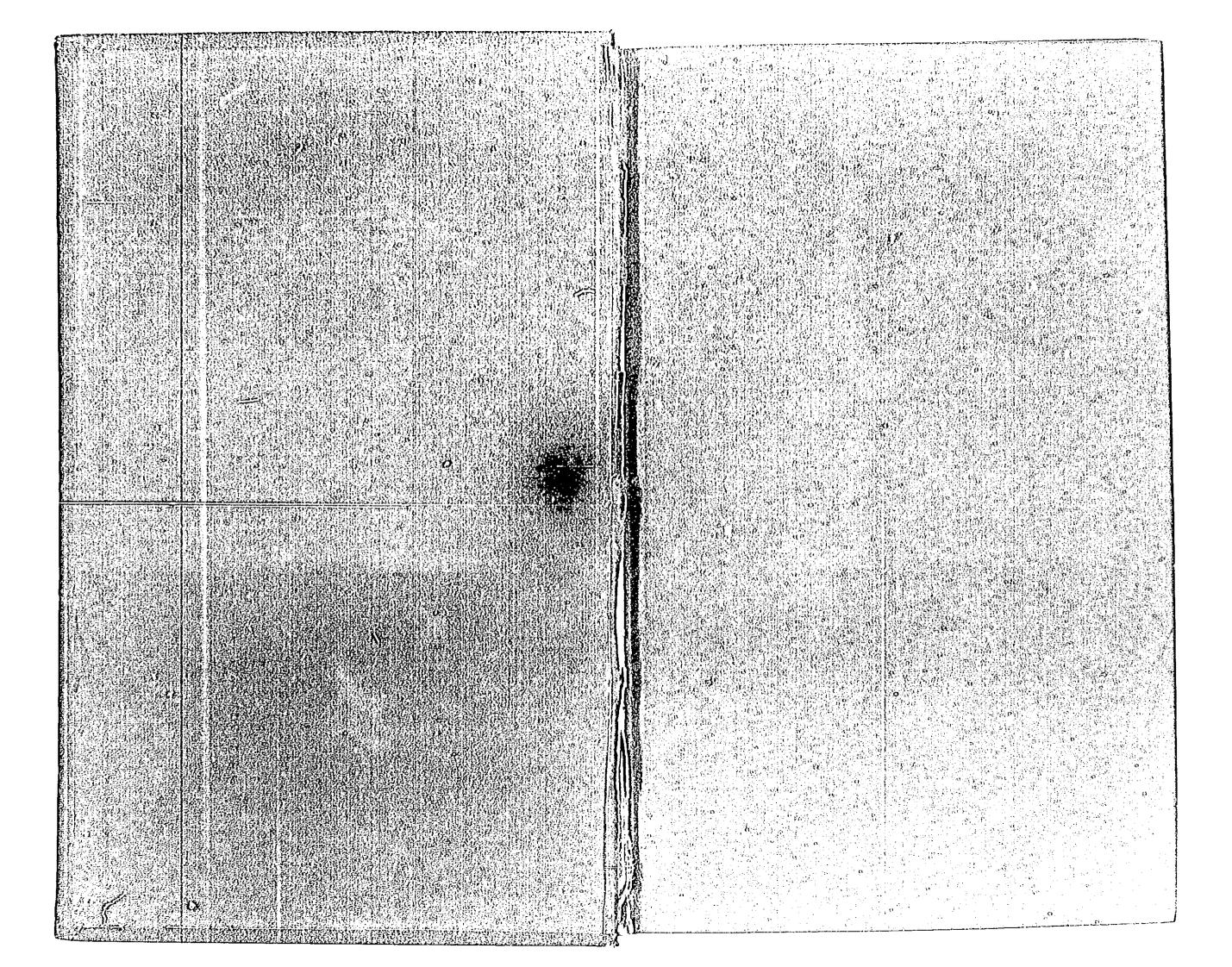
THE HEALTH OF NATIONS

EDWIN CHADWICK



THE HEALTH OF NATIONS.

A REVIEW OF THE WORKS

OF

EDWIN CHADWICK,

WITH A BIOGRAPHICAL DISSERTATION.

 $\mathbf{B}\mathbf{Y}$

BENJAMIN WARD RICHARDSON.

