were expressed in favour of reforming educational endowments.

Since the foregoing observations were written, it appears that a plan, comprising a large measure of reform for the University of Durham, has been prepared by the Dean and Chapter of Durham.

That ecclesiastical body is expected to propose a reduction in the number of University fellowships, increased encouragement to the study of physical science, the removal of religious tests from the degree of bachelor in secular faculties, such as arts and medicine, and the appointment, by the Dean, of a Warden for the University of Durham, specially charged with the care of the new seat of learning.

Reports *of the* Official Delegates *from* England *at the* Meeting *of the* International Statistical Congress, Berlin, *September*, 1863.

[Continued from p. 419, vol. xxvi.]

3. Mr. Valpy's Report.

Having been deputed to attend this meeting of the Congress, as one of the delegates from England, by the President of the Board of Trade, the Minister who received the Congress, upon the part of the Government, in London, I beg to offer the following remarks upon the progress made in some branches of the official statistics of the United Kingdom since the last meeting of the Congress.

Honoured as I was, in conjunction with my colleagues Dr. Farr and Mr. Hammick, upon the occasion of the last meeting of the Congress, by personal communication with the Prince Consort, I cannot but allude to the loss which I feel the Congress and the science of statistics have experienced in the lamented death of His Royal Highness.

Referring, in the first place, to the statistics published in my own department, I have to report that continued attention has been given to the several returns prepared for Parliament, with the view of increasing their usefulness as sources of information, and making them more valuable as statistical records.

The statistics which are now prepared and published by the Board of Trade afford very comprehensive information with respect to the foreign trade and navigation of the country, and exhibit the principal results of the separate departmental returns relating to finance, education, pauperism, crime, the movement of the population, and other subjects of national interest. The full details for these subjects are published in the reports of the separate departments.

Copies of the publications of the statistical department are regularly forwarded to each foreign Government and to the principal statistical departments in each country.

The publications of the statistical department of the Board of Trade now comprise the following documents:—

Annual Statement of Trade and Navigation.
Monthly Accounts of Trade and Navigation.
Statistical Abstract.
Miscellaneous Statistics.
Colonial Statistics.
Foreign Statistics.
Statistics of Changes in Foreign Tariffs.

With respect to the chief record of the commerce of the United Kingdom, *The Annual Statement*, it may be mentioned that the specifications of the articles of import and export have been recently revised in order to render them more in accordance with the present state of British trade with foreign countries.

With reference to the value of the trade between individual countries, as stated in their respective returns, considerable differences are still to be met with.

It will be in the recollection of the Congress that this subject was brought before it at the last meeting by Mr. Messenger, one of the principal officers of customs in London. There are circumstances which will always prevent a complete correspondence in the accounts of two countries of the trade carried on between them; but the variations which at present exist are of sufficient importance to render this subject deserving of the further attention of the Congress and of the official delegates connected with departments which publish commercial statistics.

An alteration which will be made in the form of the import account in the "Annual Statement" of the commerce of the United Kingdom for the year 1862 may be mentioned as illustrative of the changes effected in the British system of trade.

In consequence of the small number of articles now subject to import duty by the tariff of the United Kingdom, the columns hitherto given to indicate the rates of duty and the amount of duty received upon the several articles of import are generally but so much blank paper in the pages of the account of imports. A saving of space in the volume will now be effected by dividing the articles of import into two classes, of duty free and duty paying goods. The latter class, consisting of not more than about twenty separate kinds of articles, will only require the specification of the rates and amount of duty.

In the last number of the "Statistical Abstract," some new tables have been added, and there is a fuller specification of the articles of import and export. In one of the new tables, the estimated and actual amounts of the public revenue and expenditure are given, and the comparison between the estimates and the actual results affords a proof of the careful manner in which the financial estimates are prepared for Parliament. The aggregate revenue of the United Kingdom has increased notwithstanding the large reductions in some branches of taxation.

You will observe in Table IV in the "Statistical Abstract" that, between the years 1848 and 1862, customs' duties were repealed or reduced, involving an estimated loss of revenue of more than 6 *millions* sterling; and yet the customs' revenue amounted to 24 *millions* sterling in 1862, against 22½ *millions* in 1848.

An important fiscal reform was effected in 1861 by the repeal of the excise duty upon paper made in the United Kingdom. The duty amounted to 1½*d.* per pound weight and produced a revenue of 1,350,000*l.* sterling.

The excise regulations operated injuriously upon the paper manufacture, and the price of paper was enhanced both by the excise duty and the import duty upon foreign paper. Both duties have been abolished, and the English markets are now free for the sale of English and foreign paper upon equal terms.

Rags and other raw materials for the manufacture of paper can also be imported and exported free of duty. The supply of paper is not unimportant in connection with statistical publications, and the condition of that trade is deserving of attention in every country.

I wish particularly to invite the attention of the Congress to the publication of *Statistical Abstracts*, containing the principal results of national statistics. A great step would be made towards obtaining comparative international statistics if such a document were compiled and published in each country. In France and Austria, statistical abstracts have already appeared, and it is to be hoped that they will soon be adopted in other countries.

The utility of publishing the principal results of the statistics of all countries upon a uniform plan was recognized by the Congress at the meeting in London. But no plan, at that time, was agreed upon, as it appeared that the subject was engaging the attention of our distinguished colleague M. Quételet. The Congress has recommended, for the sake of facilitating the preparation of comparative statistics, that in some of the statistical publications of countries not using the metrical system of weights and measures additional columns should be introduced to show results according to that standard. But it is doubtful whether a system of publishing figures not in accordance with the national system of weights and measures, could be adopted to an extent that would be of any value for international statistics. It is not the trouble of converting weights or measures from one system into another that seriously interferes with the compilation of tables of international statistics, but the absence of corresponding details in statistical publications. With similar items of information for all countries, it would not be difficult to frame tables of international statistics according to the system of money, weights, and measures in force in any one country, notwithstanding the different systems in which the original figures were expressed.

A comparative abstract of the principal statistics of countries upon the Continent of Europe has been attempted in parts vii and viii of the "Statistical Tables" relating to foreign countries, published by the Board of Trade. I have placed a separate copy of this abstract in the collection of papers presented to the Congress, and also in the hands of some of the official delegates. The particulars which it was the endeavour to state for each country were the area, population, births, deaths, marriages, the total revenue and expenditure, the public debt, mercantile shipping, national and foreign vessels engaged in the foreign trade, and the value of the total imports and exports. A reference to the table will show how many of these particulars can be gathered from the published statistics of the several countries.

Whilst referring to international statistics, I may mention that the statistical department of the Board of Trade is preparing a new parliamentary return which will show for each article the different classifications as well as the different rates of duty adopted in the several tariffs. As the enumeration of articles of import in the commercial returns of different countries depends very much upon the classifications adopted in the tariffs, a return showing the different manner in which an article is classified for the levying of duty in different tariffs will not be devoid of statistical interest.

The trade returns, as well as the finance returns of the United Kingdom, exhibit the success of our commercial policy. The value of the total imports of merchandise was 226 *millions* sterling in 1862, against 152 *millions* in 1854, when the real value was first ascertained.

The value of the exports of British produce increased from 71 *millions* so recently as in 1850 to 136 *millions* in 1860. In consequence of the civil war in America, the value fell from 136 *millions* in 1860 to 125 *millions* in 1861 and to 124 *millions* in 1862, a decrease of less than 10 per cent.

The *quantities* of cotton yarn exported fell from 197 *million lbs.* in 1860 to 93 *million lbs.* in 1862. The *value* of cotton yarn exported decreased from 10 *millions* sterling in 1860 to 6 *millions* in 1862.

The exports of cotton piece goods fell, as regards *quantity*, from 2,766 *million yards* in 1860 to 1,681 *million yards* in 1862; and as regards *value*, from 42 *millions* sterling in 1860 to 30½ *millions* in 1862.

Gentlemen, you will appreciate the importance of the cotton manufacture in the United Kingdom before the war in America, when I remind you that *six or seven hundred thousand persons* were directly engaged in it; that it employed an estimated capital of 200 *millions* sterling; and that it contributed from 50 to 60 *millions* to the annual exports.

In the volume of *Miscellaneous Statistics*, published by the Board of Trade, some information has been collected upon two of the subjects discussed by the Congress at its last meeting—prices and rates of wages. It has not been practicable, as yet, to follow the

elaborate suggestions of the Congress upon those branches of statistics, but information has been collected which, it is hoped, may prove to be statistically useful and interesting. The prices paid for various articles by the army and navy departments, and some public institutions, are given. The rates of wages paid in several of the great branches of industry have been collected by the assistance of the principal chambers of commerce. These statistics, although not so complete as it is to be hoped they will eventually be made, have excited a good deal of interest.

The rates of agricultural wages in each county of England and Wales, Scotland and Ireland have been collected by the Government. Statistics of the prices of the chief articles of consumption, and of the remuneration of labour in the various branches of employment, are of great social and economic value.

Dr. Farr has already informed the Congress that the collection of agricultural statistics has not been commenced in England nor resumed in Scotland. Ireland is a happy exception in this respect to the other divisions of the kingdom. The Registrar-General in Dublin, who superintends this branch of the statistics of Ireland, has just been able to announce a fact of considerable public importance with respect to the growth of flax. It appears that in 1863, as compared with 1862, there was an increase of no less than 64,000 *acres* in the extent of land cultivated with flax in Ireland. A larger production of a raw material for spinning is a highly important fact at the present time.

It is believed to be the feeling of the agriculturists in England, as a class, that the Government has no right to call upon them for information respecting their farming operations. But as a matter of principle it does not appear to be any more objectionable to require the farmer to give information as to his cultivation of the land than to oblige the merchant to register his commercial transactions with foreign countries.

Prejudices are, however, happily removed in the course of time by the current of public opinion, and the present state of ignorance as to the agricultural resources of the United Kingdom cannot continue. The recommendations of the Congress on this subject will have an influence in England.

The "Judicial Statistics for England and Wales," published by the Home Department, have been perfected since the last Congress, and they now afford very useful and interesting information respecting the proceedings of our courts of criminal and civil law. Differences in the laws have prevented an assimilation of this branch of our statistics for the three divisions of the kingdom, but progress is being made towards this important object.

With respect to meteorological observations in England, Admiral

Fitzroy reports that continued progress has been made in the collection of information for which his department was instituted, and that a considerable advance has been made in the practical application of meteorology to every day use.

I trust that the reports of the English delegates will be satisfactory to the Congress.

Our colleague from Sweden, Dr. Berg, has reminded us that much progress in the collection and improvement of official statistics cannot be effected in the course of a few years only. The Congress must not be disappointed at the absence of speedy and striking results to its labours. It is not always the most conspicuous effects that are the most valuable or the most lasting. The Congress is certainly doing good service to all nations. The periodical meetings which we are invited to hold in the capital cities, where the members are received with royal and general kindness, must exercise a great and favourable influence upon public opinion in regard to national statistics.

The opportunity afforded by the Congress for the meeting of public officers and gentlemen interested in statistics from so many countries is productive of much advantage. The circle of our friends is enlarged, and, speaking as an official delegate, I can say that our means of usefulness at home are increased, and our efforts for improvement are much encouraged by the cordial personal intercourse between the members of the Congress.

We must also remember, Gentlemen, that the labours of the Congress are not unrecorded, and if the recommendations which are embodied and preserved in the printed reports are fully carried into effect, they will always afford a most useful guide to all workers in the field of statistics.

Upon the present occasion I think we have every reason to acknowledge our gracious reception by His Majesty the King of Prussia, to congratulate ourselves upon the honour conferred upon us by the Count d'Eulenburg in taking the chair, and to express our best thanks to Dr. Engel for his labours on our behalf.

MISCELLANEA.

CONTENTS:

I.—*The Annual Accumulations of Capital in the United Kingdom.*

From the *Economist* of the 12th and 19th December, 1863:—

I.

"It is somewhat singular that so few systematic attempts have been made of late years, or indeed at all, to ascertain with some degree of numerical precision the sum which represents the annual savings of the United Kingdom—meaning by annual savings the net surplus which remains for employment and investment after all expenses of living and of carrying on the public and private transactions of the country have been met, and after all expenditure necessary to replace dilapidations and wear and tear has been provided. There is a sort of notion or tradition that our annual net surplus of income—that is, of income which remains after all deductions of the nature just indicated have been made—amounts to about 60 Millions sterling. Now, whether this net surplus be 60 millions or some larger or smaller sum, it is quite clear that it is the only real fund out of which can be provided the capital required for the new enterprises of each year. Without descending to any minute classification, we may fairly divide as follows the groups of objects among which in this country our net surplus income is distributed, viz.:—

"1. Improvement and extension of the cultivation of the soil—drainage, improved machines, buildings, and appliances.

"2. Improvement and increase of dwellings—including expenditure for sanitary purposes.

"3. Improvement and multiplication of manufactories—machines, tools, workshops.

"4. Extension of public works and public buildings—railways, docks, bridges, telegraphs, roads, churches, hospitals, colleges, asylums.

"5. Increase of trading capital—ships, stocks of goods at home and abroad, trading advances in colonies and foreign countries.

"6. Foreign and colonial investments—loans, railways, public works, &c.

"7. Increase of furniture, wearing apparel, ornaments, carriages, jewels, works of art, and objects of taste and luxury.

"If our yearly expenditure on these seven groups of objects amounts to no larger a sum than our yearly net surplus, we shall, in the absence of sudden disturbing causes, such as war or scarcity, pursue an even and regular course. If the expenditure falls short of the surplus, the tendency will be towards low rates of interest; and if it rises greatly above the surplus, no device or ingenuity can avert the penalties of financial pressure in some form and in some degree.

"We incline to think, after taking some pains, that the best test available in this country for estimating the amount of annual savings is the information rendered accessible by means of the Income Tax assessments. Let us say, however, as plainly as possible at the outset that we pretend to no refined accuracy in this inquiry. All that can be done is to arrive at certain probabilities by the aid of materials, all of them imperfect, and many of them deceptive.

"There are five schedules under which Incomes are assessed,—viz., under

"A. Incomes from ownership of land, houses, railways, mines, &c.
"B. Occupation of land.
"C. Dividends on funded property.
"D. Profits of trades, professions, &c.
"E. Official incomes, public and private, *e.g.*, army, navy, public departments, public companies.

"The tax under each of these schedules is collected by means of returns obtained by the tax officers from the persons whom they believe come within the area of assessment. The only check on the accuracy of the returns is the honesty of the people who assess themselves, and the vigilance of the officers in the discovery of fraudulent cases. As a matter of fact, without entering upon moral considerations, it is perfectly well known that the assessments fall considerably short of the real amount of income liable to the tax. The most complete assessments are those under Schedules A and C, the least complete those under Schedule D. We cannot err, therefore, in assuming as a sort of basis of our inquiry that to whatever extent the income tax returns may show an increase of public wealth, that increase will in all cases be largely under the truth.

"In the following Table (A) we exhibit the amount of Income Assessed under each schedule in the three financial years 1854-55, 1856-57, and 1859-60,—the interval, therefore, embracing a period of five years, during the whole of which time the range of assessment was the same, namely, commencing with incomes of 100*l.* per annum, and also extending to the three divisions of the United Kingdom. The five years exhibited were in many ways a fair specimen period. They were not all good, nor all bad. Probably, as a whole, they were five years rather bad than good.

(A.)—*Income Tax, 1854-55 and 1859-60—Amount of Incomes, commencing at 100l. per Annum, Assessed in Years ended 5th April, stated in Millions Sterling.*

Years ended 31st March.	A.	B.	C.	D.	E.	Total.
	Mlns. £	Mlns. £	Mlns. £	Mlns. £	Mlns. £	Mlns. £
I. England and Wales.						
1854-55	100·8	41·1	21·8	74·6	13·5	254·8
'56-57	103·6	41·2	26·9	73·5	15·8	261·0
'59-60	112·1	42·9	28·3	81·9	17·0	282·3
Increase 5 years	11·3	1·8	3·7	7·3	3·5	27·5
Annual average	2·3	0·4	0·7	1·5	0·7	5·5
II. Scotland.						
1854-55	12·1	5·7	—	11·9	0·8	30·5
'56-57	12·5	5·9	—	11·1	0·9	30·5
'59-60	14·0	6·3	—	8·6	1·0	29·9
Increase 5 years	1·9	0·6	—	3·3	0·2	0·6
Annual average	0·4	0·1	—	0·6	—	0·1
III. Ireland.						
1854-55	11·9	2·6	1·4	4·8	0·9	21·6
'56-57	11·9	2·6	1·4	4·6	0·9	21·5
'59-60	12·9	2·8	1·4	4·9	1·0	22·9
Increase 5 years	1·0	0·2	—	0·1	0·1	1·3
Annual average	0·2	—	—	—	—	0·3
Total United Kingdom (increase 5 years)	14·2	2·6	3·7	4·1	3·8	18·4
Annual average	2·8	0·5	0·7	0·8	0·8	5·7

"The most salient feature in this table is the rapid rise in the assessment under Schedule A—that is the assessments on the incomes of *owners* of lands, houses, railways, mines, and the like. Taking England and Wales, the increase of this class of incomes was 2·3 millions per annum—or taking the United Kingdom, it was 2·8 millions per annum. The increase of assessments under Schedule D (trades and professions) was greatly affected by the disastrous years 1857-58. But under C and E, the progress is continuous and important.

