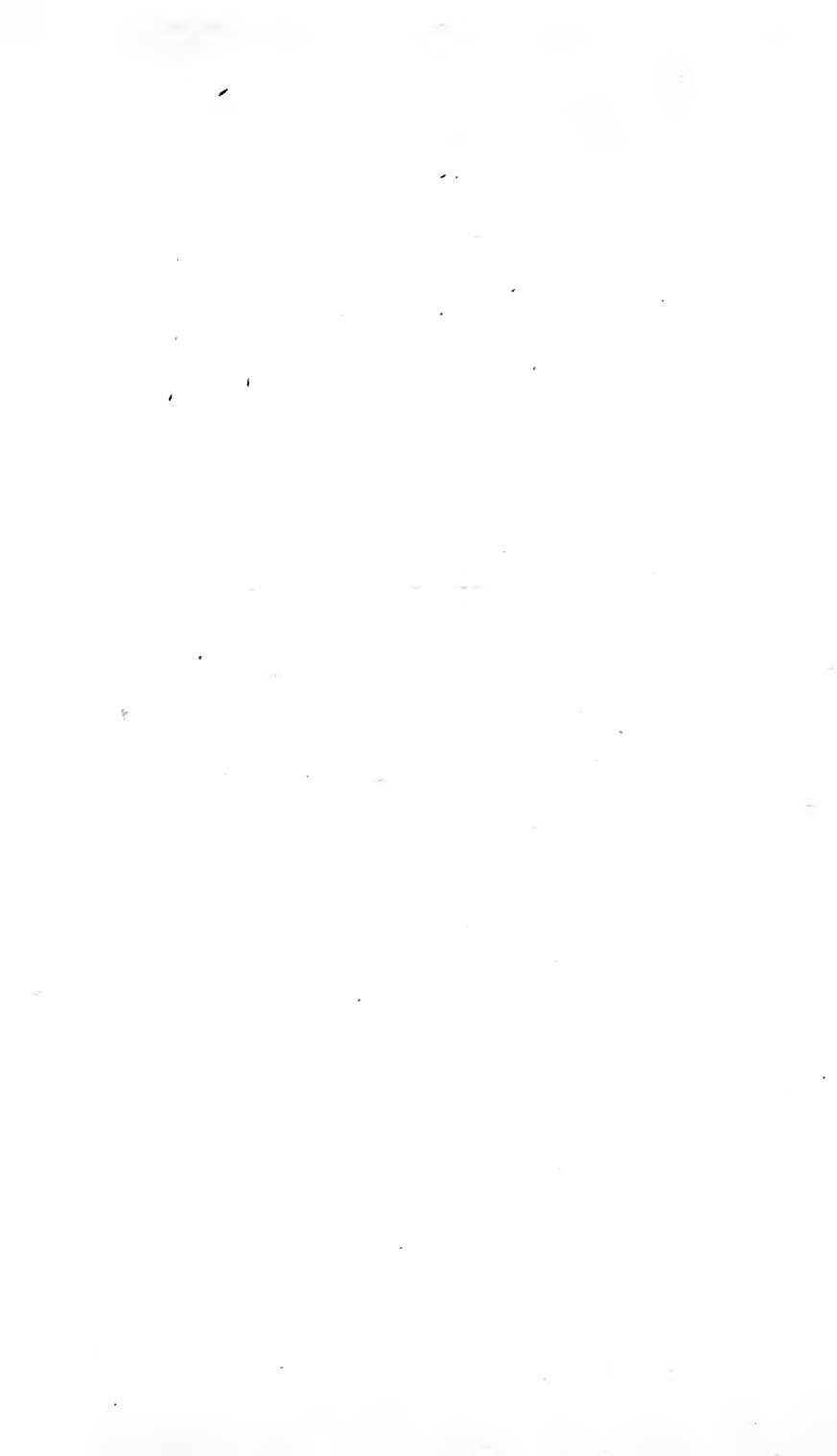


LIBRARY
OF THE
UNIVERSITY OF CALIFORNIA.

Class



THE LAW AFFECTING ENGINEERS

THE LAW AFFECTING ENGINEERS

BEING

*A CONCISE STATEMENT OF THE POWERS AND DUTIES
OF AN ENGINEER AS BETWEEN EMPLOYER
AND CONTRACTOR; AS ARBITRATOR;
AND AS EXPERT WITNESS*

TOGETHER WITH

AN OUTLINE OF THE LAW RELATING TO ENGINEERING
CONTRACTS AND AN APPENDIX OF FORMS OF
CONTRACT WITH EXPLANATORY NOTES

BY

W. VALENTINE BALL, M.A. (CANTAB.)

OF LINCOLN'S INN AND THE NORTH-EASTERN CIRCUIT, BARRISTER-AT-LAW
JOINT EDITOR OF "EMDEN'S BUILDING CONTRACTS," 4TH EDN.



LONDON

ARCHIBALD CONSTABLE AND COMPANY LTD

1909

TA 257
B3

GENERAL

**BRADBURY, AGNEW, & CO. LD., PRINTERS,
LONDON AND TONBRIDGE,**



PREFACE

HE who essays to write the law relating to engineers is beset with many difficulties. The statute book is of but little use as a work of reference; for, unlike the lawyer or the doctor, the engineer occupies no position recognised by the legislature. The powers and duties of a solicitor are defined by Act of Parliament: he owes fealty to the Incorporated Law Society. The registered medical practitioner is responsible to a statutory body known as the General Medical Council. But the engineer is legally beholden to no one. How then shall one define what is breach of professional duty on the part of an engineer?

The case law of England does not help much in the solution of this question. The engineer seldom figures in the Courts as a litigant. The Law Reports record but few actions for fees; nor is it easy to find reports of cases where engineers have been successfully or unsuccessfully charged with negligence. It would seem that, although engineers are daily engaged upon matters which involve enormous sums of money, and which frequently lead to litigation, the personal conduct of the engineer is but seldom called in question. If cases do occur in which the position of the engineer is discussed, they are generally referred to arbitration. The inquiry is then conducted, so far as the law reports are concerned, with closed doors; and no permanent or accessible record of the proceedings is preserved. Hence there are grave difficulties to be surmounted by any one who tries to write of the status or legal position of the engineer.

In spite of all these difficulties, the author has attempted, in Chaps. I., II., III. and V. of this work, to collect together all that can be said of the status of an engineer; his right to sue for fees; the terms of his employment; and his liability to actions for negligence.

He must leave it to his readers to say whether he has succeeded in explaining the legal position of the engineer in his private capacity.

There are, however, certain functions performed by the

engineer with regard to which it is possible to glean some information from the books in a lawyer's library. When employed in relation to works of any magnitude, he generally occupies the position of *quasi*-arbitrator between the employer and the contractor. In other words, he has to act in a semi-judicial capacity.

Again, he may come into direct contact with the administration of justice by being summoned to assist the Court as an expert witness.

Lastly, he is frequently employed as an arbitrator, or as a member of a Court consisting of two arbitrators and an umpire, in order to settle questions of a highly technical character between employers and contractors. It is apprehended that the proper discharge of all these duties will be greatly facilitated by some acquaintance with the law; and it is with the object of explaining his legal duties in these particulars that the author was induced to embark upon the task which is now completed.

A considerable portion of the present work (Chaps. VI. to XVIII.) is devoted to a general statement of the law relating to the class of contract with which the engineer is likely to be concerned in his daily work. It is only necessary to glance at any common form of contract to realise that the position of the engineer is of great importance. It is also a position of considerable delicacy. On the one hand, he has to protect the employer. He must take care that the specification is complied with; that proper material is used, and that time conditions are observed. On the other hand, he is morally bound to deal fairly by the contractor. An attempt has been made to explain the duties of the engineer in relation to these contracts in a style freed as far as possible from legal technicality. Wherever possible the author has preferred to quote the actual language used by the judges. Many of the cases cited relate to architects and building contracts. This was inevitable, and, it is submitted, justifiable. Inevitable, because cases actually affecting engineering works are (for reasons already given) few and far between; justifiable, because the relationship of engineer, employer, and contractor is closely allied to that of architect, building owner, and builder.