IN TWO VOLUMES.

VOL. II.

LONDON:
LONGMANS, GREEN, AND CO.,
39, PATERNOSTER ROW.

1887.
[All rights reserved.]

E	立公衆衛生院附属図書館
受入先	
受入日	
登録番号	
所 在	
Library	, National Institute of Public Health

Printed by Hazell, Watson, & Viney, Ld., London and Aylesbury.

TABLE OF CONTENTS OF SECOND VOLUME.

INT	RODUCT	ory N	OTE.				_	
PREVENTIVE SCIENCE .		• .		•	•	•		1 1
	PAR	T I.						
SANITARY AN	D PREV	ENTIV	E OF	DISI	EAS	E.		
	CHAPZ			•				
THE SANITARY CONDITION C	of the L	ABOURI	NG CLA	SSES	٠	•	•	5
	СНАРТ	ER II.						
PRELIMINARY DETAILS .		•		•	•	•	•	7
	СНАРТ	er III.						
DEFECTS IN SANITATION, AS Street and Road Cleansin	ed Leadi g: Road l	ng Rem Pavemen	its .	•	•	•		10 10
USE AND APPLICATION OF		ER IV. of Town				•	•	15
CONDITION AND PAVING OF	CHAPT STREETS.		PAVE	MENT	s .	•		24
	СНАРТ	ER VI.						
WATER AND HEALTH .		•		•	•	•	• .	30
	CHAPT	ER VII	•					441
LAND DRAINAGE AND HEA	LTH .	•	• •	•	•	•	•	4υ
	CHAPT	ER VIII	[.					48
VENTILATION AND WORK.			•	•	•	•		40
		ER IX.						5.41
OVERGROWDING IN PRIVATE	e Houses	•	• •	•	•	•	•	59

iv	CON	TEN	TS.							
	СНА	PTE	кх.							
INTEMPERANCE AND BAD 1	lealth									71
	CHAI	eriei	. VI							
COMPARATIVE VITALITY IN					0F T	ne C	юми	UNIT	Y	76
	СНАІ	TER	XH	i .						
MORTALITY AND POPULATION	os .	•	•	•		•	•	•	•	95
	CHAP	TER	хп	I.						
THE COST OF NOXIOUS AGE	ENCIES A	AND .	Acci	DEST	rs	•	•		•	102
	СНАР	TER	XIV	·.						
FINANCIAL SANITATION BY					r La	вост	ι.			109
	СНА	PTE	XV							
FINANCIAL SANITATION IN	DWELL	INGS	or 1	нь	Poor					117
	СНАР	TER	XVI	i.						
PUBLIC WALKS FOR THE P	EOPLE								•	127
·	CHAPT	rer	xvi	i.						
Medical Officers of Hea	ALTH	•					•			131
	СНАРТ	ER	XVII	[1 .						
Common Lodging-houses				•						115
	CHAP	TER	XIX							
SUMMARY ON THE HEALTH	OF THE	LABO) URI:	sa C	LASSI	es. A	SAN	ITAR	Y	
SUMMARY	•	•	•	•	•	•	•	•	•	150
	СНАГ	TER	XX							
DISPOSAL OF THE DEAD, AN	о тне I	orm.	ATIO:	N OF	Рив	ric C	'EMET	FERIE	S	157
Exposition of Existing E	ivils		•	•	•				•	158
Suggested Remedies . On Payments for Interm	ante an	tha N	9	• Ivetos	•	•	•	•	•	158 160
Advantages for the Sugg										161
	СНАР	TER	XX	ſ,						
SANITARY DWELLINGS FOR	THE W	AGE	CLAS	SSES		_	_			167
House-rate and Death-ra		•		•						168
Materials for Sanitary Co	onstructi	ion			•	•	-			173
Numerical Sanitation .	•	•	•	•	•				•	174