"We have then in the figures of Table A a *minimum* statement of the average annual growth of incomes of 100*l.* and upwards, during the five years ended with 1859-60. We say a *minimum* statement, bearing in mind the omissions, evasions, frauds, and oversights, inseparable from any scheme of income tax revenue. But more than this, we must recollect that the table wholly omits the numerous class of incomes *below* 100*l.* per annum.

"The incomes *above* the 100*l.* limit assessed in 1859-60 amounted to 335 millions. It is no part of our present plan to enter upon the very difficult task of estimating the aggregate amount of the incomes which fall below the 100*l.* limit. We shall not overstate the case, however, if we say in general terms that the aggregate of these small, or wages, or sub-tax incomes is certainly greater than one-half of the incomes liable to assessment.

"The figures in the table show an average annual increase of 5·7 millions sterling—one-half of the increase occurring under Schedule A. The amount of capital, or to use the technical phrase, the capitalized value represented by the various kinds of income included in the five schedules, is obviously very different. It might not be an exaggeration to put down the whole of the increase under Schedule A as worth 28 or 30 years' purchase, while probably 8 or 10 years' purchase might be a sufficient multiplier for the increase exhibited under D and E. The rates of capitalization can only be a matter of estimate. Considering, however, the large omissions and under-statements of all income tax statistics, *and also remembering that the figures before us wholly omit the sub-tax incomes*, we have, after taking some trouble, arrived at the conclusion that if we multiply by 20, or, what is the same thing, capitalize at 20 years' purchase, or at the rate of 5 per cent. per annum, the total average annual increase shown in Table A, we shall not overstate, but the contrary, the annual savings of the United Kingdom during the five years under review.

"This process (5·7 × 20) gives a result of 114 *Millions sterling* as the average annual savings during the five years 1854-59. Looking at the progress made during the last four years, it is probable that during the present year (1863) our annual savings are quite 130 millions sterling.

"It is not sufficient, however, for practical purposes that we should ascertain the rate of annual savings at the *present time*. If we are to compare with profit and certainty the effects produced by any given expenditure at two periods, we must be able to say whether during the same periods the amount of annual savings are the same or different.

"In the next Table (B), we have given the amounts of income assessed at an interval of nine years, 1843-44 and 1852-53. At that time the commencing limit was 150*l.* per annum, and the tax did not extend to Ireland. These are two important qualifications to be borne in mind.

"The aggregate average increase of income exhibited in this table is 2·1 millions per annum in Great Britain, equal at 20 years' purchase to 42 Millions of capital per annum. The condition of Ireland at the period in question was so unfavourable that, as we know from other sources, there were no annual savings in that country, but on the contrary a progressive impoverishment. The then sub-tax incomes, between 100*l.* and 150*l.* per annum, afforded, doubtless, some margin of surplus. But after every allowance has been made, it is abundantly clear that the annual savings during recent years and at the present time are very much greater than they were during the ten years 1843-53.

(B.)—*Income Tax, Great Britain,* 1843 *and* 1853—*Amounts of Income (stated in Millions Sterling) Assessed, the commencing limit being* 150*l.*

Years ended 31st March.	A.	B.	C.	D.	E.	Total.
	Mlns. £	Mlns. £	Mlns. £	Mlns. £	Mlns. £	Mlns. £
I. England and Wales.						
1843–44	85·7	40·4	27·3	56·6	11·0	221·1
'52–53	96·2	41·1	26·7	59·6	11·0	234·7
Increase 9 years	10·5	0·7	0·6	3·0	—	13·6
Annual average	1·2	0·1	0·1	0·3	—	1·5
II. Scotland.						
1843–44	8·7	5·2	—	8·4	0·3	22·6
'52–53	11·0	5·5	—	10·5	0·6	27·6
Increase 9 years	2·3	0·3	—	2·1	0·3	5·0
Annual average	0·2	—	—	0·2	—	0·5
Total Great Britain, increase 9 years	12·8	1·0	0·6	5·1	0·3	18·6
Annual average	1·4	0·1	0·1	0·6	—	2·1

Note.—The income tax was not extended to *Ireland* till 1851—and in the financial year 1853-54 was first applied to incomes between 100*l.* and 150*l.* per annum.

"With this fact for a guide, we may successfully explain many things which have occurred since 1853. Engagements which, met only by the resources of 1843-53, would have been impossible or ruinous have entailed but little difficulty at a time when the annual accumulations of wealth have been doubled.

"In so intricate a matter, however, it is not enough to arrive by a simple process, no matter how apparently simple and satisfactory, at a set of conclusions. We must not be content until, by other and independent means, we can test and verify our first results —and next week we will resume the subject by following such a plan."

II.

"We have now to bring together proofs from collateral sources of the inferences we drew in our first article from the evidence afforded by the income tax assessments, as regards the average annual amount of the net savings of the United Kingdom during the five years 1854-59. We said that, according to the evidence then before us, we were inclined to think that the net savings in 1854-59 were about 114 Millions sterling per annum, and that at the present time the amount is very probably quite 130 Millions per annum.

"The *income tax* assessments profess to include all incomes of 100*l.* per annum and upwards, derived from every kind of source. The *poor rate* assessment, on the contrary, is confined to visible and tangible property only—stock in trade by a special exemption not being included. It is almost superfluous to say that the valuations of parishes and unions for purposes of poor rate are neither uniform nor satisfactory. Any evidence, therefore, afforded by the poor rate assessments can only be of a collateral nature.

"The net annual value of the property assessed to Poor Rate in England and Wales only was in—

Year.	Net Annual Value.	Total Increase.	Average Annual Increase.
	£	£	£
1810-11	62,540,000	—	—
'19-50	67,700,000	5,160,000	570,000
'55-56	71,840,000	4,140,000	690,000

"If we multiply these average annual rates of increase by 25 as a fair approximation of the capitalized value of the increments represented, we have for the nine years 1810-49 a result of 14¼ millions —and for the six years 1849-55 a result of 17¼ millions—as the average annual accumulations indicated even by so imperfect and partial a test as the poor law assessments in England and Wales. In the period 1810-49, considerable efforts were made to render the valuations uniform, and hence the average rates of 14¼ millions of increase during that period is more apparent than real. But in the period 1849-55, the result of 17¼ millions may be regarded as almost wholly attributable to the growing wealth of the country.

"We have, however, in the County rate assessments of England and Wales a confirmation of the results presented by the poor law returns. The annual value of the visible and tangible property upon which county rate was assessed in England and Wales was in—

		Increase.
	£	£
1856	65,100,000	—
'60	68,400,000	3,300,000

"or 825,000*l.* per annum average increase, equal, at 25 years' purchase, to 20⅝ millions sterling.

"We are quite sensible of the comparative smallness of the rates of accumulation shown by these figures, when brought into contrast with the 114 or the 130 Millions suggested in our former article. We want our readers, however, to see fully the connection of the different points of the case. The income tax returns for the *United Kingdom*, with all their omissions and defects, profess to

include nearly the whole of the area to be surveyed, and they, as we have seen, yield a certain result. The poor rate and county rate returns for *England and Wales* contain still more omissions and defects,—are notoriously still more *under* the truth than even the income tax papers,—and, moreover, apply only to a special kind of the visible wealth of the country,—and still these tainted and partial returns do show very clearly a much higher ratio of increase since 1850 than before it: and a ratio of increase, bearing in mind all the needful qualifications, fully consistent, as we shall presently show, with the conclusions suggested by the income tax returns.

"Since 1851, there has been in Great Britain an Inhabited House duty of 9*d.* in the pound on the annual rent of houses of the value of 20*l.* per annum if used as dwelling-houses, and of 6*d.* in the pound if used as shops, ware, beer, or farm-houses. The following Table (C) gives the assessments under this duty in 1855 and 1860, an interval of five years.

(C.)—*House Duty, Great Britain,* 1855 *and* 1863, *Annual Value* 20*l. and above.*

Year.	Number of Houses, &c.			Annual Value.		
	Trade.	Dwelling.	Total.	Trade.	Dwelling.	Total.
	No.	No.	No.	£	£	£
1855	193,000	291,000	484,000	8,500,000	14,000,000	22,500,000
'60	204,000	328,000	532,000	9,200,000	16,000,000	25,200,000
Increase....	11,000	37,000	48,000	700,000	2,000,000	2,700,000

"In 1861, the total number of houses in Great Britain was 4,363,000: of this number, the 532,000 houses and shops assessed as being worth 20*l.* per annum represented 12 per cent., or say 1 in 8. The total increase of say 3 Millions, shown by the Table (C), is equal of course to an average annual increase of 600,000*l.* for the assessed houses alone. It is perfectly well known that for the purposes of the tax, houses and shops, especially of the larger kinds, are grossly under-rated. It is also perfectly well known that the increase in the number of houses *below* 20*l.* is greater than the increase in the number of houses above that limit, and it must be so from the circumstances of the bulk of the population. But if in one-eighth part of the house property of *Great Britain* there is an average increase of 600,000*l.* per annum of income, the average increase on the whole would be 4,800,000*l.* per annum,—and that sum could not well be capitalized at less than *ten* years' purchase, or say 48 millions per annum of value. To this result two corrections have to be applied, and unfortunately they are corrections which must be almost wholly conjectural. The first correction would increase the 48 millions on the ground of the notorious under-assessments prevalent all over the country. The second correction would reduce the 48 millions on the ground of the more precarious value of small house property. It seems to us that 40 millions may

be assumed as a fair compromise—but this 40 millions, it must be remembered, is the expenditure upon only *one* (the second) of the seven groups of objects enumerated in our first article.

"But if 40 Millions sterling was in 1855-60 about the average annual expenditure in providing more and better house accommodation, let us inquire what was the annual expenditure under another leading group of objects—the fourth—expenditure on public works within the United Kingdom, such as railways, docks, bridges, roads, telegraphs, churches, and the like.

"As regards British and Irish Railways, we have tolerably good information by means of the returns collected and published by the Board of Trade; and in the next Table (D) an abstract of those returns is given for various years so far as relates to the capital raised in the several periods by means of shares and loans:—

(D.)—*Railways in the United Kingdom, Total Capital Paid-up in Shares and Loans.*

At end of Year.	Paid-up.	Increase.	Number of Years.	Annual Increase.
	Mlns. £	Mlns. £		Mlns. £
1817	159·4	—	—	—
'18	200·2	40·8	1	40·8
'19	229·7	29·5	1	29·5
'50	240·3	10·6	1	10·6
1851	248·2	7·9	1	7·9
'52	264·2	16·0	1	16·0
'57	315·2	51·0	5	10·2
'61	362·3	47·1	5	9·4

"According to these figures, the capital actually raised and paid-up for Railways within the United Kingdom has been about 10 millions per annum during the last ten years. Besides these 10 millions for *home* purposes, there has been raised about 4 millions per annum for railways in India; and beyond the 14 millions of which we have specific returns in these two categories, there has been, as every one knows, a vast expenditure of British capital on railways in Canada, Australia, at the Cape, in North and South America, in Spain, France, Germany, Denmark, and in point of fact in almost all parts of the world. The exact amount of this further expenditure can be estimated only, but it is a moderate computation to reckon 20 Millions per annum as the expenditure on home, colonial, and foreign railways alone during the last ten years; and it is also a moderate computation to place at 10 millions more the average annual expenditure of the last ten years on telegraphs, docks, roads, harbours, churches, hospitals, colleges, asylums, and other public buildings.

"We can only revert here for a moment to the earlier figures in Table D, showing the expenditure in British railways in the two years 1847 and 1848. The largest expenditure was 40 millions in

the single year 1818, and the privations and suffering entailed by so vast a diversion of capital to a single kind of fixed outlay will not soon be forgotten. If we are justified in the belief we have expressed that in 1848-49 the annual savings of the country were not more than 50 or 60 millions, it is easy to understand how a railway expenditure of 40 millions almost paralysed every other branch of enterprise. And, in like manner, if we are justified in our belief that the annual savings at present are at least 130 millions, we can also understand how it happens that a railway expenditure of 20 millions per annum does not seem to produce any marked consequences.

"The evidence afforded by the duty on Fire Insurances is valuable for the objects we have in view. The assessment is in the form of a duty of 3*s.* per cent. per annum on the *sums insured*. It is easy, therefore, to deduce the amount of property insured from the amount of duty collected. We need not enter into the controversy which has been carried on so long as regards the policy or proportion of this fire duty. It is only necessary for our present purpose to bear in mind that a very large part of the property liable to be destroyed by fire is not insured at all—to say nothing of the multitude of valuable possessions which, from their very nature, *e.g.*, lands, ground-rents, canals, railways, &c., cannot come within the reach of the tax. We give the leading facts in the next Table (E):—

(E.)—*Fire Insurance—United Kingdom.*

Years.	Duty Collected.	Property Insured.	Total Increase.	Increase per Annum.
	Mlns. £	Mlns. £	Mlns. £	Mlns. £
1813	1·03	721	—	—
'53	1·27	890	166	16
'57	1·42	996	106	26
'62	1·66	1,162	166	33

"During the ten years 1843-53, the average annual increase in the property insured was 16 millions, or less than half the average annual increase of 33 millions during the five years 1857-62.

"It would be easy to multiply these corroborative evidences. But it is not necessary to do so. We have not referred at all to one class of evidence formerly much resorted to—we mean the returns of the probate and legacy duty. The gradual operation of the Succession Duty Acts of 1853 have for the present at least rendered the legacy duty returns almost useless as safe indications of the progress of public wealth. When the succession duty assessments have come fully into play, the case will be different.

"If, however, we have brought forward solid grounds for concluding that on the average of the last ten years there has been furnished out of the annual savings of the United Kingdom a sum of say 40 millions sterling for more and better dwellings—and 30 millions for home, colonial, and foreign railways, telegraphs, docks, harbours, and public buildings—making 70 millions for two only out of the seven groups of objects enumerated in our first article—we shall have done enough to justify our computation of 130 Millions as being *at least* the total of our yearly surplus.

"If 70 millions be indeed expended upon houses, railways, and public works, it may be seriously doubted whether the remaining 60 millions suffice for the—(1) drainage and improvement of the soil; (2) for the improvement and multiplication of manufactories, tools, and machines; (3) for increase of trading capital, ships, consignments, and the like; (4) for foreign and colonial loans; and (5) for the increase of furniture, apparel, works of art, and objects of taste and luxury.

"At present we confine ourselves rigidly to the functions of the statistician. At some future time we may, perhaps, endeavour to investigate some of the general consequences of the facts now brought together."

II.—*Traffic Statistics of Waterloo Bridge, London.*

Mr. John Williams, the Secretary to the Waterloo Bridge Company, has been so good as to forward for the use of the Statistical Society a return of the bridge traffic and tolls from 1817 to the present time. It appears from Mr. Williams' statement that the money raised upon shares, annuities, and bonds by the company amounts to 1,035,184*l.*; that the preliminary expenses, including the cost of *four* acts of Parliament, were 11,867*l.*; the duty paid on 1,428,913 cubic feet of stone was 20,749*l.*

From the opening of the bridge on the 18th of June, 1817, to the 23rd February, 1863, that is, during 46 years, the total receipts from passengers on foot and from horse tolls amount to 704,703*l.* The total number of foot passengers who have crossed the bridge in the same period is 160,761,175. The traffic of foot passengers and the receipts in each year are shown by the following tables.

(I.)—*Statement of the Number of Foot Passengers who have crossed Waterloo Bridge from* 1817 *to* 1863.