With a view to making his work as useful as possible, the author has endeavoured to link up his propositions with forms of contract which are in common use. The reader who is

studying the text is referred (by cross-references) to the material clauses in the forms printed in the Appendix; while an explanation of most of the difficult clauses in the forms will be found somewhere in the first part of the book. In the course of Chap. IV. the author has endeavoured to give a few hints to the engineer who is called upon to fill the difficult position of an expert witness. In making this attempt, he is fully conscious of the fact that he has undertaken to do a bold thing: namely, to teach the members of a great profession a part of their own business. Again, it may seem improper even to suggest that there can be more than one way of telling the truth! But there is more than one way of saying the same thing. There is a right way and a wrong way. The "expert" who appears in that capacity for the first time may choose the wrong way, to the discomfiture of those on whose behalf he has been retained. A few suggestions, therefore, made from the lawyer's point of view, may not be deemed inappropriate. In Chap. XX. an attempt is made to explain the duties and functions of an arbitrator. Engineers are frequently nominated to act in this capacity, and it is by no means an easy duty to discharge. It is hoped that the reader, by perusing this chapter before he takes upon himself "the burden of a reference," may lighten that burden in a material degree.

Most of the cases referred to have been found in the English reports; but with a view to making some points clear, the author has been compelled to cite Scotch and Irish decisions. He has also referred to a few important judgments delivered in Canada and the United States of America.

The "Suggested Rules of Etiquette," which are to be found on p. 5, were published in the *Electrical Review*, October 24, 1902. They closely resemble certain rules recently laid before the Institution of Civil Engineers which could not be embodied in this work as they were of a confidential nature.

The author desires to thank his brother, Mr. Robert S. Ball, and Mr. W. H. Patchell, M.I.C.E., for many valuable suggestions. He is also obliged to Mr. G. A. Layton, of the Middle Temple, for kindly reading the proofs.

W. V. B.

TABLE OF CONTENTS

CHAPTER I

THE STATUS OF AN ENGINEER

	PAGE
§ 1. "Engineer" defined... ..	1
§ 2. The engineering profession compared with other learned professions	2
§ 3. Who is a consulting engineer	3
§ 4. Engineer owning patents	4
§ 5. Suggested rules of professional etiquette... ..	5
§ 6. Civil engineers	6
§ 7. Resident engineers	6
§ 8. Powers of a resident engineer	7

CHAPTER II

THE FEES OF AN ENGINEER

§ 1. Implied contract to pay fees	9
§ 2. Various methods of providing for remuneration... ..	9
§ 3. The American practice	10
§ 4. Who is liable for the engineer's fees	10
§ 5. Where remuneration depends on a contingency... ..	11
§ 6. Amount of remuneration	12
§ 7. Fees when the employer fails to continue the employment	13
§ 8. When fees may be recovered	14
§ 9. When fees may be recovered back	15

CHAPTER III

THE EMPLOYMENT OF AN ENGINEER IN A SALARIED POST

§ 1. Preliminary	16
§ 2. The agreement—advisability of writing... ..	17
§ 3. Necessity for writing	17
§ 4. The written agreement—what it must contain... ..	18
§ 5. What signature necessary... ..	18
§ 6. Time for payment	19
§ 7. Obligation to keep a man employed	19
§ 8. Illness	20
§ 9. How the service may be determined	21
§ 10. Length of notice	21
§ 11. Effect of termination of employment on salary due	22
§ 12. Dismissal without notice	23

TABLE OF CONTENTS

	PAGE
§ 13. Measure of damages for wrongful dismissal	24
§ 14. Gratuitous service	25
§ 15. Secret commissions... ..	25
§ 16. Restrictive covenants—generally	26
§ 17. Where covenant too wide	27
§ 18. Principles of law as to restrictive covenants	27
§ 19. Disclosure of secrets by a servant	28
§ 20. Injunction to restrain the disclosure of confidential information ...	30
§ 21. Trade secrets protected by the Factory Act, 1901	30
§ 22. Rights of an engineer under the Workmen's Compensation Act ...	31
§ 23. Rights of a resident engineer as a tenant	31
§ 24. Employment of a marine engineer	31
§ 25. Agreement with a company to be formed	32
§ 26. Employment of an engineer in relation to a contract for works ...	32
§ 27. Employment of an engineer by local authorities	34
(a) Municipal corporations	34
(b) Urban authorities	35
Time for fixing seal	36
Penalty to be prescribed	36
Engineer not to be interested in contracts	36
(c) Employment by other local authorities	37
§ 28. Right to take out patents... ..	37

CHAPTER IV

THE ENGINEER AS WITNESS

§ 1. Generally	38
§ 2. Expert evidence—generally	38
§ 3. The duties of an expert witness—generally	39
§ 4. The expert should warn the clients of their difficulties	40
§ 5. Duty of expert in consultation	40
§ 6. Duty of expert in court	40
§ 7. Hints on prompting counsel	41
§ 8. Hints on giving evidence	41
§ 9. Views of an expert witness on expert evidence	42
§ 10. The use of documents to refresh the memory	42
§ 11. Cross-examination	43
§ 12. Previous statements of witness	43
§ 13. When a witness is justified in refusing to answer questions	44
§ 14. The use of plans and models	44
§ 15. Consequences of non-attendance... ..	44
§ 16. Fees and expenses of witness	45
§ 17. Who is liable for witness's expenses	45
§ 18. Witness subpoenaed but not called	46
§ 19. Fees and expenses in particular courts—generally	46
§ 20. In the High Court	47
§ 21. Special allowances to experts	47
§ 22. In the county court	48
§ 23. Criminal courts	49
§ 24. Parliamentary committees	49
§ 25. Courts of arbitration	50

TABLE OF CONTENTS

xi

CHAPTER V

ENGINEERS AND THE LAW OF NEGLIGENCE

		PAGE
§ 1.	Generally	51
§ 2.	Negligence of a consulting engineer	51
§ 3.	Degree of skill required	52
§ 4.	Engineer carrying out employer's orders	52
§ 5.	Engineer to know the law... ..	53
§ 6.	Negligence in supervising... ..	54
§ 7.	Negligence in preparing plans, estimates, etc... ..	54
§ 8.	Negligence in not certifying	55
§ 9.	Liability for acts of assistant	57
§ 10.	Who may sue the engineer for negligence	57
§ 11.	Measure of damages	59
§ 12.	Negligence of a station engineer	61
§ 13.	Liability for injuries to strangers	62

CHAPTER VI

ENGINEERING CONTRACTS GENERALLY DEALT WITH

§ 1.	Preliminary	63
§ 2.	Necessity for writing	64
§ 3.	Contract in more than one document	65
§ 4.	The parties	66
§ 5.	Disabilities of parties	66
§ 6.	Authority of persons contracting	66
§ 7.	Stamp duty	67
§ 8.	Form of contract	67
§ 9.	Consideration	69
§ 10.	Construction of a contract	69
§ 11.	Whether parol evidence admissible in relation to a written contract	70
§ 12.	Cases in which parol evidence has been admitted to explain written contracts	71
§ 13.	How far a custom may be imported	72
§ 14.	Customs held to be valid	72
§ 15.	Customs and usages held bad	73
§ 16.	Implied terms in contracts	73
§ 17.	What will not be implied	75
§ 18.	Rectification of contracts	75
§ 19.	Grave results of mistakes	75
§ 20.	When relief will be granted for mistake	76
§ 21.	Completion of contract	76
§ 22.	Failure to complete work on a lump-sum contract	77
§ 23.	Completion of a lump-sum contract	77
§ 24.	At what time the contract price may be recovered	79
§ 25.	Price where the contract is severable	79
§ 26.	Payment by instalments	80
§ 27.	What is a whole or completed work	80
§ 28.	Deviations from the contract and extras	81
§ 29.	Impracticability of the works	82
§ 30.	New contract arising out of an old contract	82
§ 31.	Work superior to contract... ..	83