	CO	NTE	NTS.	•						V
CI	IAP	TER	XX	II,						
BASES FOR THE CONSTRUCTION		2	etra i	ss 115	wri.i	INGS				178
	OF			., .,	11 12171	:	•	•		178
Sites	•		•							170
Flooring and Walls Windows and Lights Ventilation Gas Water Supply and Sewers Summary respecting the Ho Streets and Footpaths Promises of Results	•	•	•	•	•	•	•	Ċ		184
Windows and Lights .	•	•	•	•	•	•	•	·		185
Ventilation	•	•	•	•	•	•	•	•		187
Gas	•	•	•	•	•	•	•	•		187
Water Supply and Sewers	•	•	•	•	•	•	•	•	•	188
Summary respecting the 110	nse	•	•	•	•	•	•	•	•	189
Streets and Footpaths .	•	•	•	•	•	•	•	•	•	190
Promises of Results .	•	•	•	•	•	•	•	•	•	,
CI	IAP	TEI	XX	III.						
House Driver de		•				• .				192
House Drainage Introduction House Drainage in Boston (House Drainage in London Size of Sewers Tests of Good House Draina	•	•	•	•	·					192
Introduction	i.	•	•	•		·	Ì			194
House Drainage in London	11,3	•	•	•						195
House Drainage in London	•	•	•	•		•				- 198
bize of bewers	*	•	•	•						201
Dealing with Drain Product	gu S	:	•	•	•					203
Diaming with Diam 11	_	•								
C	HAI	PTE	R XX	IV.						
THE SEPARATE SYSTEM OF TO)WS	DR	AINA	GЕ	•	•	•	•	•	204
C	НА	PTE	R X	XV.						,
METROPOLITAN SEWAGE AND	Ar	BORI	CULT	URE		•	•	•	•	211
c	HA	PTE:	R XX	CVI.						
***										221
ON THE PREVENTION OF EPI	DEM	ics	3371	. D!»		.1	•	•	•	222
Original Defences by Quara	111111	nes.	wny	D150	enter.	u . wiina	27 Ki	Nidan	ioz	
Local Conditions of Ordin	ary	as w	ell as	01 E	XURIO	rama	(y 12)	picien	IICS	225
Varied Types of Epidemics	in (Com	non C			•	•	•	•	220
Alterations for Prevention	•	•				1:	I	Inida	M	
Evidence of the Climatorial	I Ch	arac	ter of	the J	EXTra	orun	ary 1	spic.e	HILIC	227
Visitation	. • .			•	•	:	•	•	•	230
Epidemics Infectious thoug	th C	lima	torial		•	•	•	•	•	231
Why Large Hospitals for T	reat	tmen	t wer	e Ab	andoi	nea	T	• 7: 1-		
Discovery of Premonitory	Sym	pton	ns of	the .	Extra	ordin	ary i	spide	mic	232
Home Treatment of the Pr	emo	mite:	ry Sy:	mpto	ms .	•	•	•	•	
Owlingry Course of the Att	ack	of t	he En	idem	ic .	•		:		23:
General Results of the C	ours	se of	Dea	ling	with	the	Epid	emic,	by	
Altering the Local Cor	nditi	ions :	and b	or Ho	me T	reatm	ient	•	•	40
Injury to the Public by the	e Ch	ange	of th	ie Fii	rst Sa	nitar	y Au	thorit	γ.	230

v

CHAPTER XXVII.

Nonfeasance, Misfeasance, and Malfeasance . . .

CHAPTER XXXI.