Years.	Number of Foot Passengers.	Years.	Number of Foot Passengers.	Years.	Number of Foot Passengers.
1818	1,569,762	1836	2,330,391	1851	4,669,868
'19	1,798,242	'37	2,381,226	'52	4,983,636§
'20	1,819,215	'38	2,417,713	'53	4,609,422
1821	2,021,657	'39	2,476,231	'54	4,785,054
'22	2,210,600	'40	2,476,321	'55	4,861,792
'23	2,254,596				
'24	2,430,909	1841	2,446,922	1856	4,916,268
'25	2,596,356	'42	4,533,196*	'57	4,951,086
1826	2,806,584	'43	4,789,264	'58	4,930,422
'27	2,645,359	'44	4,967,014	'59	4,864,760
'28	2,579,038	'45	5,096,172†	'60	4,866,646
'29	2,624,620				
'30	2,420,726				
1831	2,397,671	1846	4,515,088	1861	5,011,994
'32	2,475,745	'47	4,360,350	'62	5,071,772
'33	2,280,244	'48	4,201,152‡	'63	5,141,084
'34	2,313,013	'49	4,197,080		
'35	2,371,350	'50	4,291,564	Total	160,761,175

(II.)—*Statement of the Total Receipts of Waterloo Bridge from 1817 to 1863.*

Years.	Total Receipts.	Years.	Total Receipts.	Years.	Total Receipts.
	£		£		£
1817	4,295	1836 ...	12,494	1851	16,475
'18	8,291	'37	12,791	'52	20,248§
'19 ...	9,514	'38	13,063	'53	18,089
'20	9,855	'39	13,584	'54	19,197
		'40 ...	13,535	'55	19,650
1821	11,038				
'22	12,223				
'23	12,543				
'24	13,495	1841	14,442*	1856	19,676
'25	14,387	'42 ...	13,621	'57	20,165
		'43	13,350	'58	20,322
1826	14,959	'44	16,526	'59	20,279
'27	13,914	'45	15,790†	'60	20,956
'28	13,719				
'29	13,636				
'30	12,618				
		1846	14,501	1861	21,490
1831	12,497	'47	18,668	'62	21,107
'32	13,395	'48	13,929‡	'63	23,129
'33	12,061	'49	14,513		
'34	12,524	'50	15,449	Total	704,703
'35	12,699				

* Foot toll reduced to ½*d.* 1st March, 1811.
† Hungerford bridge opened 1st May, 1844.
‡ Waterloo station opened 11th July, 1848.
§ Great Exhibition.

III.—*Comparative Statistics of European Armies.*

The following table, showing the military force of the different States of Europe, and the consequent fiscal burden in each, is taken from the *Annuaire Encyclopédique* for 1863. These figures will possess a special interest for the readers of the *Journal* when considered in connexion with the important paper, in the present number, on English and French Military budgets.

Countries.	Army.	Population.	Expenses.	Cost per Man.	Inhabitants to One Soldier.	Proportion per Cent. to Total.
			£	£ s. d.		
Germany.....	178,576	16,960,512	3,307,947	18 10 5	95	20
Austria	467,211	35,019,058	13,462,168	28 16 –	75	37
Belgium	40,115	4,671,183	1,290,105	32 1 2	117	23
Spain	120,000	15,500,000	5,026,474	41 16 10	129	25
Roman States	8,845	684,300	177,393	20 – –	77	—
France.....	513,349	37,500,000	27,545,815	53 12 9	73	33
Greece	10,291	1,096,000	216,900	19 18 5	100	32
Holland	59,431	3,569,456	1,876,316	31 12 9	60	25
Italy	314,285	21,920,269	13,186,845	41 19 2	70	27
Prussia	214,482	18,500,116	6,269,346	29 10 5	86	30
Great Britain	300,823	29,193,319	27,097,175	89 4 9	97	39
Russia	1,000,285	61,000,000	21,169,600	21 1 2	64	42
Denmark.....	50,000	2,605,021	701,544	14 5 6	105	37
Sweden	67,867	2,855,888	683,464	10 1 7	56	45
Norway	18,157	1,433,731	337,908	18 12 –	79	32
Turkey	429,000	39,000,000	6,000,000	15 4 –	91	—
Roumania	20,000	4,000,000	472,000	23 12 –	200	—
Servia	2,500	985,000	35,776	14 5 7	394	—
Switzerland....	—	—	—	—	—	—
	3,815,217	299,494,195	128,856,776	33 15 6	76	32

Note.—The *francs* of the original table have been changed into pounds sterling at the rate of 25 frs. to 1*l.*

IV.—*Statistics of French Commerce.*

The following tables, illustrating the commercial progress of France in some of its principal branches during the three years ended with 1863, are taken from the *Economist* of the 13th February last:—

(I.)—*Value of the Principal Articles* Imported *and taken out of* Bond for Home Consumption.

Articles.	1863.	1862.	1861.
	fr.	fr.	fr.
Cattle	74,865,773	69,983,405	69,850,703
Fresh or salt meat	16,541,221	9,476,052	3,152,406
Cheese and butter	13,192,433	13,470,095	14,431,795
Hides	109,799,805	69,271,464	75,587,650
Wool	240,837,281	185,134,646	168,774,743

(I.)—*Value of the Principal Articles* IMPORTED—*Contd.*

Articles.	1863.	1862.	1861.
	fr.	fr.	fr.
Silk	310,122,194	235,957,793	184,140,207
Grease and tallow	47,115,403	40,133,719	14,118,159
Guano and other manure	24,100,167	16,089,416	14,148,273
Rice	12,510,421	12,796,231	14,790,053
Arachides	19,590,627	18,287,313	11,330,167
Eatable fruits	16,042,280	17,250,150	13,712,509
Sowing seeds	18,210,101	15,519,392	14,406,318
Oleaginous seeds	40,868,824	49,251,051	51,749,374
Olive oil	24,561,648	32,490,236	22,119,651
Sugar	146,441,025	130,922,101	129,001,647
Cocoa	7,167,003	6,630,504	7,671,179
Coffee	80,593,368	75,973,972	68,243,773
Timber	126,018,315	113,381,744	131,338,950
Jute	4,208,464	3,780,339	5,369,189
Hemp	3,873,108	5,878,667	8,219,634
Flax	41,585,404	35,808,071	41,636,063
Cotton	177,170,622	126,158,877	270,631,594
Madder	5,537,040	6,251,753	5,971,507
Hops	3,285,823	3,838,968	4,514,744
Oil, other than olive oil	5,208,625	10,301,287	13,206,178
Coals	99,567,728	102,167,363	104,369,244
Ores of various sorts	23,401,339	22,451,823	20,953,782
Pig iron	18,021,343	22,207,082	13,034,367
Iron	4,709,291	22,889,302	3,947,553
Steel	2,244,519	2,616,411	2,285,938
Copper	41,491,425	31,831,678	40,362,458
Lead	9,333,599	9,285,082	9,754,345
Tin	9,959,666	11,385,013	11,344,709
Zinc	13,269,117	14,171,720	17,782,815
Indigo	3,175,080	2,219,085	3,856,584
Wines	5,650,664	5,700,002	11,040,552
Spirits	6,504,732	6,461,109	12,704,237
Flax, hemp, and jute yarn	4,588,533	5,830,097	5,870,738
Cotton yarn	4,525,948	12,912,055	5,094,834
Woollen „	11,126,009	7,492,917	1,209,627
Goats' yarn	4,337,980	4,933,318	5,639,600
Flax and hemp tissues	11,545,629	13,483,409	13,868,025
Silk tissues	4,717,780	4,624,019	4,212,138
Woollen tissues	32,091,735	40,961,310	20,603,456
Cotton „	7,726,076	14,305,265	9,382,382
Other tissues	6,547,303	7,235,178	6,302,229
Machinery	10,668,553	10,770,352	9,683,203
Iron and other metals wrought	10,948,358	12,892,775	7,295,767
Iron vessels	4,900,350	7,194,360	796,980
Grain and flour	64,738,039	157,509,374	390,012,369
Totals of the *fifty* articles	1,985,237,771	2,067,503,798	2,067,503,798

(II.)—*Value of the Principal Articles of French Production* EXPORTED.

Articles.	1863.	1862.	1861.
	fr.	fr.	fr.
Silk tissues	375,818,779	363,156,114	332,891,322
Woollen tissues	283,286,520	221,691,271	187,999,169
Cotton „	69,111,071	63,233,732	56,347,042
Flax and hemp tissues	18,602,740	14,467,086	14,871,869
Woollen yarn	13,107,615	12,539,176	6,562,593
Cotton yarn	1,506,576	1,693,668	1,063,781
Flax and hemp yarn	22,091,454	3,126,707	1,577,086
Prepared skins	54,086,685	38,866,486	32,209,457
Wrought skins and gloves	72,293,454	65,800,715	59,260,096
Jewellery	17,656,501	18,801,711	17,908,779
Machinery	7,385,840	8,332,365	7,323,021
Cutlery	2,591,221	2,231,599	2,048,291
Arms	13,631,549	15,080,409	19,773,601
Tools and other wrought metals	44,831,629	41,877,006	39,711,641
Haberdashery	146,705,337	130,558,989	85,307,155
Millinery and flowers	12,257,312	7,623,127	6,818,144
Furniture	13,632,325	10,830,261	10,923,134
Clothing (linen and other)	85,617,726	91,711,696	77,851,711
Books, engravings	19,118,730	18,468,184	14,663,231
Pottery	11,146,140	9,590,836	8,410,340
Paper and carton	18,427,881	14,773,558	13,614,939
Glass and crystal	17,662,034	15,401,322	16,921,339
Watches and clocks	8,457,977	6,175,569	4,369,921
Wines	240,900,326	209,999,830	195,922,795
Spirits	67,810,613	59,327,111	52,966,360
Olive oil	10,331,640	7,484,096	12,972,070
Other oils	8,091,909	6,019,211	4,371,049
Perfumery	14,660,483	12,051,795	12,874,410
Soap other than soap perfumery	7,200,578	6,088,621	5,955,152
Refined sugar	75,539,240	50,635,484	41,969,807
Home sugar	7,297,019	5,442,935	1,676,769
Madder	11,072,131	12,083,563	11,058,414
Extract of madder	6,672,363	11,090,151	10,496,682
Chemical productions	51,184,798	52,716,080	35,028,053
Oilcakes	7,391,111	10,955,483	8,424,336
Flax	9,568,182	11,611,606	3,146,870
Cotton	41,332,706	41,262,345	29,158,263
Timber	31,756,689	23,051,866	23,244,617
Resins	31,693,596	20,561,234	6,877,787
Table fruits	22,167,779	13,182,572	15,234,066
Oleaginous seed	11,026,601	9,238,757	5,591,830
Sowing seeds	11,845,235	11,853,965	8,747,790
Eggs	23,282,611	17,608,291	17,844,717
Butter	30,565,635	28,969,142	30,915,364
Wool	41,528,218	45,103,419	20,986,345
Silk	99,887,352	49,786,474	37,071,229
Cattle	18,429,472	18,075,808	20,003,133
Totals of the *forty-seven* articles	2,210,263,383	1,908,297,450	1,630,965,570

V.—*The Import and Export Trade of the United Kingdom in* 1861-62-63.

THE following very complete account of our Commerce with Foreign Countries and with our own Colonies during the three years just passed is extracted from the *Daily News* of the 29th February :—

"The accounts of the Board of Trade relating to the trade and navigation of the United Kingdom have this year been looked for with unusual interest. The opening of the year 1863 found us already recovering from our first anxieties arising from the interruption of our long established intercourse with the cotton States of America. We are still dealing with the suffering masses of the population in the north, and we had had to contend with the results of the bad harvest of the preceding year. Money was cheap, but that cheapness was owing to the overthrow of an important part of our commercial relations, and to the consequent stoppage of trade. We stood upon the threshold of an uncertain future, and chances were to be counted on either side. By degrees, as weeks and months drew on, observations made from time to time led us to believe that we were running a prosperous course; and at last, now that we are in possession of the Board of Trade returns, it is easy to trace the marvellous development of our enterprise in the internal resources of the country no less than in the increasing extent of our relations with every part of the world.

"In the review of our imports the first place must be given to cotton and corn. We have, in the quantity of cotton imported during the past year, an increase amounting to 1,300.000 cwts. The largest quantities reached us from the British East Indies and from Egypt. The increase of the amount contributed by Egypt is most remarkable, although the absolute excess is greater from the East Indies. The increase over 1862 from Egypt is 309,000 cwts., and from the East Indies, 373,000 cwts. Brazil has sent us 7,000 cwts. less in 1863 than in 1862. From "other countries" we have received 689,000 cwts. more. The decrease from the United States is, as might be expected, very considerable; and the details of the imports are represented by the following figures:—

Raw Cotton.

	1861.	1862.	1863.
	cwt.	cwt.	cwt.
From the United States	7,316,,69	120,752	57,090
„ Brazil	154,378	208,381	201,814
„ Egypt	365,108	526,897	835,289
„ British East Indies.....	3,295,004	3,505,844	3,878,757
„ other countries	91,619	316,456	1,005,472
Total	11,223,078	4,678,333	5,978,422

"The value of the cotton and cotton manufactures imported in 1862 was 24,500,000*l.*, and in the past year 44,000,000*l.* The separate value of cotton manufactures is also on the increase, standing as follows for 1861, 1862, 1863—783,000*l.*, 889,000*l.*, 1,035,000*l.*

"The comparison of the imports of corn, wheat, and flour during the years 1862 and 1863 is favourable to the latter. The arrivals in the former year amounted in value to 35.000.000*l.*, while those of 1863 only figure at 24,000,000*l.* The difference of 11,000,000*l.* is to be attributed to the excellent harvest of the past year.

"So soon as we approach the figures that indicate the value of articles used in manufacture as substitutes of one or of another sort for cotton, we begin to discover some of the causes of the general addition to our prosperity. Flax, hemp, jute, and other vegetable substances of the nature of hemp, wool, wool manufactured but not made up, all show a large increase, and explain why, if Lancashire has been in distress, Leeds, Huddersfield, Dundee, and other centres of trade in these goods, have flourished in an unprecedented degree. The impulse communicated to the manufacture of flax and of woollen goods has been very great, and it is possible, even probable, that a much greater development may yet take place. The value of the articles above enumerated, and imported during the three years 1861, 1862, 1863, stands thus:—14.020.000*l.*, 17,830,000*l.*, 18,000,000*l.* The comparison would have been still more striking had the imports of flax been on a moderate scale in 1862. The sudden demand of that year acting upon a supply that had accumulated during the time when the markets were over-filled with cotton fabrics produced, however, in that year, an increase of over 50 per cent. in the value of the arrivals, which have subsequently fallen off to the extent of 339,500 cwts., and to the value of 1,150,000*l.* The imports in hemp, in jute, in other substitutes, in wool, raw and unmanufactured, show a constant progressive increase, both in value and amount. The details as to wool show a gradual advance in the extent of the supply from Australia in the course of the three years, while from the British East Indies there has been some little fluctuation without material change in the quantity. The figures denoting the amount of worsted yarn imported in the course of 1861, 1862, 1863 exhibit a large and rapid increase—1,577,091 lbs., 2,244,701 lbs., 4,523,369 lbs.

"There is not much to remark in silk. In raw silk the figures of the supply have varied greatly in the three years. The amount received from China, Egypt, and from the East Indies is below that furnished in 1862. On the other hand, the manufactures from Belgium and from France are rather rapidly assuming large proportions.

"Our imports of metals show a constantly increasing quantity of copper ore from Spain, while there is a decrease in the supply from Cuba and from Chili. From Australia the returns of the three years give a constantly declining amount. The tons of ore for 1861, 1862, and 1863 are reported 74,163, 82,050, 80,693. The weight in cwts. of copper unwrought and partly wrought gives the following figures, those of each year being below the amount previously registered—315,760, 268,020, 243,240. Compared with 1862 the weight of bar iron unwrought is rather less, that of steel unwrought 1,000 tons more. Pig and sheet lead show an increase of 5,000 tons; spelter and zinc, 11,000 tons. Of tin our receipts have fallen off 33,000 cwts., and the value of silver ore 59,000*l.*

"The imports of living animals are on the increase, as might be expected from the growth of the population of this country; but it is to be remarked that in the number of hogs and swine there is a decrease. This falling off is, however, compensated by the additional weight of bacon and hams, the imports for 1861, 1862, and 1863 being, in cwts., 515,953, 1,345,694, and 1,877,813. Eggs are also brought into this country in enormous quantities, the numbers being for the three years 203 millions, 232 millions, and 267 millions respectively. The imports of Indian corn are nearly stationery. The value of the coffee imported during the three years is as follows:—1861, 2,424,346*l.*; 1862, 3,057,476*l.*; 1863, 3,586,526*l.* We receive each year a greater number of foreign-made gloves, the following being the figures for the three past years:—6,126,000, 6,876,000, 8.093,000. Foreign clocks also appear to find an increasing number of buyers in this country, 67,000 having been imported in excess of those brought over in 1862. In watches the decrease is 1,000. The import of paper from abroad is also of greater amount, the figures standing at 61,000 cwts. in 1861, 116,000 in 1862, and 133,000 in 1863; more than half the increased amount is from Belgium. Larger quantities of rags also arrive, the tons in 1861, 1862, and 1863 being respectively stated at 20,500, 24,000, and 45,500. The demand for guano exhibits no sign of falling off in face of arrivals that compare for the three years as follows: 178,423 tons, 141,636, and

233,574; with values, 1,781,222*l.*, 1,048,856*l.*, 2,371,648*l.* The hides imported are in larger amount. Tallow from South America is in greater quantity, but from Russia, from Australia as compared with last year, and from 'other countries,' the receipts have fallen off. The total figures are little changed from last year.