	PAGE
§ 32. What conditions implied as to workmanship	83
§ 33. Summary of the law as to performance and completion of contracts	84
§ 34. Words and phrases used in contracts	85

CHAPTER VII

OLD MATERIALS ON THE SITE

§ 1. Preliminary	89
§ 2. Duty to clear away old materials	89
§ 3. Forms of clause relating to old materials	90
§ 4. Property in old materials	90
§ 5. Use of old materials in executing works	91
§ 6. Form of clause providing for the use of old materials...	91
§ 7. Clause to prevent the removal of materials	92

CHAPTER VIII

TENDERS

§ 1. Definition—whether writing necessary	93
§ 2. Advertisement for tenders... ..	94
§ 3. Statement of conditions to be observed on tendering	94
§ 4. Costs of preparing tender	95
§ 5. Withdrawal of invitation for tenders	95
§ 6. Preparation of form of tender	95
§ 7. Simple form of tender	96
§ 8. Necessity for care in preparing tender	96
§ 9. Effect of a tender	97
§ 10. Tenders for uncertain quantities... ..	97
§ 11. Withdrawal of a tender	97
§ 12. Damages for withdrawal of tender	99
§ 13. "The lowest tender"	99
§ 14. Fraud in relation to tender	101
§ 15. Agreements not to tender... ..	101
§ 16. Tenders to local authorities	102

CHAPTER IX

BILLS OF QUANTITIES

§ 1. Bill of quantities defined	104
§ 2. Duty of quantity surveyor	104
§ 3. Whether bound to disclose his calculations	105
§ 4. Liability of quantity surveyor	105
§ 5. Whether bills of quantities part of contract	107
§ 6. Accuracy of bills of quantities	108
§ 7. Clause drawing attention of the contractor to the bills of quantities	109
§ 8. Rectification of bills of quantities	109
§ 9. Who is to pay the quantity surveyor	109
§ 10. Amount of quantity surveyor's fees	111

TABLE OF CONTENTS

xiii

CHAPTER X

SPECIFICATIONS

		PAGE
§ 1.	Preliminary	112
§ 2.	Commencement of a specification	113
§ 3.	How far contractor bound by specification	113
§ 4.	Specification for "a sound machine"	115
§ 5.	How the specification becomes part of the contract	116
§ 6.	Works omitted from the specification not necessarily extra	116
§ 7.	Specification in contracts with urban authorities	117
§ 8.	Clause to secure conformity to specification	117
§ 9.	Consequences of negligence in drawing a specification	117
§ 10.	Fraud in relation to a specification	118

CHAPTER XI

PLANS, DRAWINGS, AND DESIGNS

§ 1.	Preliminary	120
§ 2.	Requirements as to drawings to be observed by persons tendering	120
§ 3.	Plans and drawings to be furnished by person tendering	121
§ 4.	Matters to be considered in the preparation of plans and designs	121
§ 5.	Plans are no warranty	121
§ 6.	Preliminary plans and sketches	122
§ 7.	Effect of approval of plans, etc., by employer	122
§ 8.	Plans for competition	123
§ 9.	Drawings part of the contract	123
§ 10.	Deviation from plans	124
§ 11.	Approval of plans by local authority	124
§ 12.	Compliance with statutes	124
§ 13.	Delay in supplying plans	125
§ 14.	Payment for plans where estimates exceeded	126
§ 15.	Payment for plans dependent on contingency	126
§ 16.	Property in plans and drawings	127

CHAPTER XII

EXTRAS AND ALTERATIONS

§ 1.	Generally	129
§ 2.	Terms of the contract as to extras	130
§ 3.	Extras in the case of a lump-sum contract	131
§ 4.	Extras where contract is under seal	132
§ 5.	Authority of engineer as to extras	132
§ 6.	How extras may be authorised	132
§ 7.	Extras wholly outside the contract	133
§ 8.	Limitation to the extra clause	133
§ 9.	Extras ordered by employer	134
§ 10.	Effect of final certificate on extras	134
§ 11.	Whether arbitration clause applies to extras	135

TABLE OF CONTENTS

CHAPTER XIII

TIME

	PAGE
§ 1. Generally	137
§ 2. Meaning of the terms "directly," "after" a given date, etc. ...	137
§ 3. Simple form of time clause	138
§ 4. Where the contract does not prescribe a particular time ...	138
§ 5. Effect of extras on time conditions	139
§ 6. Extension of time by engineer	140
§ 7. Result of failure to observe the time conditions	141

CHAPTER XIV

CERTIFICATES AND PAYMENT

§ 1. Generally	142
§ 2. Necessity for writing	143
§ 3. "Progress" certificates	143
§ 4. Form of progress certificate	144
§ 5. "Final" certificate... ..	145
§ 6. Must the engineer give reasons?... ..	146
§ 7. What amounts to a certificate	147
§ 8. Whether a certificate is an award	147
§ 9. Powers of the engineer limited by the contract	148
§ 10. No action for negligence in granting a certificate	149
§ 11. Finality of certificate	151
§ 12. Effect of arbitration clause on certificate	152
§ 13. Effect of certificate according to electrical engineers' conditions ...	154
§ 14. Fraud and collusion	154
§ 15. Bias of engineer	155
§ 16. Certificate, condition precedent to payment	157
§ 17. Payment contingent on quality of work	157
§ 18. Certificates and extras	158

CHAPTER XV

PENALTIES AND BONUSES

§ 1. Generally	160
§ 2. Legal effect of the penalty clause	161
§ 3. Penalty or liquidated damages	162
§ 4. Danger of imposing too large a penalty ..	162
§ 5. Principles deduced from the cases	163
§ 6. The framing of the penalty clause	163
§ 7. Severity of the penalty clause	164
§ 8. Interference by employer... ..	166
§ 9. Delay in commencing work	167
§ 10. Effect of a strike and advantage of strike clause	167
§ 11. Employer not to decide as to penalties... ..	168
§ 12. Powers and duties of the engineer	168
§ 13. Terms of the contract as to extension of time to be observed ...	170
§ 14. Penalties in contracts with local authorities	171
§ 15. Bonus clauses	171

TABLE OF CONTENTS

xv

CHAPTER XVI

MAINTENANCE AND DEFECT CLAUSES

	PAGE
§ 1. Preliminary	173
§ 2. Forms of maintenance clause	174
§ 3. Example of the effect of a maintenance clause... ..	175
§ 4. Maintenance of work not properly supervised	176
§ 5. Time for bringing action for failing to maintain	177
§ 6. Liability under a clause to rectify defects	177
§ 7. Defects after completion where there is no defect clause	178
§ 8. Form of defect clause	179
§ 9. Effect of clause on defects appearing after the stated period... ..	179
§ 10. Distinction between maintenance and defects clause... ..	180
§ 11. Liability under a repairing clause	180
§ 12. Contractor entitled to notice of want of repair	181
§ 13. Form of repairing clause	182
§ 14. When there is no defect or maintenance clause	182
§ 15. Claim for defects not barred by payment of or judgment for the contract price	183
§ 16. Effect of payments with knowledge of defects... ..	184
§ 17. Where employer has approved the work	184

CHAPTER XVII

SUB-CONTRACTORS AND SUB-CONTRACTING

§ 1. Preliminary	185
§ 2. Right of contractor to employ sub-contractors... ..	186
§ 3. Whether engineer has power to employ sub-contractors	186
§ 4. Clauses to prevent or regulate sub-contracting	187
§ 5. Liability of employer to sub-contractor... ..	187
§ 6. Rights of sub-contractor against head contractor	188
§ 7. Remuneration of sub-contractor	188
§ 8. Rights of sub-contractor where head contractor becomes insolvent... ..	189
§ 9. Liability of employer for delay of sub-contractor	190
§ 10. Sub-contractor's liability for delay	191
§ 11. Negligence of sub-contractor	192
§ 12. Accidents to sub-contractor's workmen	193