PREVENTION OF EPIDEMICS IN SCHOOLS

	CON	TE?	vrs.							VII
	PA	RT	II.							
PREVENTION OF	' PA	UPE	RIS.	V .1	ND	POI	ER	TT.		
	СНА	APTF	er I.							
FIRST WORKS ON POOR LAW	Refe)RM	•			•		•	•	321
	CHA	PTE	R 11.	,						
PLAN OF INQUIRY INTO THE	Qm i ir	יי פי	THE	Po	าม					325
Inquiry at Windsor .	131AI	n or	11117	10	<i>.</i>	•	•	•	•	326
inquiry at windsor .	•	•	•	•	•	•	•	•		
Inquiry at Reading Lawrence Workhouse, Read	i line	•	•	•	•	•	·	•		331
Lawrence workhouse, new	ung	•	•	•	•	•	•	•	·	,,,,,
	СНА	PTE	R III	•						
RESULTS AND RECOMMENDAT	IONS									333
	•			•						336
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Ĭ	-	·	Ť	-					
	CHA	PTE	R IV	•						
PRINCIPLES OF ACTION .			•					•		341
	CHA	\PTF	er v.	,						
ORIGINAL OUTLINE OF POOR	LAW	AD:	MINIS	TRA	TION					353
			R VI							
SUMMARIES ON POOR LAW A		ISTR.	ATION				•	•		361
Paid Service the Best Servi	ice	•	•	٠	•	•	•		٠	361
The Emancipation of Paup Training of Pauper Childre Ideas for Preventing Distre	erisco	l and	l Serf	Lab	ourei	· .	•	•	•	364
Training of Pauper Childre	n	•		•	•	٠.		•	•	366
Ideas for Preventing Distra	ess du	iring	Perio	als o	f Dej	pressi	.on	•	•	367
Distress in Manuacturing	171911	icis	•	•	•	•	•	•	•	170.
On Agricultural Distress				•	•	٠	•	•	•	372
Medical Relief to the Desti		Poor	•	•	•	•	•	•	•	381
Public Charities in France	•	•	•	•	•	•	•	•	•	383
	TD 4	יוים	III.							
	Τ 11	TIL	111.							
PREV	ENT.	ION	0F	CRI	ME.					
	CH.	APT	ER I.							
LABOURS FOR THE PREVENTI	0 ZO	F CF	RIME	•	•		•	•	•	387
	СН	A PTI	er H							

Précis of Preventive Police revised by Author in 1884 390

	٠	٠	•
V	ı	1	1

TRICYCLES FOR POLICE

CONTENTS.

CHAPTER III,		
PREVENTION OF ROBBERIES AND MURDERS FOR MONEY	•	398 398
CHAPTER IV.		
ON THE BEST FORCES FOR THE SUPPRESSION OF RIOTS		406
The Author's Propositions	•	406
CHAPTER V.		
THE POLICE AND THE EXTINCTION OF FIRES		418
The Economy and Efficiency of a Police Force		418
Economy of the Combined Police Service	•	420
Superior Efficiency of Small Force Near, to Large Force Distant		422
Superior Efficiency of the Present Metropolitan Fire Police Service		423
Electric Science Available for Fire Extinction	•	421
Loss of Time from Excessive Distance		425
Reduction of Crime of Incendiarism by Police Service		427
Protection from Fires and Panics at Theatres, and other Pal	olie	
Establishments	•	428
CHAPTER VI.		

INTRODUCTORY NOTE.

PREVENTIVE SCIENCE.

Y

as the pioneer of that modern sanitary science which has worked in the course of half a century such true marvels for

the prevention of disease. In the field of his work in this direction we trace out designs not always finished, indeed not often finished in detail, but so projected, that others may labour on them and bring them to perfection. His universality is unique. He is found dealing with building and construction as if he were an architect; with engineering as if he were an engineer. In treating of diseases he might be often taken for a physician, in matters of administration for a politician, while he is always in his right place as a statistician. By a strange fortune he is least prolific on the legal side of sanitary work, though by education and profession a lawyer called to the bar.

This universality of industry renders it difficult to place his sanitary work in anything like systematic order, because in point of fact it has been produced just as the occasion called it forth, without plan or premeditation. It has come from the fulness of knowledge,—knowledge good from the first, but gain-

VOL. II.

1

ing in power and extension as facts were observed, accumulated, and mastered.

In presenting the sanitary labours of the author to a public now largely advanced in a knowledge of sanitation, I shall, in the first twenty chapters of the present volume, pith, if I may so express myself, the report on the sanitary condition of the labouring classes. In this way, without troubling the reader with the necessary official style of the original document, I shall place under distinctive heads the practical ideas of the writer as they were and are still applicable to sanitary science as a whole. This plan will serve, at the same time, to show the remarkable originality of thought and action which too often lay concealed in the official record.

In the succeeding chapters I shall select from Mr. Chadwick's other works those which appear to be most instructive to students of public health at the present time.

By pursuing this course the reader of the present day will be able to form an idea, not only of the changes which have taken place for good, but of those which still remain to be effected before the realisation of the aspirations of our author have been fulfilled. Following the plan adopted in the previous volume, inverted commas are placed at the head of each paragraph that contains the *ipsissima verba* of Mr. Chadwick.

VOLUME II.

PART I.

SANITARY AND PREVENTIVE OF DISEASE.