"One of the most remarkable features of the returns is perhaps that relating to the sudden growth of the demand for petroleum. We received in 1861 1,435 tons, in 1862 the amount had risen to 22,160, and last year it is returned at 35,345. This increase has not led to any perceptible diminution in the supply of other oils. The value for the three years is 16,357*l.*, 201,226*l.*, 595,124*l.*

"The arrivals of foreign hops are stated as follows: 1861, 149,000 cwts.; 1862, 133,000; 1863, 147,000. The imports of sugar for 1861, 1862, and 1863 are 10,399,405 cwts., 9,884,191, and 10,724,647, having values respectively 11,416,544*l.*, 10,243,363*l.*, and 10,839,085*l.* The increase in quantity is from the Mauritius; decreased arrivals having taken place from the East Indies, from Java and the Philippine Islands, and from Brazil, the decline in this latter case being from 120,000 cwts. in 1862 to 50,000 cwts. in 1863. The returns from the West Indies and from Cuba show little change. The value of our imports of tea has risen as follows:—1861, 5,894,732*l.*; 1862, 7,826,521*l.*; 1863, 9,108,287*l.*

"We appear disposed to celebrate the national prosperity by an increased consumption of wines. The total gallons are noted for 1861, 1862, and 1863 at 11, 12, and 14 millions. Portugal has supplied 3,594,885 gallons, and Spain 6,716,560; the increase over the previous year being in each case in round numbers about 500,000 gallons and 1,350,000 gallons. The taste for the productions of Naples and Sicily is apparently growing, as the figures, which had fallen from 332,210 gallons imported in 1861 to 211,489 in the following year, have again risen, and now stand at 377,131. The wines of France, Hungary, and South Africa have not attracted a larger share of attention.

"The total value of our imports has risen from 158,000,000*l.* in 1862 to 173,000,000*l.* in 1863. We have imported cotton and cotton manufactures to the value of 19,500,000*l.* in excess of the receipts of the previous year, and if we deduct 11,000,000*l.* as available by reason of the diminished quantity of wheat, corn, and flour purchased by this country, we have 8,500,000*l.* as representing the additional amount to which it has been worth our while to buy abroad other materials for consumption, for use, or for manufacture.

"The general details bearing on the supplies of raw goods assuredly indicate that cotton cultivation is being largely extended. We have convincing proofs from the East Indies, from Egypt, and from 'other countries.' In Brazil and in other parts of South America, as well as from Java and the Philippines, the returns in coffee, in sugar, and other products, appear to show that the cotton plantation is progressing on a scale calculated to interfere with the existing trade of those countries. The wonderful stimulus given by the high value to which cotton has attained is rapidly serving to uproot the plantations of coffee, cocoa, and sugar. With regard to Australia, it would appear that mining enterprise is on the wane; owing, perhaps, partly to the difficulties of access to the south coast. The stronger reason is, however, rather to be sought in the increased attention paid by the rapidly growing population of the country to the cultivation of the soil. It is impossible to dismiss the table of the imports of the past year without acknowledging that we have many indications of the shifting, not only of the direction, but also of the nature of our trade and commerce. It is to us to profit by the signs it conveys, and to take advantage of the earliest currents and of the most favourable winds.

"If in the imports we see evidence of the prosperity of the country, it is, however, in the account of the exports that we must seek for the details and causes of its development, and in the returns of 1863 these abound. The space at our command will hinder us from entering fully into this branch of the subject on the present occasion.

"Some countries in Europe appear to be profiting by their own cheaper labour in this present crisis to manufacture cotton goods for their own consumption on an extended scale, and in several cases we are exporting larger quantities of raw

material and fewer of manufactured goods. In the trade in iron manufactures also, in cutlery, and various kinds of hardware, there is reason to conclude that we are by degrees losing part of our market. It is to be regretted that we should by a neglect of the first symptoms incur such a risk. In the manufacture of tools it has been long known that we have been distanced by the Americans. The competition is now, and successfully, extending its ground. The colonial demand for shovels, axes, nails, and for many other articles, is rapidly increasing. Because the American shovels are polished, their axes of a particular fashion, and their nails of steel, they are justly preferred to ours, which are of inferior workmanship, shape, and material. We have ascertained that one house in Birmingham is paying 1,200*l.* per month for such goods, shipped from New York to Australia. A year ago their payments were 300*l.* per month on the same account. Now, even, the American manufacturers are unable to supply goods with sufficient rapidity, since they cannot obtain all the steel they require from England. In telegraph cable and apparatus also there is a falling off. It was stated a short time back that for the first time two important contracts had been taken in Belgium.

"Egypt and South Africa have taken apparel and slops to a lower value in the course of 1863, on a comparison with the previous year, but our exports to British North America have doubled. The total figures give 250,000*l.* increase. Empty bags appear to be in greater demand, as the figures denoting their value have risen from 388,724*l.* in 1862 to 555,785*l.* in the following year.

"The cotton yarn exported to Prussia, Hanover, and Hanse Towns, to Holland, and to France, is less in quantity and in value than in 1862. To Italy the quantity is less, but the value, as compared with 1862, greater. Similar results are noted as to Austria, China, and Hong Kong. To British India the quantity exported nearly equals that sent in 1861, the value is nearly double that of that year, and double the amount of 1862. The quantity and the value sent to Turkey are greater than in 1862. The total values for the three years are 9,272,761*l.*, 6,202,240*l.*, and 8,019,954*l.*

"Of cotton manufactures similar results are to be remarked. The Hanse Towns, Holland, and France, as well as the West Coast of Africa, took less both in quantity and value. Portugal, Italy, and Egypt took smaller quantities than in 1862, but of higher value. Austria took larger quantities, and, of course, for greater value. Turkey, in quantity, took fifteen per cent. more than in 1861, and thirty per cent. more than in 1862. The total values to Turkey for the three years stand—1,877,365*l.*, 2,192,490*l.*, and 3,630,391*l.* Our exports to Mexico were, in quantity, near to, and in value more than double that of those shipped in 1862, and the case of New Granada gives similar results. To Brazil the quantity sent was less, but the value was near that of 1862. To China and to South Africa the quantity, as well as the value, was less. The British East Indies took a quantity that exceeded the amount sent in 1862, but under the shipment of 1861. The total values were 36,124,685*l.* in 1861; 28,562,466*l.* in 1862; and 37,541,485*l.* in 1863.

"Beer and ales have been exported in greater quantities, and the increasing demand probably arises rather from the growing opulence of the English communities established in Australia and other British settlements than from any greater appreciation of those beverages by the foreigner. A similar comment may be made on the subject of English printed books, with the further remark that the additional export demand indicates an extended desire for knowledge of and acquaintance with the literature of the mother country, that may, later, produce good results. The export of coal scarcely shows any change. A steady increase in the amount of earthenware and porcelain sent abroad serves to prove the excellence and cheapness of those manufactures. Brazil and British North America have, however, taken less than in 1862. Furniture, millinery, English pickles and sauces, all figure in increased amounts.

"Our exports of hardwares exhibit a total increase, but the details are unsatisfactory. The United States, Brazil, and South Africa are countries to which we have during each of the past three years sent smaller quantities. In the case of

the United States the war may in part account for the difference, but the details in the export of cutlery have a similar character. Of steam engines and machinery, Australia, India, Brazil, and Spain have been our customers for a smaller value than in 1862. France, Russia, and 'other countries' have taken for larger amounts. In railway iron our exports show an increase. In telegraphic wire a decrease is noted. Our exports of copper have advanced in value to the extent of 1,500,000*l.* In woollen manufactures the greatest revival has taken place. Every item exhibits a considerable increase. Worsted stuffs alone figure at 8,327,729*l.*, against 5,881,789*l.* in 1862. Linen yarn and linen manufactures show increased exports to the value of 2,000,000*l.* The total increase in the value of cotton goods exported is 9,000,000*l.*, and the figures indicating the whole value of our exports during the years 1862 and 1863 are respectively 123,992,264*l.* and 146,489,768*l.*, giving an increase, in round numbers, of 22,000,000*l.* for the past year.

"A review of the various causes of the increase in our trade and prosperity, and of its consequences present and probable, would be full of interest now that the hurrying course of events is perhaps involving still greater changes than those actually recorded. But in view of the details now presented, we may confidently refer to the derangement of the cotton trade of this country, the bullion drain consequent on the research for raw material for new countries, and the loss resulting to the manufacturing interests involved, as items of but secondary importance in the history of the commerce of Great Britain in the year 1863."

MARRIAGES, BIRTHS, AND DEATHS IN GREAT BRITAIN.

No. I.—ENGLAND AND WALES.

MARRIAGES DURING THE THIRD QUARTER (JULY—SEPTEMBER) AND OF BIRTHS AND DEATHS DURING THE FOURTH QUARTER (OCTOBER—DECEMBER) OF 1863.

THE general result of the quarterly returns is favourable. The marriage-rate was above the average during the first nine months of the last year for which we have returns; and it is well known that they afford a good indication of the opinions which the people themselves have of their prospects in life. The births are returned for the last quarter of the year, and greatly exceed the average; while the deaths are also above the average, but to a much less extent.

The marriage returns of the last quarter are not in; but in spite of some discouragement it is evident that the year of the marriage of the Prince and Princess of Wales will be the anniversary of more than the usual number of such celebrations. The birth-rate of the year 1863 is the highest that has been observed in England; and the rate of mortality, owing chiefly to the prevalence of fever and of scarlatina, is also higher than is usual.

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 ..... ,,	729,399	711,691	696,406	684,048	689,881	655,481	663,071
Deaths..... ,,	475,582	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	35,454	33,976	33,274	35,150	35,382	29,918	33,321
June ..... ,,	44,058	40,771	42 012	43,777	42,042	39,890	41,267
Septmbr..... ,,	41,902	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	172,953	183,180	175,532	170,959	170,430
June ..... ,,	189,611	185,638	184,820	174,028	175,864	169,115	170,444
Septmbr..... ,,	173,125	172,237	172,033	164,121	168,394	157,445	161,181
Decmbr. .... ,,	180,010	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 ..... ,,	118,375	107,555	107,558	110,869	105,631	107,142	100,046
Septmbr..... ,,	112,381	92,225	101,232	86,312	101,216	98,142	100,528
Decmbr. .... ,,	116,299	114,542	105,109	102,923	109,354	118,553	110,576

MARRIAGES.—83,804 persons were married in the quarter that ended on September 30th, 1863. The weddings were 41,902, and exceed by 1,317 the weddings in the summer quarter of 1862, and by 2,018 the weddings in the summer preceding. The marriage-rate was 1·616 per cent., and this is above the average of ten preceding quarters. Thus the marriage meter indicates by its rise a steady improvement in the condition and prospects of the great body of the nation. London takes the lead, and is followed by all its surrounding divisions; in the interval between 1861 and 1863, the summer marriages rose from 7,322 to 8,031 in the metropolis; from 3232 to 3512 in Kent and the other south-eastern counties. A notable increase also appears in the returns of the counties of Hertford, Oxford, Bedford, and Cambridge; in Suffolk and Norfolk; while marriage decreased in Wilts, Devon, and Somerset; but increased in Gloucester, Bristol, Salop, Stafford, and Warwick, which are pervaded in different degrees by prosperous coal and iron works. Leicester, Lincoln, and Derby show an increase; Nottingham indicates some depression.

The marriages of Cheshire and Lancashire fell from 7,086 in the summer quarter of 1861 to 6,376 in the corresponding quarter of 1862, but in the summer quarter of the year 1863 rose again to 6,999, and thus gave the signal of reaction. Yorkshire sympathized with Lancashire,—especially in Huddersfield, Halifax, Bradford and Hull,—but the reaction in this great county was more complete; and the people of Leeds and Sheffield married in greater numbers than they did in either of the two preceding summer quarters. The marriages increased steadily in the northern counties; and the principality of Wales, either animated by loyalty, or by the heat of the iron trade, surpassed the metropolis in the rise of its marriage-rate, which exceeded by 12 per cent. the summer rate of Wales in 1861.

BIRTHS.—180,010 births were registered in the last quarter of the year 1863; and the birth-rate of the quarter was 3·461, which is considerably above the average-rate of the autumn quarter. Children are not born in equal numbers throughout the year; and, in general, births are at the highest in the winter quarter, and at the lowest in the autumn quarter of the year. But the seasons of the last year were exceptional, for the birth-rate was highest in the spring, and lowest in the summer quarter; and in all the quarters the rate was above the average.

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 Per ct.	—	1·670	1·612	1·628	1·710	1·704	1·604	1·652
Births .... ,,	3·549	3·427	3·500	3·461	3·437	3·504	3·366	3·443
Deaths.... ,,	2·314	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.	1·404	1·394	1·360	1·346	1·422	1·464	1·252	1·410
June..... ,,	1·722	1·693	1·610	1·678	1·766	1·716	1·646	1·722
Septmbr. ,,	1·616	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 .... ,,	3·705	3·587	3·666	3·690	3·512	3·588	3·488	3·555
Septmbr. ,,	3·337	3·292	3·356	3·388	3·267	3·389	3·204	3·316
Decmbr. ,,	3·461	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 ..... ,,	2·313	2·191	2·124	2·147	2·237	2·155	2·210	2·087
Septmbr. ,,	2·166	1·982	1·797	1·994	1·718	2·097	1·997	2·068
Decmbr. ,,	2·236	2·178	2·226	2·064	2·043	2·195	2·406	2·269

The account of 1863 makes the registered births in that year 729,399; and the birth-rate is 3·549, or 0·122 above the average (3·427) of the ten preceding years. The births exceeded by 17,708 the births in the year 1862, which was itself more prolific than any year that had gone before it.

It is shown in the Census Report that the number of wedded childbearing women is increasing faster than the general population, and this partly accounts for the increase of the birth-rate.

Increase of Population.—As the births were 180,010, the deaths 116,299, the ascertained natural increase of population in the last quarter of the year was 63,711. About 15,319 persons of English origin emigrated during the quarter. The emigrants from the United Kingdom of which the emigration commission furnishes an account amounted to 43,123, of whom about 2,850 were foreigners.

68,280 emigrants of English origin sailed from ports at which there are emigration agents in the year 1863; and of their number 36,312 sailed to the United States, 2,813 to the North American Colonies, 27,487 to the Australian Colonies, and 1,638 to other places. The emigrants from the United Kingdom in the year were 215,025,—124,433 males and 90,592 females,—after excluding 8,733 foreigners who sailed from British ports.

Allowing for unregistered births, and for emigration, the increase of the population of England was about 215,537 in the year; while the emigration from Ireland reduced the rest of the population, so that the probable increase of the United Kingdom was about 190,428.

The Registrar General of Ireland is now empowered to register births and deaths, and under his able superintendence the country will learn the exact numbers in that part of the United Kingdom during the ensuing year.

Prices, Pauperism, and the Weather.—Fortunately for the country, while the price of meat remained nearly stationary, the prices of wheat and the prices of potatoes are kept down by the abundant crops, and this was as advantageous to the people at large, as it was to the monetary world. Beef by the carcase at the London markets was quoted at 4*d.* and 6¼*d.* in the autumn quarters of 1861, 1862, and 1863; mutton in the same quarters at 4¾*d.*, 5¼*d.*, 5*d.* and 6¾*d.*, 6¾*d.* and 7*d.* The average price of beef in the last quarter was 5⅛*d.*, of mutton 6*d.* a pound. Wheat in the corresponding autumn quarters was 59*s.* 3*d.*, 48*s.* 2*d.*, and 40*s.* 6*d.*; potatoes 6*s.*, 5*s.*, and 3*s.* 6*d.* a hundredweight wholesale. While potatoes were 137*s.* a ton in 1862, they fell to 101*s.* in 1863. Wheat in the last autumn was 40*s.* 6*d.*, to which it fell progressively from 59*s.* 3*d.* in the autumn of 1861. The average price of wheat was 55*s.* 5*d.* in 1862, and 44*s.* 8*d.* in 1863; the reduction was 19 per cent.; and the wheat entered for home consumption fell from nearly *ten* to less than *six* million quarters.

The paupers in the receipt of relief were 951,895 in 1862, and 993,491 in 1863; but the distress culminated in the first three months of the year, when 1,091,873 paupers were on the lists, which at the end of the year contained 935,013; a number less by 105,143 than the paupers of the corresponding quarter of the previous year. The change is still greater in the cotton districts, where, as we learn from the report of the Central Executive Committee, the numbers in the receipt of relief from the guardians and from local committees was 448,955 in the last week of November, 1862, and 170,850 in the last week of November, 1863. It is difficult to conceive what the distress and the mortality might have been in the manufacturing districts, had it not been for the Poor Law and for the charity of the nation, which has placed 1,323,493*l.* at the disposal of the able committee of which Lord Derby is the chairman.