CHAPTER XVIII

THE ENGINEER'S ASSISTANT

§ 1. Generally	196
§ 2. Whether the contract gives any powers to an assistant	196
§ 3. Responsibility of engineer for acts of assistant	197
§ 4. Entire work of supervision not to be delegated	197
§ 5. Checking of materials on the site	198
§ 6. Duties of the engineer's assistant	198

TABLE OF CONTENTS

CHAPTER XIX

CONTRACTS RELATING TO THE SUPPLY OF ELECTRICITY AND
MACHINERY

	PAGE
§ 1. Preliminary	199
§ 2. Contracts to supply power... ..	199
§ 3. What is a "complete installation"	200
§ 4. What is "actual cost of generating light"	201
§ 5. Liability for fire and accidents	202
§ 6. Latent defects in machinery	203

CHAPTER XX

ARBITRATIONS AND AWARDS

I. PRELIMINARY

§ 1. The definition of an arbitration	205
--	-----

II. ARBITRATION BY ORDER OF COURT

§ 2. How there can be arbitration by order of Court	207
§ 3. Two kinds of reference by order of Court	207
§ 4. Appeal on a compulsory reference	208

III. ARBITRATIONS BY CONSENT OUT OF COURT

§ 5. Ordinary arbitrations, generally	208
§ 6. Submission defined... ..	208
§ 7. Enforcing submission	209
§ 8. What may be referred to arbitration	209
§ 9. Writing not necessary if Arbitration Act not to apply	210
§ 10. Jurisdiction of the Courts not ousted	210
§ 11. Arbitration clause strictly construed	212
§ 12. Effect of arbitration clause on sub-contractors... ..	212
§ 13. When the Court will revoke a submission	212

IV. THE APPOINTMENT OF AN ARBITRATOR

§ 14. Appointment of prejudiced person	214
§ 15. Submission to single arbitrator	215
§ 16. Submission to two arbitrators	215
§ 17. Death, etc., of arbitrator	215

V. THE FEES OF AN ARBITRATOR

§ 18. Preliminary observations as to fees	216
§ 19. How an arbitrator may enforce his claim for fees	216
§ 20. Power and duty of taxing officer as to fees	217
§ 21. Duty to specify items	217
§ 22. Fees should not be exorbitant	218
§ 23. What fees an engineer arbitrator may charge	219

VI. PROCEEDINGS BEFORE THE ARBITRATOR

§ 24. Conduct of proceedings	220
§ 25. Conduct of the arbitrator	221

TABLE OF CONTENTS

xvii

	PAGE
§ 26. Evidence in an arbitration	221
§ 27. Arbitrator may consult skilled persons	222

VII. THE ESSENTIAL FEATURES OF AN AWARD

§ 28. Generally	223
§ 29. Form of an award	223
§ 30. Requisites of a valid award	224
(a) An award must not exceed the submission	224
(b) An award must extend to all matters mentioned in the submission	225
(c) An award must be certain	226
(d) An award must be final	226
(e) An award must not be impossible, unreasonable, inconsistent, or illegal	227
§ 31. Time for making an award	227
§ 31A. Costs of an arbitration	228

VIII. THE EFFECT OF AN AWARD

§ 32. How far binding	229
§ 33. Enforcing an award	230

IX. SETTING ASIDE AN AWARD

§ 34. Grounds for setting award aside	230
§ 35. Corruption, misconduct, or bias	231
§ 36. Statement of a special case	231
§ 37. Requisites of a special case	232

APPENDIX

Form I. Form of general conditions for engineering work	235
IA. Short form of general conditions for engineering works... ..	245
IIA. Form of model general conditions for electricity works contracts approved by the Institution of Electrical Engineers... ..	247
IIB. Form of tender	266
IIC. Form of agreement	267
III. Agreement with an engineer for preparation of drawings, etc., for sewerage works	268

TABLE OF CASES

	PAGE		PAGE
ALLEN <i>v.</i> Yoxall	116	Brahmah <i>v.</i> Abingdon	187
Ames <i>v.</i> Milward	227	Brecknock and Abergavenny Canal Co. <i>v.</i> Pritchard	181
Andrews <i>v.</i> Eaton	228	Britain <i>v.</i> Rossiter	17
Appleby <i>v.</i> Myers	78	British Insulated Wire Co. <i>v.</i> Prescot Urban District Council	36
Armstrong <i>v.</i> Jones	60	British Thomson-Houston Co. <i>v.</i> West Bros.	170
Arnold <i>v.</i> Walker	154	British Waggon Co. <i>v.</i> Lea ..	186
Ashbury Carriage Co. <i>v.</i> Riche	66	Brocklebank <i>v.</i> Lancashire and Yorkshire Ry.	50
Attorney-General <i>v.</i> Briggs ..	8	Brown <i>v.</i> Laurie	115
<i>v.</i> Stewards		Brunlees <i>v.</i> Mersey Ry. Co. . .	33
& Co.	97	Bryant <i>v.</i> Flight	9, 25
<i>v.</i> Tewkes- bury Ry.	86	Buccleugh (Duke of) <i>v.</i> Metro- politan Board of Works ..	225
Ayr Road Trustees <i>v.</i> Adams	176	Buckingham <i>v.</i> Surrey and Hants Canal Co.	22
BANK of New Zealand <i>v.</i> Simp- son	72	Budgett <i>v.</i> Binnington & Co.	168
Banks <i>v.</i> Banks	222	Bulawayo Municipality <i>v.</i> Bulawayo Waterworks. . . .	201
Barnes <i>v.</i> Youngs	213	Bullock <i>v.</i> Dommitt	181
Barr <i>v.</i> Dumferline Ry.	74	Burn <i>v.</i> Miller	82
Batterbury <i>v.</i> Vyse	154	Burr <i>v.</i> Ridout	13, 14
Baxters and Midland Ry. Co.	232	Burrell <i>v.</i> Russell	71
Beattie <i>v.</i> Gilroy	11	Bywaters <i>v.</i> Carnick	172
Belcher <i>v.</i> Roedean School ..	214	CALEDONIAN Ry. Co. <i>v.</i> Lockhart	222
Bemrose, <i>Re</i> , Ford <i>v.</i> Bemrose	104, 108	Callo <i>v.</i> Brouncker	23
Bentley <i>v.</i> Metcalfe	199	Cape of Good Hope Govern- ment <i>v.</i> Hills	163
Bird <i>v.</i> Bird	225	Carlisle, <i>Re</i> , Clegg <i>v.</i> Clegg ..	213
<i>v.</i> McGaheg	9	Carpenter and Bristol Corpo- ration, <i>Re</i>	232
Birdseye <i>v.</i> Dover Harbour Commissioners	109	Caucasian Co., <i>Ex parte</i>	230
Bolt <i>v.</i> Thomas	58, 106	Chamberlayne <i>v.</i> Collins	87
Boody <i>v.</i> Rutland and Bur- lington	131	Chambers <i>v.</i> Goldthorpe ..	150, 151
Boston Deep Sea Fishing Co. <i>v.</i> Ansell	25, 32		
Botterill <i>v.</i> Whytehead	2		
Bozson <i>v.</i> Altrincham Urban District Council	94		
Brace <i>v.</i> Calder	25		