The weather of the quarter presented some peculiarities. The temperature at the latter end of October and the beginning of December was colder than the average of the season at Greenwich; but the mean temperature of the season was 3°·2 above the average of 92 years. The rain in three months was 4·6 inches, which is 2·5 inches below the average. The water supply was therefore in some degree defective. Fog prevailed on 66 out of 92 days. Violent storms blew, particularly about the middle of the quarter, and swept the face of the earth.

Consols, Provisions, Pauperism, *and* Temperature, *in each of the Nine* Quarters *ended 30th December*, 1863.

1	2	3	4	5	6	7	8	9
Quarters ending	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the *Mean* Prices		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Mean Temperature.
			Beef.	Mutton.		In-door.	Out-door.	
1861	£	*s.* *d.*	*d.* *d.* *d.*	*d.* *d.* *d.*	*s.* *s.* *s.*			°
31 Dec.	93⅜	59 3	4—6¼ 5⅛	4¾—6¾ 5¾	110—130 120	128,533	716,096	45·5
1862								
31 Mar.	93⅛	60 1	4—6¼ 5⅛	4¾—6½ 5⅝	130—155 142	143,926	804,272	41·1
30 June	93⅝	56 8	4—6 5	5—7 6	180—200 190	127,863	781,858	53·3
30 Sept.	93⅝	56 10	4¼—6¼ 5¾	5¼—7 6⅛	100—130 115	119,592	789,914	58·7
31 Dec.	93⅛	48 2	4—6¼ 5⅛	5¼—6¾ 6	90—110 100	132,663	907,493	45·0
1863								
31 Mar.	92⅝	46 7	4—6¼ 5⅛	5—7 6	120—130 125	143,661	948,212	42·6
30 June	93⅛	46 2	4¼—6¼ 5¼	4¾—6¾ 5¾	110—130 120	127,852	879,241	53·0
30 Sept.	93	45 7	4¼—6¼ 5⅜	4¾—6¾ 5¾	70—105 87	120,189	819,795	58·8
31 Dec.	92⅞	40 6	4—6¼ 5⅛	5—7 6	60—80 70	130,072	804,941	46·8

Col. 6 is deduced from the Weekly Tables published in the *Economist*. The *average* of the highest and of the lowest *weekly* prices is here shown in cols. 4, 5, and 6, and not the *absolute* highest or lowest price quoted at any period of the quarter.

Cols. 7 and 8 are deduced from the Returns of the Poor Law Board. The Returns now relate to 655 Unions, &c., comprising a population of 19,885,921 (in 1861), and do not include the paupers of parishes, &c., incorporated under Gilbert's Act, or still under the 43rd Elizabeth; Lunatic Paupers in Asylums and Vagrants relieved in the above Unions are also excluded. They amounted on January 1st, 1860, to—Insane Persons, 31,554; Vagrants, 1,542. The rest of the paupers on that day amounted to 817,800.

Deaths; and the State of the Public Health.—The deaths in the last 92 days of the year were 116,299; and the mortality was at the rate of 2·236 per cent., or ·058 above the quarter's average. The mortality was at the rate of 2·452 in the chief town districts, and of 1·916 in the country and small districts; the mortality in the towns being near its average, and in the country above its average.

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. 1851.	Population Enumerated. 1861.	Quarters ending	Annual Rate of Mortality per Cent. in each Quarter of the Year: 1863.	Mean '63 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	2·63
				June....	2·478	2·336	2·265	2·27
				Sept. ..	2·401	2·239	1·977	2·19
				Dec....	2·462	2·451	2·512	2·22
				Year	2·512	2·429	2·354	2·33
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,037,732	8,771,615	9,135,383	Year	2·064	1·970	1·894	1·93
				March	2·313	2·287	2·181	2·21
				June ..	2·102	2·031	1·949	1·99
				Sept. ..	1·864	1·694	1·573	1·73
				Dec.....	1·916	1·866	1·870	1·79

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.

475,582 deaths were registered in the year; and the mortality was at the rate of 2·314 per cent.; the average of the preceding ten years being 2·211. The death-toll instead of 22 was 23 in 1,000; so of every 1,000 living *one* was sacrificed in the year. The mortality of the year in the chief town districts was at the rate of 25, in the rest of the country 21, per 1000.

Average Annual Rate of Mortality in the Eleven Divisions of England in the Ten Years 1851-60, *and in each of the Years* 1862 *and* 1863.

Divisions.	Average Annual Rate of Mortality per 1,000 in Ten Years, 1851-60.	Deaths Annually to 1,000 Living. 1862.	1863.
I. London	23·63	23·38	24·83
II. South-Eastern counties	19·55	18·09	19·88
III. South Midland „	20·44	19·16	21·68
IV. Eastern counties	20·58	19·28	22·00
V. South-Western counties	20·01	18·74	21·51
VI. West Midland „	22·35	21·07	22·69
VII. North Midland „	21·10	19·52	21·68
VIII. North-Western „	25·51	25·07	25·84
IX. Yorkshire	23·09	23·23	25·18
X. Northern counties	21·99	22·12	23·30
XI. Monmouthshire and Wales.....	21·28	20·74	21·01

The number of deaths was higher in every division than it was in the corresponding quarter of 1861; and also in 1862, except in the West Midland division, in the North Western (Lancashire and Cheshire), in Yorkshire, and in the Northern division, where the deaths were less numerous than they had been. The deaths in the South Eastern division rose from 8,427 in the last quarter of 1861 to 9,269 in the corresponding quarter of 1863; in the South Midland division from 6,176 to 6,964; in the Eastern division from 5,552 to 6,011; in the South Western division from 8,474 to 9,716, where Wilts and Cornwall were the greatest sufferers.

Yet in Salisbury only 24 deaths were registered out of a population of 9,039. This city was formerly one of the unhealthiest small cities in the kingdom; and in the ten years 1841-50 the mortality was at the rate of 28 in 1,000; cholera with diarrhœa was fatal in the epidemic of 1849 to 20 in every 1,000 of its inhabitants. Aroused into activity on the approach of the second cholera epidemic, a Local Board of Health was appointed, and proceeded to do its work effectually. The open drains running through the streets were filled up, a *complete system* of drainage was carried out, and works were established which provide a plentiful supply of water. These municipal reforms, commenced in 1853, were completed in 1854; and the death-toll has been levied with less severity ever since the year 1855. The mortality in the ten years 1851-60 fell to 24 in 1,000, and though higher in the first was lower in the last five years of this period. The mortality was at the rate of 27 in 1862, and 15 per 1,000 in 1863. The full effects of sanitary improvements only become apparent after some years; and the disturbance of the seeds of disease is sometimes followed by epidemics, as was apparently the case in Salisbury, where the mortality was at the rate of 29 and 27 in 1,000 during 1854 and 1855; while in 1856 the mortality fell to 22, and after some fluctuation to 18 in 1860 and 1861. This happy healthy state was disturbed by epidemics of measles and whooping-cough in 1862, when 240 people died from all causes, and the mortality was at the rate of 27 in 1,000. In the year 1863, the vigilance of the Board of Health was again rewarded, and the mortality fell to 15 in 1,000; thus justifying the sanguine Registrar when he says:

"In my previous report I stated that in my opinion the low rate of mortality was owing to the completeness of the sanitary improvements lately carried into effect, and I attribute the continued favourable state of the public health in this district to the same cause. It is a remarkable fact, that in a population of 9,039 the deaths have been only 44 in a half-year."

At the rates still prevailing in other towns the deaths in a half-year would have been 113; thus 79 lives were saved. The Sick City, healed in his county, is a cheering memorial near the ashes of Lord Herbert, which lie above Salisbury, on a tributary of the Avon. But, as experience proves, the health of a city, like the sacred fire on the altar, requires the constant vigilance of its guardians, otherwise its flames expire.

Staffordshire and Warwickshire, in the West Midland counties, as well as Yorkshire and the Northern division, experienced a higher rate of mortality in the last quarter than they did in the corresponding quarter of 1861, but a lower rate than they experienced in 1862. This was also the case with Lancashire and Cheshire.

The mortality of the North-western division (Lancashire and Cheshire), instead of being 17, was nearly 26 (25·51) in 1,000 during the ten years 1851-60; it was 25·07 in 1862, and 25·84, or a little above the average in 1863. The people of Lancashire have been so busy in clothing the world that their workpeople have been neglected, and been destroyed by thousands every year, for the want of the most elementary sanitary conveniences, which we may hope will now be provided under the Public Works Act.

ENGLAND:—MARRIAGES *Registered in Quarters ended 30th September,* 1863-61; *and* BIRTHS *and* DEATHS *in Quarters ended 31st December,* 1863-61.

1 DIVISIONS. (England and Wales.)	2 AREA in Statute Acres.	3 POPULATION. 1861. (*Persons.*)	4 MARRIAGES in Quarters ended 30th September, '63.	5 '62.	6 '61.
		No.	No.	No.	No.
ENGLD. & WALES.... *Totals*	37,324,883	20,066,224	41,902	40,585	39,884
I. London	77,997	2,803,989	8,031	8,067	7,322
II. South-Eastern	4,065,935	1,817,661	3,512	3,489	3,232
III. South Midland	3,201,290	1,295,497	2,152	2,032	1,972
IV. Eastern	3,214,099	1,142,580	1,651	1,639	1,560
V. South-Western	4,993,660	1,835,714	3,211	3,351	3,364
VI. West Midland	3,865,332	2,436,568	5,064	4,872	4,631
VII. North Midland	3,540,797	1,288,928	2,250	2,113	2,130
VIII. North-Western	2,000,227	2,935,540	6,999	6,376	7,086
IX. Yorkshire	3,654,636	2,015,541	4,386	4,128	4,215
X. Northern	3,492,322	1,151,372	2,294	2,285	2,241
XI. Monmthsh. & Wales	5,218,588	1,312,834	2,352	2,233	2,101

7 DIVISIONS. (England and Wales.)	8 BIRTHS in Quarters ended 31st December. '63.	9 '62.	10 '61.	11 DEATHS in Quarters ended 31st December, '63.	12 '62.	13 '61.
	No.	No.	No.	No.	No.	No.
ENGLD. & WALES.... *Totals*	180,010	171,811	166,620	116,299	114,542	105,109
I. London	27,127	23,783	23,567	18,857	17,717	16,173
II. South-Eastern	15,524	15,057	14,439	9,269	8,895	8,427
III. South Midland	11,058	10,628	10,221	6,964	6,389	6,176
IV. Eastern	9,187	9,145	8,701	6,011	5,690	5,552
V. South-Western	14,588	14,824	13,728	9,716	8,826	8,474
VI. West Midland	22,144	21,329	20,961	13,303	14,306	11,763
VII. North Midland	11,204	10,980	10,745	7,058	6,401	6,065
VIII. North-Western	27,398	26,444	26,156	19,532	20,186	19,227
IX. Yorkshire	19,514	18,426	17,575	12,437	12,831	10,928
X. Northern	11,374	10,830	10,458	6,558	6,901	6,206
XI. Monmthsh. & Wales	10,892	10,365	10,069	6,594	6,397	6,118

REMARKS ON THE WEATHER

DURING THE QUARTER ENDING 31ST DECEMBER, 1863.

By JAMES GLAISHER, ESQ., F.R.S., *&c., Sec. of the British Meteorological Society.*

Till October 9th the temperature was alternately warm and cold. On October 10th a warm period set in, and continued to the 22nd inclusive, the average daily excess of mean temperature was nearly 5°; the weather then changed, and till November 13th the weather was variable with respect to warmth, some days being in excess of temperature to a considerable amount, and others below, but the latter preponderated; and the daily deficiency of warmth for the 22 days ending November 13th was rather more than 1° daily. From this time to the end of the quarter there was an excess of temperature over the average, amounting, from these 48 days ending December 31st, to 4°½ daily. The same excess of temperature extended over the country. The period from October 30th to the beginning of December was unusually stormy, even for the time of the year. Successive gales of wind occurred till November 4th. Other severe storms took place all over the country on November 21st and December 2nd and 3rd. On October 30th the heaviest pressure within the preceding 20 years took place, viz., one of 29½ lbs. on the square foot. On December 3rd, at Greenwich, at 7h. 30m. A.M., the barometer reading was 28·79 in., and remained at this reading for 42 minutes, then turned to increase, and was 30·22 in. by noon on the 4th; at Castleton the increase was 1·1 in. in 13 hours; at Cockermouth, between December 3rd, at 9 A.M., and December 4th, at 9 A.M., was 1·34 in. So that the increase from the 3rd to the 4th all over the country was extraordinary. The variations of atmospheric pressures between October 27th and December 5th were very frequent and to large amounts.

The mean temperature of October was 51°·6, being nearly the same as in 1862, when it was 51°·8, and less than in 1861, when it was 54°·9.

The mean temperature of November was 45°·7, being higher than any November since 1857, which was 45°·8.

The mean temperature of December was 43°·2, being 0°·4 less than in 1862; higher than in 1861, which was 41°·0; and higher than in any other year back to 1857, which was 45°·1.

The mean high day temperature in October was that of the average for the month, in November was 2° in excess, and in December 3°·4 in excess above the average.

The mean low night temperature in the three months was in excess to the amount of 2°·1 in October, 2°·9 in November, and 1°·1 in December.

Therefore the days in October were of the average value, and were warm in both November and December, and the nights were warm throughout the quarter.

The mean temperature of the air in October was 1°, in November was 1°¾, and in December was 3° nearly in excess over their respective averages of the preceding 22 years.

The mean temperature of the dew point was in excess in each month of the quarter, to the amount of 1°¼, 2°½, and 1°⅓ in each month respectively.

The degree of humidity of the air was very nearly the same as its average value in the months of October and November, and was below its average in December.

The pressure of the atmosphere was a little below its average in October, and above in November and December.

The fall of rain at Greenwich was below its average in each month, and to the amount of 2½ inches upon the quarter.

The mean temperature of the air at Greenwich in the three months ending November, constituting the three autumn months, was 50°·3, being 0°·9 above the average of the preceding 92 years.

1863. Months.	Temperature of Air. Mean.	Air. Diff. from Average of 93 Years.	Air. Diff. from Average of 23 Years.	Evaporation. Mean.	Evaporation. Diff. from Average of 23 Years.	Dew Point. Mean.	Dew Point. Diff. from Average of 23 Years.	Air—Daily Range. Mean.	Air—Daily Range. Diff. from Average of 23 Years.	Water of the Thames	Elastic Force of Vapour. Mean.	Elastic Force of Vapour. Diff. from Average of 23 Years.	Weight of Vapour in a Cubic Foot of Air. Mean.	Weight of Vapour in a Cubic Foot of Air. Diff. from Average of 23 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Gr.	Gr.
Oct.	51·6	+2·1	+1·1	49·7	+1·2	47·8	+1·4	12·7	−2·0	51·8	·333	+·016	3·7	0·0
Nov.	45·7	+3·3	+1·7	44·2	+2·6	42·4	+2·6	10·8	−0·9	48·5	·271	+·019	3·1	+0·1
Dec.	43·2	+4·2	+3·9	41·1	+2·3	38·5	+1·4	11·8	+2·3	44·0	·233	+·010	2·7	+0·1
Mean.	46·8	+3·2	+1·9	45·0	+2·0	42·9	+1·8	11·8	−0·2	49·1	·270	+·015	3·2	+0·1

1863. Months.	Degree of Humidity. Mean.	Degree of Humidity. Diff. from Average of 23 Years.	Reading of Barometer. Mean.	Reading of Barometer. Diff. from Average of 23 Years.	Weight of a Cubic Foot of Air. Mean.	Weight of a Cubic Foot of Air. Diff. from Average of 22 Years.	Rain. Amnt.	Rain. Diff. from Average of 46 Years.	Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass. Number of Nights it was: At or below 30°.	Between 30° and 40°.	Above 40°.	Lowest Reading at Night.	Highest Reading at Night.
			In.	In.	Gr.	Gr.	In.	In.	Miles.				°	°
Oct.	87	0	29·638	−·061	537	− 2	1·7	−1·1	226	1	14	16	23·0	50·3
Nov.	88	− 1	29·870	+·121	547	− 1	1·8	−0·6	221	11	12	7	17·7	45·8
Dec.	83	− 6	29·942	+·126	553	0	1·1	−0·8	299	16	10	5	16·2	43·0
Mean.	86	− 2	29·817	+·062	545	− 1	Sum 4·6	Sum −2·5	Mean 249	Sum 28	Sum 36	Sum 28	Lowest 16·2	Highest 50·3

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.

The Earthquake of October 6th was felt at Helston at 3 h. 30 m. A.M.; at Truro; at Exeter at 3 h. 8 m. A.M. (local time); at Clifton at 3 h. 15 m. A.M.; at Great Berkhampstead the shock was very slight; at Aspley at 3 h. 25 m. or 30 m., as a slight shock; at Lampeter at 3 h. 20 m. A.M.; at Grantham at 3 h. 28 m. A.M.; and at Eccles, near Manchester, at 3 h. 20 m. A.M.

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

1 Names of Stations.	2 Mean Pressure of Dry Air reduced to the Level of the Sea.	3 Highest Reading of the Thermometer.	4 Lowest Reading of the Thermometer.	5 Range of Temperature in the Quarter.	6 Mean Monthly Range of Temperature.	7 Mean Daily Range of Temperature.	8 *Mean Temperature of the Air.*	9 Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·731	62·5	37·5	25·0	17·5	5·8	45·7	86
Exeter	29·703	63·3	32·5	30·8	24·6	8·0	44·4	84
Ventnor	29·748	61·0	30·0	31·0	22·1	6·8	44·7	82
Barnstaple	29·687	65·0	30·0	35·0	27·0	9·3	45·2	86
Royal Observatory	29·708	66·5	26·5	40·0	31·0	11·8	42·9	86
Royston	29·738	65·3	25·6	39·7	31·4	12·3	42·1	87
Lampeter	29·706	63·6	21·5	39·1	28·9	11·1	43·9	92
Norwich	29·644	65·0	31·0	34·0	27·3	10·7	43·8	86
Diss (Norfolk)	29·717	66·0	27·0	39·0	31·3	10·6	41·7	85
Belvoir Castle	29·630	64·0	25·5	38·5	31·6	12·6	42·7	91
Liverpool	29·665	60·2	33·3	26·9	21·2	7·7	40·7	81
Wakefield	29·632	62·7	25·0	37·7	32·2	12·9	42·6	89
Stonyhurst	29·610	62·6	25·7	37·9	26·9	9·6	41·8	87
North Shields	29·625	60·0	25·2	34·8	27·2	9·2	40·4	87
Alnwick	29·584	63·0	24·0	39·0	29·3	12·2	40·3	86

10 Names of Stations.	11 Wind. Mean estimated Strength.	12 Wind. Relative Proportion of N.	13 E.	14 S.	15 W.	16 Mean Amount of Cloud.	17 Rain. Number of Days on which it fell.	18 Rain. Amount collected.
								in.
Guernsey	1·8	6	5	10	10	5·3	50	12·4
Exeter	0·9	5	4	9	13	6·5	58	10·0
Ventnor	—	6	5	5	15	—	46	9·5
Barnstaple	1·5	5	5	11	10	4·8	66	11·5
Royal Observatory	—	3	4	11	17	7·0	—	4·6
Royston	—	2	3	13	13	5·8	58	5·2
Lampeter	0·8	4	4	12	11	7·9	33	14·9
Norwich	—	3	3	13	12	—	31	6·6
Diss (Norfolk)	—	3	4	12	12	6·7	40	6·4
Belvoir Castle	1·3	1	1	15	14	5·5	33	6·9
Liverpool	1·4	4	4	11	12	7·7	55	9·2
Wakefield	1·8	4	6	9	12	6·8	55	7·0
Stonyhurst	0·9	7	4	7	13	7·6	70	19·6
North Shields	2·0	5	2	7	17	6·6	47	8·0
Alnwick	2·1	2	5	4	20	4·3	41	8·8

No. II.—SCOTLAND.

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

This Return comprises the number of BIRTHS, DEATHS, and MARRIAGES entered on the registers of the 1,009 districts into which Scotland is divided for the purposes of registration during the quarter ending 31st December, 1863. From the returns received, it would appear that the births and deaths were above their usual proportion, while the marriages were in the same proportion as during the corresponding quarter of the eight previous years.

BIRTHS.—26,583 births were registered in Scotland during the quarter ending 31st December, 1863, being in the annual proportion of 313 births in every 10,000 of the estimated population, or 1 birth to every 29 persons. This, though higher than the average birth-rate of the corresponding quarter during the eight previous years, which was at the rate of 334 births in every 10,000 of the estimated population, was equalled in 1861, and exceeded in 1859. This birth-rate is considerably higher than that of England, which, on a ten years' average, only shows a proportion of 323 births to every 10,000 of the estimated population.

The usual difference was observed between the proportion of births in the town and country districts. Thus, in the 126 town districts (which embrace almost all the towns with populations of 2,000 and upwards), 15,286 births were registered; while in the 883 country districts (embracing the remainder of the population of Scotland) 11,297 births occurred; thus indicating an annual proportion of 373 births for every 10,000 persons in the town districts, but only 309 births for an equal population in the rural districts.

Of the 26,583 births, 23,801 were legitimate, and 2,782 illegitimate, being in the proportion of 10·4 per cent., of the births illegitimate, or 1 illegitimate in every 9·5 births. As usual, the proportion of illegitimate births was lower in the towns than in the rural districts, for while 10·3 per cent. of the births were illegitimate in the towns, 10·6 per cent. were so in the country districts. The North and North-western divisions of Scotland furnished, as usual, the smallest proportion of illegitimate births; the North-eastern and Southern divisions the highest proportion; for, while the former only yielded respectively 4·9 and 5·5 per cent. of the births as illegitimate, the latter yielded respectively 16·5 and 15·2 per cent. as illegitimate.

Of the children born during the quarter, 13,714 were boys, and 12,869 girls; showing the very high proportion of 107 boys for every 100 girls at birth.

DEATHS.—17,998 deaths were registered in Scotland during the fourth quarter of the year 1863, being in the annual proportion of 232 deaths in every 10,000 of the estimated population. This is an exceeding high death-rate and very greatly above the average, which, for the corresponding quarter of the eight previous years, was only at the rate of 204 deaths in every 10,000 of the estimated population.

The deaths in the town districts were greatly more numerous in proportion to the population than in the rural districts. Thus, in the 126 town districts 11,592 deaths were registered; but only 6,406 deaths in the 883 rural districts; indicating an annual proportion of 283 deaths in every 10,000 persons in the towns, but only 175 deaths in a like population in the country districts.

Of the deaths, 5,583 occurred during October, 5,996 during November, and 6,419 during December; so that the daily deaths in Scotland amounted to 180 during October, to 199 during November, and to 207 during December.

INCREASE OF THE POPULATION.—As the births numbered 26,583, and the deaths 17,998, the natural increase of the population during the quarter, through

the excess of births over deaths, amounted to 8,585 persons. From a return furnished to the Registrar-General by the Emigration Commissioners, it appears that 43,123 persons emigrated from the ports of Great Britain and Ireland during the quarter, of which number 3,050 were ascertained to be of Scottish origin. If to that number 151 be added as the proportion of persons whose nationality was not distinguished, the total Scottish emigration during the quarter would amount to 3,201 persons; and being deducted from the excess of births over deaths, would leave 5,381 as the increase of the population during the quarter.

MARRIAGES.—6,577 marriages were registered in Scotland during the quarter, being in the annual proportion of 84 marriages in every 10,000 persons of the estimated population. This is the exact average of the corresponding quarter during the eight previous years. This speaks well for the general prosperity of the country, and shows the opinion of the people as to the non-existence of any depression in trade at present.

As with the births and deaths, the proportion of marriages was much higher in the town than in the rural districts. Thus, in the 126 town districts 3,873 marriages were registered, but only 2,701 in the 883 rural districts; showing an annual proportion of 91 marriages in every 10,000 persons in the town districts, but only 74 marriages in a like population in the rural districts.

HEALTH OF THE POPULATION.—The population has been very unhealthy during the quarter, and the mortality high above the average of the corresponding quarter of the eight previous years. Scarlet fever and diphtheria have been prevalent and fatal over almost every part of Scotland, while influenza, bronchitis, and sore throats (not diphtheritic) have been very general. Continued fever also in its varied forms has been prevalent; confined to no locality, however, but seemingly as prevalent and fatal in the detached cottage as in the crowded town. Small-pox seems to be almost everywhere on the decline; and a few of the Registrars, in noticing the ravages of the late epidemic, draw attention to the fact, that the deaths almost alone occurred among those who had not been vaccinated.

WEATHER.—The weather, as a whole, has been unusually mild during the quarter, and the year closed without frost or snow beyond a very few days' continuance, excepting in the high lying districts. Strong, mild, damp winds from the south-west were the prevailing atmospheric currents, and so long as these continue, it is well known we have neither frosts nor snows occur—a fact which proves how dependent we are on these atmospheric currents for the mildness of our British winters. Rain fell on 52 days during the quarter, or seven days more than usual; its depth also was great, amounting to 12·64 inches, or 1·53 inch more than the mean of former years. There was also less sunshine, by reason of the greater amount of cloud; the temperature was consequently scarcely so high during the day, but was amply compensated for during the night, by these being less cold than usual; so that the mean temperature of the quarter was 2°·2 higher than the average of the fourth quarter during the eight previous years.

The mean barometric pressure, corrected and reduced to the sea level, and to 32° of temperature, was 29·657 inches in October, 29·825 inches in November, and 29·810 inches in December. The mean temperature was 46°·8 during October, 43°·1 during November, and 40°·8 during December. The mean daily range of temperature was 10°·6 during October, and 9°·8 during both November and December, an unusually low range for the quarter. The mean degree of humidity of the air was 89 during October and November, and 88 during December, full saturation of the air with moisture being 100. The number of days on which rain fell was 19 during October, 15 during November, and 18 during December; with a mean depth of 4·11 inches during October, 3·52 inches during November, and 5·01 inches during December. Winds with an easterly point blew 9 days during October, 5 during November, and 4 during December. Winds with a westerly point blew 16 days during October, 17 days during November, and 23 during December.

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

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1861. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND.....*Totals*	19,639,377	3,062,294	6,577	26,583	17,998
I. Northern	2,261,622	130,422	231	897	468
II. North-Western.....	4,739,876	167,329	240	1,139	728
III. North-Eastern	2,429,594	366,783	835	3,101	1,650
IV. East Midland	2,790,492	523,822	1,122	4,297	2,865
V. West Midland	2,693,176	212,507	432	1,894	1,304
VI. South-Western	1,462,397	1,008,253	2,323	9,947	7,699
VII. South-Eastern	1,192,524	408,962	962	3,671	2,331
VIII. Southern	2,069,696	214,216	432	1,634	953

No. III.—GREAT BRITAIN.

SUMMARY *of* MARRIAGES, *in the Quarter ended 30th September*, 1863; *and* BIRTHS *and* DEATHS, *in the Quarter ended 31st December*, 1863.

COUNTRIES.	AREA in Statute Acres.	POPULATION, 1861. (*Persons.*)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
England and Wales.....	37,324,883	20,066,224	41,902	180,010	116,299
Scotland	19,639,377	3,062,294	6,577	26,583	17,998
GREAT BRITAIN.....	56,964,260	23,128,518	48,479	206,593	134,297

Trade of United Kingdom, 1863-62-61.—*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*), Imported from, and Exported to, the following Foreign Countries, &c. (000's omitted.)	First Nine Months. 1863. Imports from	1863. *Exports to*	1862. Imports from	1862. *Exports to*	1861. Imports from	1861. *Exports to*
I.—FOREIGN COUNTRIES:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	11,790,	3,731,	12,402,	3,279,	10,299,	4,014,
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium	18,357,	15,981,	17,709,	16,072,	16,038,	16,015,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	22,256,	11,975,	19,259,	11,168,	18,039,	10,661,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	3,002,	6,019,	3,481,	5,481,	3,056,	6,037,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	15,882,	7,632,	11,982,	4,834,	9,536,	4,371,
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	385,	145,	316,	143,	427,	124,
Western Africa	927,	452,	1,168,	718,	1,004,	615,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	31,	66,	—	57,	6,	38,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	1,182,	861,	813,	1,041,	847,	1,500,
South Sea Islands	20,	136,	—	—	—	93,
China, including Hong Kong	10,956,	2,921,	8,865,	2,544,	6,913,	4,107,
United States of America	14,669,	10,492,	18,502,	10,468,	43,631,	6,803,
Mexico and Central America	1,445,	1,489,	754,	559,	477,	647,
Foreign West Indies and Hayti	41,51,	2,559,	3,709,	2,383,	3,670,	1,772,
South America (Northern), New Granada, Venezuela, and Ecuador	630,	1,342,	661,	743,	433,	1,105,
" (Pacific), Peru, Bolivia, Chili, and Patagonia	4,524,	1,867,	3,803,	1,220,	4,130,	1,929,
" (Atlantic) Brazil, Uruguay, and Buenos Ayres	5,251,	4,103,	4,278,	3,869,	3,248,	5,021,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	28,	11,	50,	10,	19,	6,
Total.—Foreign Countries	115,486,	61,782,	107,752,	64,589,	121,774,	64,858,
II.—BRITISH POSSESSIONS:						
British India, Ceylon, and Singapore	30,021,	14,711,	20,599,	12,690,	15,803,	13,587,
Austral. Cols.—New South Wales and Victoria	3,834,	6,044,	4,311,	5,920,	4,073,	5,819,
" " So. Aus., W. Aus., Tasm., and N. Zea.	2,039,	2,545,	1,818,	1,901,	1,741,	1,648,
British North America	5,229,	4,262,	5,208,	3,536,	5,497,	3,461,
" W. Indies with Btsh. Guiana & Honduras	6,544,	2,689,	5,391,	2,289,	4,832,	1,784,
Cape and Natal	1,250,	1,109,	937,	1,424,	818,	1,479,
Brt. W. Co. of Af., Ascension and St. Helena	121,	227,	142,	299,	120,	257,
Mauritius	1,640,	340,	902,	410,	1,814,	410,
Channel Islands	482,	585,	494,	614,	491,	492,
Total.—British Possessions	51,160,	32,512,	39,802,	29,083,	35,189,	28,937,
General Total.....£	166,646,	94,294,	147,554,	93,672,	156,963,	93,795,

IMPORTS.—(United Kingdom.)—First Eleven Months (*January—November*), 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 Eleven Months.) [000's omitted.] Foreign Articles Imported.		1863.	1862.	1861.	1860.	1859.
		£	£	£	£	£
Raw Matls.—*Textile.*	Cotton Wool	43,193,	23,598,	35,910,	31,567,	28,762,
	Wool (Sheep's)..	10,741,	10,492,	8,735,	9,727,	8,791,
	Silk	13,982,	14,213,	7,090,	7,881,	8,901,
	Flax	3,553,	4,691,	3,019,	3,377,	3,463,
	Hemp	2,916,	2,253,	1,637,	1,509,	2,205,
	Indigo	2,287,	2,360,	2,698,	2,403,	1,888,
		76,672,	57,640,	59,119,	56,464,	54,013,
,, ,, *Various.*	Hides	2,700,	2,560,	2,377,	2,801,	2,795,
	Oils	3,408,	3,201,	2,987,	3,331,	2,846,
	Metals	3,472,	3,816,	3,161,	3,442,	3,221,
	Tallow	1,819,	1,770,	2,272,	2,815,	2,517,
	Timber.....	9,846,	8,465,	9,228,	8,366,	7,002,
		21,245,	19,815,	20,028,	20,758,	18,411,
,, ,, *Agricltl.*	Guano	2,372,	1,019,	1,781,	1,183,	720,
	Seeds	2,751,	2,553,	2,663,	2,697,	2,570,
		5,123,	3,602,	4,444,	3,880,	3,290,
Tropical,&c.,Produce.	Tea	9,108,	7,827,	5,895,	5,932,	4,510,
	Coffee	3,586,	3,057,	2,421,	2,175,	1,788,
	Sugar & Molasses	11,636,	11,276,	12,431,	11,722,	11,322,
	Tobacco	2,293,	1,790,	1,625,	984,	1,069,
	Rice.....	1,352,	2,069,	1,697,	778,	658,
	Fruits	1,274,	1,027,	1,155,	951,	950,
	Wine	3,992,	3,273,	3,563,	3,883,	2,320,
	Spirits.....	1,563,	1,470,	1,567,	1,769,	1,993,
		34,804,	31,789,	30,357,	28,197,	24,609,
Food	Grain and Meal..	24,254,	35,063,	31,568,	27,320,	16,559,
	Provisions	7,193,	6,858,	5,958,	5,036,	2,986,
		31,447,	41,921,	37,526,	32,356,	19,544,
Remainder of Enumerated Articles		4,078,	3,499,	3,239,	3,232,	2,966,
Total Enumerated Imports....		173,369,	158,266,	154,713,	144,887,	122,833,
Add for Unenumerated Imports (say)		43,342,	39,561,	38,678,	36,222,	30,708,
Total Imports.....		216,711,	197,827,	193,391,	181,109,	153,541,

EXPORTS.—(United Kingdom.)—Whole Years, 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.*