TABLE OF CASES

	PAGE		PAGE
Champion <i>v.</i> Plummer	18	Eaton <i>v.</i> Basker	35
Chandler <i>v.</i> Webster	85	Ebby <i>v.</i> McGowan	73, 127
Clark <i>v.</i> Bulmer	64	Eccles <i>v.</i> Southern	188
Cobb <i>v.</i> Beck	57	Edinburgh Magistrates <i>v.</i> Lownie	214
Columbus Co. <i>v.</i> Clowes	15, 55	Ellis <i>v.</i> Hamlen	124
Connor <i>v.</i> Belfast Water Com- missioners	135	Elmes <i>v.</i> Burgh Market Co.	143
Cooke <i>v.</i> Cholmondeley	86	Emery <i>v.</i> Wase	223
Cooper <i>v.</i> Langdon	124, 132	Evans <i>v.</i> Harlow	2
Cort <i>v.</i> Holford	200	Ewing <i>v.</i> Hanbury	76
Cowan <i>v.</i> Goderich Northern Gravel Road Co.	186	FARNSWORTH <i>v.</i> Garrard	12
Crabb <i>v.</i> Brinsley	59	Fernley <i>v.</i> Branson	218
Crosshaw <i>v.</i> Pritchard	73, 97	Fisher <i>v.</i> Ford	139
Cross <i>v.</i> Leeds Corporation ..	156	Folkes <i>v.</i> Chadd	39
Cubitt <i>v.</i> Smith	125	Ford <i>v.</i> Beech	69
Cuckson <i>v.</i> Stones	20	— <i>v.</i> Cotesworth	138
Cummings <i>v.</i> Heard	230	Forman & Co. <i>v.</i> Liddesdale ..	77
Cutler <i>v.</i> Close	12	Foxall <i>v.</i> International Land Credit Co.	22
Cutter <i>v.</i> Powell	73, 84	Freeman & Son <i>v.</i> Hensler ..	84
DARTFORD Guardians <i>v.</i> Trickett	96	Fulham Borough Council <i>v.</i> National Electric Co. ..	193, 202
Davis <i>v.</i> Hedges	183	GIBBON <i>v.</i> Pease	127
— <i>v.</i> Mayor, etc., of Bromley	124	Gilbert <i>v.</i> Wright	217
— <i>v.</i> New York Steam Co.	14	Goff <i>v.</i> Mills	45
De Morgan, Snell & Co. and Rio de Janeiro Flour Mills Co.	7	Goodwins <i>v.</i> Brand	212
Dicas <i>v.</i> Lawson	45	Goodyear <i>v.</i> Weymouth Cor- poration	158, 178
Digby <i>v.</i> Atkinson	181	Gordon <i>v.</i> Jennings	88
Dixon <i>v.</i> Hatfield	188	Graham <i>v.</i> The Commissioners of Works	57, 198
Dodd <i>v.</i> Churton	139, 166	Green & Co., <i>Re</i> , Balfour & Co.	225
Doe <i>v.</i> Horner	225	Greenwood <i>v.</i> Hawkins	194
Dole <i>v.</i> Johnson	38	Gregg <i>v.</i> Gardner	46
Dossett <i>v.</i> Gingell	218	Gwyther <i>v.</i> Gaze	73, 111
Dowling <i>v.</i> Pontypool Ry. ..	86	HALL <i>v.</i> Burke	83
Down <i>v.</i> Pinto	22	Hall and Hinds, <i>In re</i>	233
Drew <i>v.</i> Josolyne	50	Halliday <i>v.</i> National Tele- phone Co.	194
Driscoll <i>v.</i> Australian Mail Co.	32	Hare, <i>Re</i>	223
Dunaberg <i>v.</i> Hopkins, Gilkes & Co.	151	Harold <i>v.</i> Watney	62
Duncan <i>v.</i> Blundell	13, 122	Harris <i>v.</i> Nickerson	95
— <i>v.</i> Topham	137	Harrison <i>v.</i> Creswick	225
EAST Stonehouse Local Board <i>v.</i> Victoria Brewery Co. ..	46	— <i>v.</i> Eaton	232

TABLE OF CASES

xxi

	PAGE		PAGE
Harvey <i>v.</i> Lawrence	91	Kirchner <i>v.</i> Venus	72
Heald's Case	37	Knight <i>v.</i> Gravesend Water Co.	74
Helmore <i>v.</i> Smith	30	LAGERWALL <i>v.</i> Wilkinson	19
Henthorn <i>v.</i> Fraser	98	Lakeman <i>v.</i> Mountstephen	65
Hitchin <i>v.</i> Groom	70	Lamb <i>v.</i> Evans	30
Hobbs <i>v.</i> Turner	189	Lamburn <i>v.</i> Cruden	22
Hobson <i>v.</i> Cowley	21	Lamphier <i>v.</i> Phipos	52
Hochster <i>v.</i> De la Tour	84	Lamprell <i>v.</i> Billericay Union	85
Hohenzollern Gesellschaft <i>v.</i> London Contract Corpora- tion	153	Landauer <i>v.</i> Asser	232
Holland <i>v.</i> Lazarus	86	Landless <i>v.</i> Wilson	14, 123
Holme <i>v.</i> Guppy	84, 167	Law <i>v.</i> Local Board of Red- ditch	162
Horner <i>v.</i> Graves	27	Lawson <i>v.</i> Wallasey Local Board	151, 169
Horton <i>v.</i> Hemsley	14	Laythoarp <i>v.</i> Bryant	18
Hovenden <i>v.</i> Millhoff	26	Lee <i>v.</i> Elkins	227
Hulse <i>v.</i> Hulse	25	— <i>v.</i> Everest	45
Humphreys <i>v.</i> Jones and Pickering	77	— <i>v.</i> Griffin	65
Hunt <i>v.</i> Wimbledon Local Board	35, 127	Leslie <i>v.</i> Metropolitan Asylums District	191
Hydraulic Co. <i>v.</i> Spencer	115	Lester <i>v.</i> Garland	138
Hydraulic Engineering Co. <i>v.</i> McHaffie	137, 191	Lewis <i>v.</i> Brass	99
IND, Coop & Co. <i>v.</i> Hamblin	85	— <i>v.</i> Hoare	86
Inglis <i>v.</i> Buttery	87	Llandrindod Wells Water Co. <i>v.</i> Hawksley	219
Islington Union <i>v.</i> Brentnall and Cleland	98	London and South Western Ry. <i>v.</i> Flour	87
Ives <i>v.</i> Willans	213	London Shipping Co. <i>v.</i> John Duffus	175
JACKSON <i>v.</i> Barry Ry. Co.	155	Lord Bateman <i>v.</i> Thompson	178, 184
— <i>v.</i> Eastbourne Local Board	74	Lord North's case	57
— <i>v.</i> Lowe	18	Lorden <i>v.</i> Pryce	135, 146
Jameson <i>v.</i> Simon	54, 57, 198, 240	Lovelock <i>v.</i> King	134
Jephson <i>v.</i> Hawkins	232	Ludbrook <i>v.</i> Barrett	154
Johnstone <i>v.</i> Milling	181	Luxmore <i>v.</i> Robson	177
Jones <i>v.</i> Bright	182	Lysaght <i>v.</i> Pearson	85
— <i>v.</i> North	101	McAlpine <i>v.</i> Lanarkshire, etc., Ry.	75
— <i>v.</i> St. John's College	73, 139, 164	McConnell <i>v.</i> Kilgallen	111
KELLETT <i>v.</i> Mayor of Stock- port	32	McDonald <i>v.</i> Workington Cor- poration	147, 157
— <i>v.</i> New Mills Urban District Council	55, 149, 155	Macdonell <i>v.</i> Marsden	24
King <i>v.</i> Parker	88	Macintosh <i>v.</i> Midland Coun- ties Ry. Co.	172
Kingdom <i>v.</i> Cox	125	Macintyre <i>v.</i> Barnes	85
Kingston-upon-Hull Guar- dians <i>v.</i> Petch	99	M'Intyre <i>v.</i> Gallacher	192

	PAGE		PAGE
Mackersy v. Ramsays	57	Paterson v. Gandasequi	187
Mackley v. Chillingworth ..	47	Patman and Fotheringham v.	
Makin v. Watkinson	181	Pilditch	107
Manchester Bonded Ware-		Pauling v. Pontifex	99
house Co. v. Carr	88	Payne v. Wright	87
Mansfield v. Doolin	212	Pearce v. Gardner	18
— v. New York Cen-		Pearson v. Dublin Corporation	118,
tral Ry. Co.	167		122
Manson v. Baillie	9	Pell v. Daubney	46
Marshall and Naylor's Patent	37	Pierce v. Jersey Waterworks	
Mason, Ltd. v. Lovatt	217	Co.	66
Mellish v. Motteaux	87	Planché v. Colburn	84
Melliss v. Shirley Local Board	36	Ponsford v. Swaine	216
Mellor v. Brittain	111	Portman v. Middleton	191
Metcalf v. Bouck	102	Powell v. Double	85
Mitchell v. Guildford Union	190	Prebble, <i>In re</i>	228
— v. Reynolds	27	Priestley v. Stone	104, 105
Moffatt v. Dickson	11	Prince of Wales Dry Dock Co.	
— v. Laurie 11, 122,	127	v. Fownes Forge and En-	
Money Penny v. Hartland .. 13,	55,	gineering Co.	193
	117, 126		
Monks v. Dillon	53	R. v. Norwich Corporation ..	35
Morgan v. Birnie	147	R. v. Peto	133
Morison v. Moat	28	— v. Roberts (<i>Ex parte</i> Bailey)	100
Morphett, <i>Re</i>	228	— v. Winterset	20
Mosdell v. Mitchell	61	Randall v. Trimen	59, 133
Moseley v. Simpson	221	Randell v. Newson	204
Munro v. Butt	140	Ranger v. Great Western Ry.	156,
Myers v. Sarl. 70, 88,	132		197, 214
		Reeve v. Reeve	25
NEELON v. Toronto City	68	Reid v. Batte	131
Neill v. Midland Ry. Co.	76	Reynolds, <i>Ex parte</i>	44
Nelson v. Spooner 13, 55,	126	Richards v. May	135, 158
Newfoundland Government v.		Richardson v. Mahon 144,	169
Newfoundland Ry. 77,	79	Ridoat v. Pye	222
Newman, <i>In re, Ex parte</i>		Rigby v. Bristol (Mayor)	129
Capper	162	Ripley v. Great Northern Ry.	211
Newton v. Forster	91	— v. Lordon	157
— v. Harland	45	Robb v. Green	29
North v. Bassett	73, 109	Roberts v. Bury Commis-	
Northampton Gas Light Co.		sioners .. 125, 151, 152,	167
v. Parnell	147, 148	— v. Havelock	79
		— v. Watkins	143
PALMER and Hoskin, <i>In re.</i> ..	232	Robins v. Goddard	152, 154
Panama Co. v. India Rubber		Rogers v. James	58, 150
Co.	6	Rolland v. Cassidy	223
Pappa v. Rose	149	Ross v. Boards	227
Parbery v. Newnham	228	Roux v. Colonial Government	180
Parsons v. Sexton	157	Russell v. Sa da Bandeira .. 86,	132,
Pashby v. Birmingham Cor-			133, 166
poration	135	Ryan v. Dolan	48

TABLE OF CASES

xxiii

	PAGE		PAGE
SADLER <i>v.</i> Smith	210	Tasker <i>v.</i> Shepherd	21
Salford (Mayor of) <i>v.</i> Lever..	101	Tate <i>v.</i> Latham	86
Sanders <i>v.</i> St. Neots Union..	37	Tergeste, The	79
Sattin <i>v.</i> Poole	140	Tharsis Sulphur and Copper	
Saunders <i>v.</i> Broadstairs Local		Co. <i>v.</i> M'Elroy	83, 114, 143
Board	60, 197	Tharsis Sulphur Co. <i>v.</i> Loftus	149, 158
School Board for London <i>v.</i>		Johnson	176
Northcroft	52, 105, 106	Thomas <i>v.</i> Williams	21
Schumann, <i>Ex parte, In re</i>		Thompson <i>v.</i> Gibson	87
Foster & Co.	21	Thorn <i>v.</i> Mayor of London . .	73, 113, 122
Scott <i>v.</i> Liverpool Corporation	206	Thornhill <i>v.</i> Neats	166
Scrivener <i>v.</i> Pask	104, 114	Thornton <i>v.</i> Hornby	226
Seaton Brick Co. <i>v.</i> Mitchell..	97	Tomlin <i>v.</i> Mayor of Fordwick	225
Sharman <i>v.</i> Bell	232	Trent and Humber Company,	
Sharp <i>v.</i> Great Western Ry.	179	<i>In re</i>	60
Sharpe <i>v.</i> San Paulo Ry. Co.	114, 133	Turner <i>v.</i> Garland	13, 53
Sheridan <i>v.</i> Nagle	232	— <i>v.</i> Goldsmith	19
Sherren <i>v.</i> Harrison	108		
Shipman <i>v.</i> District of Colum-		UNDERWOOD, etc., Ry. Co., <i>Re</i>	223
bia	90		
Simpson <i>v.</i> Margitson	138	VAUGHAN <i>v.</i> Brine	45
Smith <i>v.</i> Barton	123	Vawdrey <i>v.</i> Simpson	213
— <i>v.</i> Buller	48		
— <i>v.</i> Gold Coast and		WADSWORTH <i>v.</i> Smith	147
Ashanti Explorers, Ltd.	18	Wain <i>v.</i> Warlters	18
— <i>v.</i> Thompson	24	Wakefield <i>v.</i> Llanelly Ry. Co.	222
Snelling <i>v.</i> Lord Huntingfield	18	Walker, <i>Re</i>	87
Soothill Urban District Council		— <i>v.</i> Giles	70
<i>v.</i> Wakefield Rural District		Wallace <i>v.</i> Brandon and By-	
Council	117	shottles Urban District	
South Hetton Coal Co. <i>v.</i>		Council	145
Haswell	100	Wallis <i>v.</i> Smith	84, 87, 162
Spencer <i>v.</i> Harding	99	Wandsworth District Board <i>v.</i>	
Stegman <i>v.</i> O'Connor	85	Heaver	35
Stenning <i>v.</i> Mitchell	12, 111	Ward <i>v.</i> Lowndes	123
Stephens <i>v.</i> Harris	88	— <i>v.</i> Secretary of State for	
Stevens <i>v.</i> Taylor	125	War	228
Stevenson <i>v.</i> Watson	146, 149	Ware <i>v.</i> Lyttleton Harbour	
Stirling <i>v.</i> Maitland	74	Board	171
Storey <i>v.</i> Fulham Steel Works	20, 24	Waters <i>v.</i> Towers	141
Stubbs <i>v.</i> Holywell Ry. Co. . .	19	Watson <i>v.</i> Watson	226
Sumpter <i>v.</i> Hedges	77, 84	Wells <i>v.</i> Army and Navy	
Sun Insurance Co. <i>v.</i> Dublin		Stores	167, 168
Corporation	61	Westwood, <i>Re</i>	219
Symonds <i>v.</i> Lloyd	71	— <i>v.</i> Secretary of State	
		for India	165, 211
TANCRED, Arrol & Co. <i>v.</i> The		White <i>v.</i> Arthur	162
Steel Co. of Scotland, Ltd.	81		

TABLE OF CASES

	PAGE		PAGE
White <i>v.</i> Bayley.....	31	Windhill Local Board of Health <i>v.</i> Vint	69
Whiteley <i>v.</i> Barley	36	Wohlenberg <i>v.</i> Lageman	226
Wilkinson, <i>Re, Ex parte</i> Fowler.....	189	Woodward <i>v.</i> Buchanan	188
Willesden, <i>In re</i>	230	Workman <i>v.</i> Belfast Harbour Commissioners	213
Williams <i>v.</i> Barmouth Urban Council	132	YOUNG <i>v.</i> Blake	59, 106, 111
——— <i>v.</i> Fitzmaurice ..	80, 114	——— <i>v.</i> Royal Leamington Spa.....	35, 171
Willson <i>v.</i> Love.....	162	——— <i>v.</i> Smith.....	109, 110
Wilmot <i>v.</i> Smith	83, 131		
Wimshurst <i>v.</i> Deely	116		