(Whole Year.) [000's omitted.] British Produce, &c., Exported.		1863.	1862.	1861.	1860.	1859.
		£	£	£	£	£
Manfrs.—*Textile.*	Cotton Manufactures..	39,424,	30,569,	37,544,	42,138,	38,743,
	,, Yarn.....	8,020,	6,203,	9,293,	9,875,	9,466,
	Woollen Manufactures	15,519,	13,147,	11,141,	12,164,	12,033,
	,, Yarn	5,065,	3,854,	3,546,	3,844,	3,080,
	Silk Manufactures	1,959,	2,015,	2,036,	2,106,	2,145,
	,, Yarn.....	270,	346,	276,	295,	207,
	Linen Manufactures....	6,510,	5,131,	3,859,	4,802,	4,607,
	,, Yarn.....	2,536,	1,852,	1,616,	1,801,	1,685,
		79,303,	63,117,	69,311,	77,025,	71,966,
,, *Sewed.*	Apparel	2,808,	2,556,	2,154,	2,157,	2,191,
	Haberdy. and Millnry.	4,362,	3,592,	3,423,	4,011,	4,289,
		7,170,	6,148,	5,577,	6,168,	6,480,
Metals	Hardware.....	3,827,	3,316,	3,425,	3,772,	3,826,
	Machinery	4,365,	4,097,	4,220,	3,825,	3,701,
	Iron	13,111,	11,302,	10,342,	12,158,	12,327,
	Copper and Brass.....	4,233,	2,823,	2,313,	3,002,	2,600,
	Lead and Tin	2,863,	2,729,	1,822,	2,562,	2,552,
	Coals and Culm	3,708,	3,750,	3,593,	3,322,	3,266,
		32,107,	28,047,	25,715,	28,641,	28,272,
Ceramic Manufcts.	Earthenware and Glass	2,090,	1,863,	1,660,	2,094,	1,921,
Indigenous Mnfrs.	Beer and Ale	1,777,	1,594,	1,417,	1,864,	2,116,
	Butter	472,	379,	484,	633,	717,
	Cheese	156,	127,	131,	119,	138,
	Candles	190,	226,	279,	239,	188,
	Salt	287,	321,	370,	358,	254,
	Spirits	454,	511,	484,	287,	306,
	Soda.....	868,	886,	604,	963,	1,024,
		4,204,	4,044,	3,769,	4,463,	4,743,
Various Manufcts.	Books, Printed.....	457,	416,	445,	495,	478,
	Furniture.....	302,	276,	264,	222,	242,
	Leather Manufactures	2,318,	2,565,	2,197,	2,129,	1,998,
	Soap.....	256,	227,	230,	250,	226,
	Plate and Watches	463,	505,	449,	564,	495,
	Stationery.....	345,	286,	649,	750,	840,
		4,141,	4,275,	4,234,	4,410,	4,279,
Remainder of Enumerated Articles		8,669,	8,839,	4,556,	3,966,	3,366,
Unenumerated Articles		8,805,	7,805,	10,293,	9,076,	9,413,
Total Exports		146,489,	124,138,	125,115,	135,843,	130,440,

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

(Whole Year.)	1863.			1862.		1861.		1860.	
ENTERED:—	Vessels.	Tonnage (000's omitted.)	Average Tonnage	Vessels.	Tonnage (000's omitted.	Vessels.	Tonnage (000's omitted.	Vessels.	Tonnage (000's omitted.)
Vessels belonging to—	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	423	137,	321	436	135,	407	125,	435	126,
Sweden	1,043	172,	165	963	162,	945	156,	1,119	182,
Norway	3,360	755,	225	3,121	657,	2,917	631,	2,862	638,
Denmark	2,871	278,	97	2,634	257,	2,321	226,	2,957	292,
Prussia and Ger. Sts.	3,881	942,	242	3,857	929,	3,457	809,	4,067	836,
Holland and Belgium	1,702	212,	112	1,778	217,	1,546	215,	1,758	239,
France	2,884	238,	83	2,336	197,	1,686	136,	2,187	186,
Spain and Portugal	364	112,	308	375	115,	436	106,	391	101,
Italy & other Eupn. Sts.	919	266,	289	928	267,	863	239,	1,057	299,
United States	681	692,	1,016	1,327	1,179,	1,932	1,617,	1,417	1,361,
All other States	12	4,	333	15	5,	19	7,	20	6,
United Kingdm. & Depds.	18,140	3,838,	212	17,770	1,150,	16,529	4,300,	18,270	4,293,
	23,773	7,299,	307	22,356	6,590,	21,060	6,301,	20,104	5,762,
Totals Entered	41,913	11,137,	266	40,126	10,740,	37,589	10,601,	38,374	10,055,
CLEARED:—									
Russia	420	131,	311	417	127,	413	123,	396	117,
Sweden	1,039	167,	161	981	163,	1,041	168,	1,163	185,
Norway	1,860	333,	179	1,974	333,	1,903	312,	1,746	311,
Denmark	3,272	321,	98	3,153	309,	3,285	323,	3,362	328,
Prussia and Ger. Sts.	5,548	1,132,	204	5,480	1,072,	5,207	990,	5,033	936,
Holland and Belgium	1,888	292,	154	2,195	331,	1,932	278,	2,018	319,
France	4,602	450,	98	5,070	492,	5,135	496,	4,068	431,
Spain and Portugal	390	124,	317	380	121,	398	107,	364	92,
Italy & other Eupn. Sts.	1,106	330,	298	1,039	297,	1,098	304,	1,152	332,
United States	627	648,	1,033	1,172	1,052,	1,580	1,369,	1,456	1,368,
All other States	21	6,	286	32	12,	23	7,	19	6,
United Kingdm. & Depds.	20,773	3,934,	189	21,893	4,309,	22,015	4,177,	20,777	4,425,
	27,624	7,952,	288	27,066	7,400,	26,454	6,841,	23,713	6,359,
Totals Cleared	48,397	11,886,	246	48,959	11,709,	48,469	11,318,	44,490	10,784,

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—*Computed Real Value for the* Whole Years, 1863-62-61.

(000's omitted.)

(Whole Year.)	1863.		1862.		1861.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from:—	£	£	£	£	£	£
Australia	5,995,	—	6,075,	—	6,331,	1,
So. Amca. and W. Indies	3,897,	6,651,	1,631,	6,242,	1,600,	5,115,
United States and Cal.	7,321,	627,	9,732,	333,	39,	28,
	17,413,	7,278,	18,068,	6,575,	7,970,	5,144,
France	187,	1,257,	92,	2,203,	2,505,	690,
HanseTowns, Holl. & Belg.	316,	2,062,	430,	2,707,	886,	524,
Prtgl., Spain, and Gbrltr.	16,	90,	25,	120,	27,	155,
Mlta., Trky., and Egypt	115,	4,	8,	13,	53,	29,
China	—	—	—	—	5,	1,
West Coast of Africa	70,	8,	100,	6,	78,	2,
All other Countries	1,025,	189,	1,179,	128,	640,	38,
Totals Imported	19,142,	10,888,	9,902,	11,752,	12,164,	6,583,
Exported to:—						
France	3,503,	1,258,	6,356,	849,	998,	1,053,
HanseTowns, Holl. & Belg.	1,101,	791,	348,	655,	21,	854,
Prtgl., Spain, and Gbrltr.	1,745,	5,	2,466,	8,	985,	3,
	6,352,	2,054,	9,170,	1,512,	2,004,	1,910,
Ind. and China (viâ Egypt)	3,474,	8,815,	1,920,	10,710,	794,	7,280,
Danish West Indies	—	—	—	—	53,	39,
United States	40,	14,	37,	1,	7,298,	84,
South Africa	159,	7,	—	—	133,	10,
Mauritius	—	—	—	—	—	2,
Brazil	1,681,	50,	409,	44,	20,	150,
All other Countries	3,597,	300,	4,476,	1,047,	934,	98,
Totals Exported	15,303,	11,240,	16,012,	13,314,	11,238,	9,573,
Excess of *Imports*	3,839,	—	3,890,	—	926,	—
,, Exports	—	648,	—	1,562,	—	2,990,

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.			
	Totally.	Part of Cargo Saved	Whole, or nearly so, of Cargo Saved.	Total.	Lost.	Raised.	Total.	Lost.	Recovered.	Total.	Mast;
October—											
1854	76	19	12	107	30	1	31	25	8	33	1
'55	58	14	7	79	28	5	33	12	10	22	2
'56	50	13	1	64	29	4	33	20	4	24	2
'57	80	13	8	101	49	5	54	17	5	22	—
'58	61	10	9	83	35	3	38	7	8	15	3
'59	149	21	7	180	62	9	71	19	3	22	1
Aver. of Six Yrs.	79·5	15·5	7·33	102·33	38·83	4·5	43·33	16·67	6·33	23·0	1·5
November—											
1854	70	15	6	91	26	3	29	21	7	31	1
'55	56	7	7	70	36	5	41	13	6	19	—
'56	63	12	9	84	36	1	37	10	11	21	1
'57	61	12	6	79	29	2	31	11	5	16	1
'58	106	21	6	133	47	6	53	36	7	43	1
'59	141	21	6	168	63	3	66	46	12	58	1
Aver. of Six Yrs.	82·83	14·67	6·67	104·17	39·5	3·33	42·83	23·33	8·0	31·33	·83
December—											
1854	102	12	10	124	28	2	30	21	7	28	6
'55	73	13	12	98	32	2	34	19	7	26	1
'56	88	16	7	111	48	7	55	19	8	27	8
'57	52	17	2	71	22	—	22	20	3	23	5
'58	53	15	7	75	34	7	41	48	8	56	1
'59	100	18	1	119	41	5	46	15	6	21	4
Aver. of Six Yrs.	78·0	15·17	6·5	99·67	34·17	3·83	38·0	23·67	6·5	30·17	4·17
Dec. Qr.—											
1854	248	46	28	322	84	6	90	70	22	92	8
'55	187	34	26	247	96	12	108	44	23	67	3
'56	201	41	17	259	113	12	125	49	23	72	11
'57	193	42	16	251	100	7	107	48	13	61	6
'58	223	46	22	291	116	16	132	91	23	114	5
'59	390	63	14	467	166	17	183	80	21	101	6
Aver. of Six Yrs.	240·33	45·33	20·5	306·17	112·5	11·67	124·17	63·67	20·83	84·5	6·5
Annual No.-											
1854	701	76	37	814	250	25	275	234	71	305	47
'55	574	113	59	746	266	32	298	138	62	200	29
'56	604	112	44	760	292	34	326	172	57	229	43
'57	589	147	53	789	334	30	364	162	50	212	40
'58	610	116	42	768	330	49	379	186	52	238	34
'59	771	157	38	966	403	49	452	184	55	239	36
Aver. of Six Yrs.	641·5	120·17	45·5	807·17	312·5	36·5	349·0	179·33	57·83	237·17	38.17

* The majority of these may

the Months of October, November, *and* December, *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.	Total.	After Striking, &c.	From other Causes.	Total.			
57	126	10	193	1	2	3	—	368	October— 1854
57	92	2	151	4	4	8	—	295	'55
46	116	5	167	1	4	5	1	296	'56
40	98	3	141	1	4	5	—	323	'57
58	119	11	188	5	3	8	—	335	'58
117	139	12	268	6	8	14	—	556	'59
62·5	115·0	7·17	184·67	3·0	4·17	7·17	·17	362·17	Aver. of Six Yrs.
50	99	6	155	1	4	5	—	312	November 1854
72	160	6	238	1	4	5	4	377	'55
66	93	9	168	3	2	5	1	317	'56
46	108	4	158	2	5	7	—	292	'57
67	132	7	206	4	2	6	2	444	'58
76	154	10	240	6	6	12	—	545	'59
62·83	124·33	7·0	194·17	2·83	3·83	6·67	1·17	381·17	Aver. of Six Yrs.
93	141	4	238	4	4	8	2	436	December 1854
90	156	2	248	6	3	9	—	416	'55
70	182	11	263	5	3	8	2	474	'56
48	101	5	154	3	4	7	—	282	'57
53	135	14	202	1	7	8	—	383	'58
62	129	10	201	4	7	11	—	402	'59
69·33	140·67	7·67	217·67	3·83	4·67	8·5	·67	398·83	Aver. of Six Yrs.
200	366	20	586	6	10	16	2	1,116	Dec. Qr.— 1854
219	408	10	637	11	11	22	4	1,088	'55
182	391	25	598	9	9	18	4	1,087	'56
134	307	12	453	6	13	19	—	897	'57
178	386	32	596	10	12	22	2	1,162	'58
255	422	32	709	16	21	37	—	1,503	'59
194·67	380·0	21·83	596·5	9·67	12·67	22·33	2·0	1142·17	Aver. of Six Yrs.
618	1,110	54	1,782	33	36	69	22	3,314	Annual No. 1854
505	1,176	59	1,740	27	34	61	11	3,085	,55
571	1,155	72	1,798	32	40	72	13	3,241	,56
555	1,265	69	1,889	28	48	76	7	3,377	,57
503	1,228	84	1,815	31	59	90	5	3,329	,58
546	1,263	86	1,895	42	72	114	—	3,702	,59
549·67	1199·5	70·67	1819·83	32·17	48·17	80·33	9·67	3341·33	Aver. of Six Yrs.

be considered as "*Wrecks.*"

SUMMARY OF SHIPPING CASUALTIES *Reported in Lloyd's*

(Casualties to Foreign Coasters, or to

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

	Wrecked.				Sunk.			Abandoned.			Missing
	Totally.	Part of Cargo Saved.	Whole, or nearly so, of Cargo Saved.	Total.	Lost.	Raised.	Total.	Lost.	Recovered.	Total.	
Monthly Average—											
January	92·0	11·67	3·67	107·33	31·0	3·67	34·67	22·83	5·0	27·83	5·83
February	58·17	8·0	2·83	69·0	23·0	2·33	25·33	18·5	6·0	24·5	4·0
March	56·67	9·17	2·17	68·0	23·5	2·67	26·17	17·33	5·67	23·0	5·17
April	40·17	9·67	2·33	52·17	21·17	3·67	24·83	11·0	5·5	19·5	3·67
May	23·0	8·33	1·83	38·17	21·17	2·83	24·0	12·67	2·5	15·17	3·0
June	30·0	6·33	2·17	38·5	16·33	2·5	18·83	7·83	2·67	10·5	4·67
July	29·0	6·17	3·5	38·67	15·5	1·83	17·33	5·50	3·0	8·5	2·17
August	31·0	8·83	2·67	42·5	23·67	2·5	26·17	8·67	4·17	12·83	1·83
September	36·17	6·67	3·83	46·67	24·67	2·83	27·5	8·33	2·5	10·83	1·33
October	79·5	15·5	7·33	102·33	38·83	4·5	43·33	16·67	6·33	23·0	1·5
November	82·83	14·67	6·67	104·17	39·5	3·33	42·83	23·33	8·0	31·33	·83
December	78·0	15·17	6·5	99·67	31·17	3·83	38·0	23·67	6·5	30·17	4·17
Quarterly Average—											
March quarter	206·83	28·83	8·67	244·33	77·5	8·67	86·17	58·67	16·67	75·33	15·0
June „	98·17	24·33	6·33	128·83	58·67	9·0	67·67	31·5	10·67	45·17	11·33
September quarter	96·17	21·67	10·0	127·83	63·83	7·17	71·0	22·5	9·67	32·17	5·33
December quarter	240·33	45·33	20·5	306·17	112·5	11·67	124·17	63·67	20·83	84·5	6·5
Half-Yearly Average—											
First half-year	305·0	53·17	15·0	373·17	136·17	17·67	153·83	93·17	27·33	120·5	26·33
Second half-year	336·5	67·0	30·5	434·0	176·33	18·83	195·17	86·17	30·5	116·67	11·83
Annual Average	641·5	120·17	45·5	807·17	312·5	36·5	349·0	179·33	57·83	237·17	38·17

* The majority of these may

"Register of Losses" *during the Years* 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.	Total.	After Striking, &c.	From other Causes.	Total.			
Monthly Average—									
80·33	139·33	6·5	226·17	3·83	4·5	8·33	2·17	412·33	January
50·0	103·5	4·17	157·67	2·67	5·33	8·0	1·83	290·33	February
50·33	114·17	5·0	169·5	3·33	5·0	8·33	1·0	301·17	March
37·33	96·33	6·83	140·5	2·67	2·83	5·5	·17	246·33	April
31·83	73·83	6·33	112·0	2·0	3·83	5·83	·5	198·67	May
22·83	70·17	5·0	98·0	1·33	3·5	4·83	·5	175·83	June
26·5	65·33	4·5	96·33	3·0	3·83	6·83	·67	170·5	July
22·83	61·5	5·5	92·83	1·67	3·83	5·5	·33	182·0	August
33·0	92·33	5·0	130·33	2·0	2·83	4·83	·5	222·0	September
62·5	115·0	7·17	184·67	3·0	4·17	7·17	·17	362·17	October
62·83	124·33	7·0	194·17	2·83	3·83	6·67	1·17	381·17	November
69·33	140·67	7·67	217·67	3·83	4·67	8·5	·67	398·83	December
Quarterly Average—									
180·67	357·0	15·67	553·33	9·83	14·83	24·67	5·0	1003·83	March quarter
92·0	240·33	18·17	350·5	6·0	10·17	16·17	1·17	620·83	June „
82·33	222·17	15·0	319·5	6·67	10·5	17·17	1·5	574·5	September quarter
191·67	380·0	21·83	596·5	9·67	12·67	22·33	2·0	1142·17	December quarter
Half-Yearly Average—									
272·67	597·33	33·83	903·83	15·83	25·0	40·83	6·17	1624·67	First half-year
277·0	602·17	36·83	916·0	16·33	23·17	39·5	3·5	1716·67	Second half-year
549·67	1199·5	70·67	1819·83	32·17	48·17	80·33	9·67	3341·33	Annual Average

be considered as "*Wrecks.*"

REVENUE.—(UNITED KINGDOM.)—31ST DEC., 1863-62-61-60.