ABBREVIATIONS USED IN THIS WORK

- A. & E. Adolphus & Ellis' Reports, King's Bench (1834—1840).
B. & Ad. Barnewall & Adolphus' Reports.
B. & Ald. Barnewall & Alderson's Reports.
B. & S. Best & Smith's Reports.
C. B. Common Bench Reports (1845—1856).
C. B. N. S. Common Bench, New Series (1856—1865).
C. & E. Cababé & Ellis' Reports.
C. P. Common Pleas.
C. P. D. Law Reports, Common Pleas Division.
Ch. D. Law Reports, Chancery Division.
[1898] 1 Ch. Law Reports, Chancery Division.
E. & B. Ellis & Blackburn's Reports.
- Emden's Building
Contracts Emden's Building Contracts, Building Leases, and
Building Statutes (4th ed.). By J. B. Matthews
and W. Valentine Ball. Butterworth & Co.
- F. & F. Foster & Finlason's Reports.
H. B. C. Hudson's Building Contracts (3rd ed.), 2 vols.
Sweet & Maxwell.
H. & C. Hurlstone & Coltman's Reports.
I. R. Irish Reports.
Ir. L. R. Irish Law Reports.
Jur. Jurist Reports.
L. C. B. Lower Canada Reports.
L. J. Q. B. Law Journal, Queen's Bench.

xxvi ABBREVIATIONS USED IN THIS WORK

- L. R. Ch. Law Reports, Chancery.
L. R. C. P. Law Reports, Common Pleas.
L. R. Eq. Law Reports, Equity Cases.
L. R. Ex. Exchequer.
L. R. H. L. English and Irish Appeal Cases.
L. T. Law Times.
Q. B. D. Law Reports, Queen's Bench Division, 1891 onward.
Sm. L. C. Smith's Leading Cases.
T. L. R. Times Law Reports.
W. N. Weekly Notes.



THE LAW AFFECTING ENGINEERS

CHAPTER I

THE STATUS OF AN ENGINEER

	PAGE		PAGE
§ 1. Engineer defined	1	§ 5. Suggested rules of profes- sional etiquette	5
§ 2. The engineering profession compared with other learned professions	2	§ 6. Civil engineers	6
§ 3. Who is a consulting engineer	3	§ 7. Resident engineers... ..	6
§ 4. Engineer owning patents ...	4	§ 8. Powers of a resident engi- neer	7

§ 1. **Engineer defined.**—Etymologically, the word “engineer” is probably an immediate adaptation of the French “Ingénieur,” or the Italian “Ingegnere.” As it is a general term which bears a variety of meanings, persons who have devoted themselves to particular branches of the profession are wont to choose a more definitive title. Thus we have the terms “civil engineer”; “mechanical engineer”; “electrical engineer”; “mining engineer”; “marine engineer”; and “railway engineer.” Last, but not least, we are accustomed to hear the phrase “consulting engineer.” In what particular branch of the profession he holds himself out for consultation does not always appear. Nor is it necessary that he shall have any particular experience in the art of consulting or advising in consultation. Any man can assume this imposing title; and there is no disciplinary body to whom the persons who consult him can complain if they find out that he has no qualification either as an engineer or as a consultant.

Seeing then that anyone can call himself “engineer” or “consulting engineer,” it is manifest that no universal standard of conduct can be laid down to apply to all who

adopt this title. The driver of a locomotive is insulted if he is not called "engineer"; the wireman boasts the proud title "electrical engineer" on his bill-heads. Indeed, he frequently adds the word "consultant" as well.

If the public are deceived by the use of these imposing titles, they have only themselves to blame.

There are no cases reported in the law reports which bear very closely upon the right of a man to call himself an engineer.

In one old case (*Evans v. Harlow*, 5 Q. B. 624), the plaintiff, who carried on the "trade" of an engineer, sold in the way of his trade goods called "self-acting tallow syphons or lubricators." The defendant published a statement alleging that the lubricator in question was not the subject of a patent, and generally decrying it. The plaintiff sued for libel, when it was held that this was not a libel upon him in the way of his trade, but only a libel on the lubricators, and therefore not actionable without proof of special damage. It has been held, however, that to say of an architect employed to build a church "he has no experience in church work" is actionable as a libel (*Botterill v. Whytehead*, 41 L. T. 588). (As to the negligence of an engineer, see Chap. V., § 2, *post*).

§ 2. The engineering profession compared with other learned professions.—Whatever the code of professional ethics may prescribe, the statute book lays down no rules to guide engineers or their clients. Touting and advertising offend against no Act of Parliament; and it is in this respect that, for good or ill, there is a great difference between the brotherhood of engineers and the other learned professions.

The General Medical Council, for example, exercises certain disciplinary powers over registered medical practitioners. If a doctor is guilty of infamous conduct in a professional respect, he may be deprived of the right to practise. It has been held, moreover, that the powers of this Council are not limited to matters which would be dealt with in the law courts. Thus a doctor who advertises can be struck off the register.

Again, the State exercises control over those who practise dentistry. A man who improperly assumes the title of dentist may be struck off the register, while it has lately been decided that anyone who adopts a title which is calculated to

lead the public to believe that he is qualified as a dentist in the popular sense may be prosecuted and fined. In the profession of the law the Incorporated Law Society can deal with solicitors, while the benchers of the Inns of Court have power to supervise the action of every member of the Bar. But the engineering profession has no domestic body to control and prescribe rules of conduct for its members.

§ 3. Who is a consulting engineer.—The first difficulty attending the enforcement of rules for professional conduct would be the definition of the term “consulting engineer.” As we have already pointed out, anyone may adopt this high-sounding title; and, apparently, the persons who consult him have no right to complain if they find out that the consultant has no semblance of a qualification. Amongst the leaders of the profession it would seem that the phrase “consulting engineer” has a well-defined meaning. Sir Alexander Kennedy, in addressing a body of students in 1903, said: “Among engineers who may be called consultants I would include not only men who work independently, like myself, but also the great army of borough engineers of all classes—of engineers to municipal works of every kind, and of engineers to companies or firms who are not manufacturers.

“All these men, although they are not strictly consulting engineers, at least belong to a class distinct from manufacturers, and it is their kind of work which I know most about, and desire to speak of. Their business is generally to scheme out plans for carrying out works; to draw up the specification in which these plans are, or ought to be, described; to superintend the work as it goes on; and in general to formulate what they or their employers want to be done, and then to see that it is properly done. Very often, besides, they have the interesting experience of being actually users of the works that they have schemed out.”

If it were possible to limit the right to use the title “consulting engineer” to persons having these qualifications, it would not be difficult to enforce rules of etiquette. The medical practitioner who has a degree knows that the use of that degree will be protected. He knows that no mere layman can call himself “doctor” or “surgeon”; but he knows more. He can rely upon the General Medical Council to punish any of his professional brethren who ignore the unwritten code of

professional ethics. But what does it avail the engineering profession to set up a standard which can be set at naught by any outsider who chooses to enter the lists as a consultant? That rules of professional conduct would be honoured in the observance may be admitted; but that there is any prospect of their becoming so universally honoured as to lead the public to attach a special meaning to the word "consultant" is too much to hope.