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

[000's omitted.]

QUARTERS, ended 31st Dec.	1863.	1862.	1863.		Corresponding Quarters.	
			Less.	More.	1861.	1860.
	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Customs	5,970,	6,320,	350,	—	6,147,	5,861,
Excise	4,753,	4,000,	—	753,	3,896,	4,359,
Stamps	2,293,	2,187,	—	106,	2,098,	2,036,
Taxes	1,285,	1,270,	—	15,	1,282,	1,293,
Post Office	990,	950,	—	40,	910,	880,
	15,291,	14,727,	350,	914,	14,333,	14,429,
Property Tax	2,132,	2,931,	799,	—	2,359,	3,530,
	17,423,	17,658,	1,149,	914,	16,692,	17,959,
Crown Lands	87,	86,	—	1,	81,	83,
Miscellaneous	808,	631,	—	173,	292,	228,
Totals	18,318,	18,378,	1,149,	1,088,	17,068,	18,270,
			NET DECR. £60,762			

YEARS, ended 31st Dec.	1863.	1862.	1863.		Corresponding Years.	
			Less.	More.	1861.	1860.
	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Customs	23,421,	24,036,	615,	—	23,774,	23,032,
Excise	17,745,	17,531,	—	211,	18,161,	19,069,
Stamps	9,252,	8,914,	—	338,	8,488,	8,285,
Taxes	3,208,	3,148,	—	60,	3,119,	3,126,
Post Office	3,800,	3,600,	—	200,	3,500,	3,420,
	57,426,	57,232,	615,	809,	57,042,	56,932,
Property Tax	9,806,	11,104,	1,298,	—	9,962,	12,902,
	67,232,	68,336,	1,913,	809,	67,004,	69,834,
Crown Lands	302,	298,	—	4,	294,	290,
Miscellaneous	2,899,	2,362,	—	537,	1,306,	1,843,
Totals	70,433,	70,996,	1,913,	1,350,	68,604,	71,967,
			NET DECR. £562,809			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST DEC., 1863:—APPLICATION.

An Account showing the REVENUE *and other* RECEIPTS *of the* QUARTER *ended 31st December*, 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 30th September, 1863, viz.:—		
Great Britain	—	
Ireland	£457,580	
		457,580
Income received in the Quarter ended 31st December, 1863, as shown in preceding page		18,318,100
Amount received in the Quarter ended 31st December, 1863, in repayment of Advances for Public Works, &c.		428,052
		£19,203,708
Balance, being the Deficiency on 31st December, 1863, upon the charge of the Consolidated Fund in Great Britain, to meet the Dividends and other charges payable in the Quarter to 31st March 1864, and for which the Exchequer Bills (Deficiency) will be issued in that Quarter		899,054
		£20,102,852

Paid:—

		£
Amount applied out of the Income for the Quarter ended 31st December, 1863, in Redemption of the Exchequer Bills (Deficiency), for the Quarter ended 30th September, 1863, viz.:—		
Total deficiency	£2,273,610	
Deduct—Redeemed by Sinking Fund	289,000	
		1,984,610
Amount applied out of the Income to *Supply Services* in the Quarter ended 31st December, 1863		8,777,292
Charge of the *Consolidated Fund* for the Quarter ended 31st December, 1863, viz.:—		
Interest of the Permanent Debt	£6,200,694	
Terminable Debt	333,448	
Principal of Exchequer Bills	71,700	
Interest of „ „	69,710	
„ Deficiency „	—	
The Civil List	101,270	
Other Charges on Consolidated Fund	588,615	
Advances for Public Works, &c.	396,072	
Sinking Fund	510,292	
		8,362,701
Surplus Balance in Ireland beyond the Charge of the Consolidated Fund in Ireland for the Quarter ended 31*st December*, 1863		978,219
		£20,102,852

CORN.—*Gazette Average Prices* (England and Wales), *Fourth 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.*
October 3	42 2	35 4	19 8	31 –	37 11	36 7
„ 10	41 –	34 7	19 4	31 5	37 –	36 4
„ 17	40 4	34 –	18 8	29 2	36 5	34 7
„ 24	40 –	33 11	18 7	28 0	36 5	35 8
„ 31	40 10	34 –	18 11	28 –	35 8	35 2
Average for October ..	40 8	34 4	19 –	29 8	36 8	35 8
November 7	40 –	34 2	18 7	28 4	35 10	35 –
„ 14	39 10	34 –	18 9	25 –	36 5	34 1
„ 21	39 11	33 11	19 11	29 7	35 6	34 2
„ 28	40 3	33 7	19 7	31 0	36 1	34 1
Average for November ..	40 –	33 11	19 2	29 5	35 11	34 4
December 5	40 9	33 6	19 5	29 7	35 3	33 7
„ 12	41 1	32 10	19 3	29 11	34 11	34 2
„ 19	41 2	32 6	19 –	29 4	34 9	33 7
„ 26	40 5	32 –	19 –	33 6	34 4	33 8
Average for December ..	40 10	32 8	19 2	30 7	34 9	33 9
Average for the Quarter ..	40 6	33 8	19 1	29 10	35 10	34 8
Average for the Year	41 9	33 11	21 2	32 5	37 5	36 –

RAILWAYS.—Prices, *Oct.—Dec.*;—*and* Traffic, *Jan.—Dec.*, 1863.

Total Capital Expended Mlns.	Railway.	For the (£100). Price on 1st Dec.	2nd Nov.	1st Oct.	Miles Open. '63.	'62.	Total Traffic first 52 Weeks. (unit 000's omitted.) '63.	'62.	Traffic pr. Mile pr. Wk 52 Weeks. '63.	'62.	Dividends per Cent. for Half Years. 30 Jun. '63.	31 Dec. '62.	30 Jn. '62.
£					No.	No.	£	£	£	£	*s. d.*	*s. d.*	*s. d.*
48,0	Lond. & N. Westn.	104½	104⅜	103	1,209	1,179	4,905,	4,679,	77	68	42 6	55 –	37 6
44,0	Great Western	63⅜	66⅛	66⅛	1,056	1,032	3,026,	2,955,	55	52	20 –	30 –	5 -
15,0	„ Northern....	128	130	127	353	351	1,523,	1,467,	84	75	42 6	85 –	45 -
20,6	„ Eastern	50	51	52	663	644	1,539,	1,476,	48	45	12 6	25 –	20 -
11,2	Brighton	112	113	113½	261	241	976,	1,000,	68	71	50 –	70 –	50 -
14,9	South-Eastern	96	96½	97½	306	306	1,135,	1,130,	69	69	45 –	60 –	42 6
14,7	„ Western	102½	102¾	102½	450	441	1,143,	1,109,	51	47	45 –	60 –	40 -
68,4		93¾	94¾	94½	4,298	1,194	14,247,	13,816,	64	61	36 9	55 –	31 3
22,7	Midland.....	127¾	129½	128¾	641	614	2,177,	2,064,	68	55	57 6	65 –	55 -
19,8	Lancsh. and York.	108¾	112	113½	402	395	1,813,	1,700,	88	80	42 6	40 –	37 6
12,5	Sheffield and Man.	48½	51	47	239	239	806,	739,	66	58	—	—	—
30,8	North-Eastern	102	103¾	102	1,095	1,079	2,524,	2,373,	47	45	42 6	50 –	42 6
85,8		96¾	99	97¾	2,377	2,327	7,320,	6,876,	67	59	47 6	51 8	45 -
9,7	Caledonian	119½	120½	120	234	231	880,	822,	73	66	52 6	60 –	50 -
5,5	Gt. S. & Wn. Irlnd.	101	102	102	273	329	413,	408,	22	25	42 6	50 –	50 -
269,4	*Gen. aver.*	97½	98⅜	98	7,282	7,084	22,860,	21,922,	62	58	38 –	50 –	35 9

Consols.—Money Prices 1*st Dec.*, 92¼ to 92¼ de, and 91⅛ to 91¼ x. d.—2*nd Nov.*, 92⅛ to 93⅛, 1*st Oct.*, 92¼, 92⅜ de, and 92⅜ to 92½ for acc.

Exchequer Bills.—1*st Dec.*, 10*s.* to 5*s.* d.—2*nd Nov.*, 1*s.* to 2*s.* pm.—1*st Oct.*, par to 3*s.* pm.

BANK OF ENGLAND.—Weekly Return.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), *for Wednesday in each Week, during the* Fourth Quarter (*Oct.—Dec.*) *of* 1863.

[0,000's omitted.]

1	2	3	4	5	6	7
Issue Department.					Collateral Columns.	
Liabilities.	Dates.	Assets.				
Notes Issued.	(Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
£ Mlns.	1863.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1863. Per ann.
28,82	Oct. 7	11,02	3,63	14,17	21,77	21 May 4 p. ct.
28,54	„ 14	11,02	3,63	13,89	22,14	
28,58	„ 21	11,02	3,63	13,93	22,08	
28,42	„ 28	11,02	3,63	13,77	21,87	
27,85	Nov. 4	11,02	3,63	13,19	22,05	5 Nov. 6 „
27,43	„ 11	11,02	3,63	12,78	21,42	
27,37	„ 18	11,02	3,63	12,73	21,09	
27,33	„ 25	11,01	3,63	12,68	20,51	
27,08	Dec. 2	11,01	3,63	12,43	21,02	3 Dec. 8 „
26,93	„ 9	11,01	3,63	12,28	20,20	
27,57	„ 16	11,01	3,63	12,92	19,81	
28,15	„ 23	11,01	3,63	13,50	19,66	26 Dec. 7 „
28,33	„ 30	11,02	3,63	13,68	20,12	

Banking Department.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					Dates.	Assets.				
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		Totals of Liabilities and Assets.
Capital.	Rest.	Public.	Private.		(Wdnsdys.)	Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1863.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,74	9,51	12,89	,78	Oct. 7	11,14	22,59	7,05	,69	41,47
14,55	3,12	4,62	16,35	,72	„ 14	10,95	21,34	6,40	,68	39,37
14,55	3,14	4,44	15,27	,75	„ 21	10,95	19,99	6,50	,72	38,15
14,55	3,15	4 46	15,02	,73	„ 28	10,99	19,69	6,55	,67	37,90
14,55	3,14	5,07	13,86	,74	Nov. 4	10,95	20,01	5,80	,60	37,37
14,55	3,18	5,62	13,66	,69	„ 11	10,95	20,07	6,01	,68	37,71
14,55	3,19	6,45	13,40	,68	„ 18	10,81	20,50	6,28	,69	38,28
14,55	3,20	7,04	12,80	,65	„ 25	10,71	20,02	6,82	,69	38,25
14,55	3,18	7,23	12,92	,66	Dec. 2	10,71	21,17	6,06	,61	38,56
14,55	3,22	8,63	12,98	,61	„ 9	10,71	21,81	6,73	,73	39,99
14,55	3,23	9,10	13,26	,58	„ 16	10,76	21,44	7,76	,76	40,73
14,55	3,23	10,27	12,71	,61	„ 23	10,76	21,41	8,49	,71	41,38
14,55	3,25	10,84	13,02	,56	„ 30	10,96	22,38	8,21	,68	42,23

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* 1863; *and in* SCOTLAND *and* IRELAND, *at the Three Dates, as under.*

ENGLAND AND WALES.				SCOTLAND.				IRELAND.		
DATES.	Private Banks. (Fixed Issues, 4·26.)	Joint Stock Banks. (Fixed Issues, 3·27.)	TOTAL. (Fixed Issues, 7·54.)	Three Weeks, ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2·75.)	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6·35.)
1863.	£ Mlns.	£ Mlns.	£ Mlns.	1863.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Sept. 26	3,17	2,93	6,10							
Oct. 3	3,31	3,04	6,35							
„ 10	3,40	3,05	6,46							
„ 17	3,44	3,03	6,47	Oct. 17	1,63	2,70	4,34	2,88	2,78	5,66
„ 24	3,41	3,01	6,43							
„ 31	3,38	3,00	6,38							
Nov. 7	3,36	3,00	6,36							
„ 14	3,33	2,98	6,31	Nov. 14	1,74	2,79	4,53	2,99	3,02	6,02
„ 21	3,29	2,95	6,25							
„ 28	3,26	2,93	6,19							
Dec. 5	3,19	2,87	6,06							
„ 12	3,13	2,84	5,98	Dec. 12	1,70	2,94	4,64	2,86	3,08	5,94

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
	Paris.				Hamburg.				Calcutta.				
DATES.	London on Paris.	Bullion as arbitrated.		Prem or Dis on Gold per mille.	London on Hambg.	Bullion as arbitrated.		New York.	India Council	At Calcutta on London.	Hong Kong.	Sydney.	Standard *Silver* in bars in London.
	3 m.d.	Agnst. Engd.	For Engd.		3 m.d.	Agnst. Engd.	For Engd.	60 d.s.	60 d.s.	6 m.s.	6 m.s.	30 d.s.	pr.oz.
1863.		pr.ct.	pr.ct.			pr.ct.	pr.ct.	pr.ct.	*d.*	*d.*	*d.*	pr.ct.	*d.*
Oct. 3 ..	25·57½	—	0·3	¼ pm	13·8⅜	—	0·6	151	23⅜	24⅜	57¾	1 p.	61¼
„ 17 ..	25·60	—	0·3	½ „	·8¾	—	0·6	157	23¼	„	58	2 „	61⅜
Nov. 7 ..	25·62½	—	0·1	1½ „	·9	0·4	—	163¼	23⅜	24½	„	„	61⅜
„ 14 ..	25·75	—	0·1	2 „	13·9½	0·5	—	161	24	24⅜	„	„	„
Dec. 5 ..	25·80	—	0·1	2½ „	13·9¼	0·1	—	162½	23⅝	25⅛	57½	„	61⅜
„ 19 ..	25·75	—	0·2	3 „	13·8½	—	—	161½	„	25½	„	„	61¼

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REPORT *of the* COUNCIL *for the* FINANCIAL YEAR *ended* 31*st December*, 1863, *and for the* SESSIONAL YEAR *ended March*, 1864, *presented at the* THIRTIETH ANNIVERSARY MEETING *of the* STATISTICAL SOCIETY, *held at the Society's Rooms*, 12, *St. James's Square, on Tuesday*, 15*th March*, 1864; *with the* PROCEEDINGS *of that Meeting.*

COLONEL W. H. SYKES, M.P., F.R.S., *President, in the Chair.*

THE Council have much pleasure in placing before the Fellows of the Statistical Society upon this the *thirtieth* anniversary a brief report of the proceedings of the past year.

The number of Fellows now on the list (March, 1864) is 357, including 63 Life Members — against 368 (including 67 Life Members) at the same date last year. The losses by death, withdrawal, and default have been 27; the new elections are 16. In 1862-63 the losses were 35; and the new elections, 26.

The Income of the Year ended 31st December, 1863 (exclusive of the balance of 233*l.* from 1862), was 766*l.* (against 770*l.* in 1862); and the expenditure was 669*l.* (against 763 in 1862), leaving a Cash Balance, on 31st December, 1863, of 330*l.* (against 233*l.* at the end of 1862).

The Surplus of Assets, on the 31st December, 1863, was 1,767*l.*, after providing for all Liabilities; on 31st December, 1862, it was 1,720*l.* These figures afford the best evidence of the satisfactory condition of the Society's finances.

No diminution has been experienced in the number, variety, or importance of the subjects which, during the past year, have been brought under the notice of the Society. The following Papers were read at the Monthly Meetings:—

March, 1863.—*Mr. Walford.*—Recent Financial and Taxation Statistics of the United States.

April, „ *Mr. Frederick Purdy.*—The Expenditure of the United Kingdom for Colonial Purposes.