Sir Alexander Kennedy—according to the speech above referred to—would inculcate these excellent principles in the minds of all those who are entering the profession. Witness the following passage:—"If you are consulting engineers also you have absolutely no business and no right to be interested in any way whatever in any manufacturer's firm from whom you can possibly buy anything. Many of the manufacturing concerns are limited companies, and sometimes it may be very tempting to take up shares in them when you know that their work is good; but clearly it would not do for anybody who was going to specify work to be a shareholder in a firm who might possibly tender to his specification. However free from prejudices your mind might, in fact, be, it is necessary for you not only to avoid wrong, but also to avoid even the appearance of it. There is yet another matter which perhaps I ought to mention. There is a very strong temptation to a young man conscious not only of his own merits and abilities, but conscious also that he wants to get married and to make money, and that as yet he is known to but few people, to tout round for business. That is a thing which must not be. There is, unfortunately, no definite rule, as in the legal and medical professions, against it; but everybody who does so will be sorry afterwards. It is, of course, a very undesirable thing that business should not come your way, but should go to some other fellow who is not nearly so clever or virtuous as you are. I hope that such experience will not be yours; but, even at the worst, you will find it the best policy in the long run—to put the matter on the lowest basis—to do nothing in your own profession which would not be tolerated in any of the other great professions with which we wish to feel ourselves on an equality."

§ 4. Engineer owning patents.—With regard to an engineer owning patents, Sir Alexander said (in the speech above

referred to):—"In the first place, it is a very dangerous thing for you to own any patents in your own line, no matter how ingenious they are, if you are going to take to consulting work. You cannot put a patent of your own in your specifications, and you cannot use it at all without disagreeable things being afterwards said. If you are going to advise the use of things to other people, you cannot, as professional men, advise the use of things out of which you are going to make money; and it is very undesirable, on many grounds, therefore, that you should be the financial owners, or the beneficial owners, of such patents. Of course, if you are engineers to works, the matter may be different, although in every case it requires to be definitely arranged with your directors."

§ 5. Suggested rules of professional etiquette.—A special committee of the Institution of Civil Engineers suggested the following rules for members in 1902:—

1.—No consulting engineer should solicit employment as consulting engineer verbally, by letter, by agent paid by commission or otherwise, or by any other means.

2.—No consulting engineer should answer advertisements for consulting engineers.

3.—No consulting engineer should advertise for employment.

4.—No consulting engineer should pay by commission or otherwise anyone who introduces clients.

5.—No consulting engineer should receive trade or other discount, or surreptitious commissions or allowances in connection with any works which he superintends.

6.—A consulting engineer who is also directly or indirectly interested in any contracting or manufacturing business should inform his client in writing what his connection is with such contractor. (As to the origin of these rules, see note in *Preface*.)

Assuming that all these rules, which appear to follow the lines suggested by Sir Alexander Kennedy, were to be incorporated in the bye-laws of the Institution, they could only be enforced as against members of that body. To other engineers, the first three are mere suggestions for the guidance of members of an honourable profession. The last two rules above referred to are in quite a different category. With regard to (5), an engineer acting in

contravention of this rule would not only bring himself within the Prevention of Corruption Act, and so be amenable to the criminal law, but he would also be guilty of a breach of his legal duty to his employer. In one reported case (*Panama, etc., Telegraph Co. v. India Rubber Co.*, 1875, L. R. 10 Ch. 515) an engineer received a commission from a contractor. It was held that this was a fraud which entitled the employer to have the contract rescinded. (See further as to secret commission, Chap. III., § 15, *post*). Moreover, the Court will not inquire into the motive of the person who gives a bribe, and there is an irrefutable presumption that the person receiving it was influenced by it.

As to the sixth rule, the question whether an engineer would be under a legal duty to disclose his interest is not quite so clear. It is submitted, however, that if an engineer were to introduce a contractor in whose business he had a large share he would be guilty of a breach of duty if he did not disclose the fact. The employer not unnaturally looks to the engineer to select the contractor whose tender is the most favourable from every point of view. How could an engineer justify an appointment if it were shown that he himself were a participator in some of the profits? (As to the effect of fraud and collusion in granting certificates, and in relation to contracts generally, see Chap. XIV., §§ 14, 15, *post*; and as to bias of an arbitrator, see Chap. XX., § 35.)

§ 6. **Civil engineers.**—A civil engineer has been defined (*O. Masselin on Responsabilité des Architectes*, s. 38) to be “a man who has, or professes, knowledge of the design and construction of works not falling within the definition of dwelling-houses and churches, or like edifices, *i.e.*, of bridges, docks, harbours, canals, railways, roads, embankments, water, drainage, and gas works, and factories.” He need have no diploma in England.

§ 7. **Resident engineers.**—It is pointed out in a well-known work (*Hudson on Building Contracts*, vol. i., p. 32) that: “In the case of engineering works it is common to have a resident engineer upon the works with considerable power of supervision and rejection. Such a resident engineer may be a mere servant or agent of the building owners, or he may be in an independent position. If he acts in the latter capacity

(without any interference on the part of the building owners) the owners are not liable for his acts. If he is merely subordinate to the engineer, or is in an independent position like an engineer, then the same rules apply to him as apply to engineers and architects generally, that is to say, for example, he is under no liability to the contractor, if he acts honestly."

§ 8. Powers of a resident engineer — A contract for the erection of large works may necessitate the appointment of a resident engineer. If he is independent, his mistakes will not make his employers liable. In the case of *De Morgan, Snell & Co. and Rio de Janeiro Flour Mills Co.*, 1892, 2 H. B. C., 198, the plaintiffs contracted to erect works in Brazil for the Rio Flour Mills Co. By the contract, a resident engineer was appointed to superintend the construction of the works. The resident was appointed by, and was subordinate to, the chief engineer, who was in England. The contractor sustained damage in consequence of honest errors made by the resident engineer. It was held that the resident engineer was not a mere servant or agent of the defendant company, but was in an independent position, and that the company were not liable for any damage or delay caused to the contractor by any honest error made by him in the exercise of his duties, without any interference on the part of the company.

The resident engineer may, however, assume the character of an assistant (as to whom, see Chap. XIX., *post*), and then his certificate or his approval will not necessarily bind the employers. This point is illustrated by a case which arose out of the excavation of a railway tunnel in the neighbourhood of Birmingham. It appeared that a railway company, having constructed the tunnel, sold the superincumbent land to one Briggs on the express understanding that he was to erect no building and make no excavation, unless in accordance with a specification approved by the principal engineer. The principal engineer at that time was Mr. Brunel, who had a number of assistants, amongst whom was a Mr. Hewitt, the resident engineer. Some months after he purchased the lands, Briggs sent in plans to the resident for the approval of the principal engineer. The resident never did in fact submit them for approval, but told Briggs verbally that he might proceed. Subsequently the company's solicitors, finding that

building operations were proceeding, caused the plans to be submitted for the first time to the principal engineer, who at once condemned them as dangerous to the tunnel. As Briggs insisted on proceeding, an action was brought for an injunction to restrain him. It was held that the approval of the company's resident engineer was not binding on the company, the Court being satisfied that Briggs knew that Brunel was the principal engineer. In giving judgment, Sir W. P. Wood, V.-C., said:—"It would be carrying the doctrine of acquiescence beyond all precedent to hold the company bound by Hewitt's verbal approbation. If indeed Brunel had said so,—if the plans had been laid before Brunel, and he had approved of them, although verbally only, the Court might have refused to assist the company; or if Brunel had on the spot verbally sanctioned the defendant's proceedings, the Court might have declined to act on the difference between a verbal and a written consent, for the permission would, at any rate, have been given by the agent specially appointed for the express purpose. . . . The evidence of Brunel as to the danger to be apprehended from Briggs' plan was entirely unshaken" (*Attorney-General v. Briggs*, 1855, 1 Jur. 1084). The moral of this case is that the powers and duties of a resident engineer should be clearly laid down in the contract. When a contract is submitted for his approval, the engineer should also be at pains to see that his right to appoint and control the resident is expressly reserved.

CHAPTER II

THE FEES OF AN ENGINEER

	PAGE		PAGE
§ 1. Implied contract to pay fees	9	§ 6. Amount of remuneration ...	12
§ 2. Various methods of providing for remuneration ...	9	§ 7. Fees when the employer fails to continue the employment	13
§ 3. The American practice ...	10	§ 8. When fees may be recovered	14
§ 4. Who is liable for the engineer's fees... ..	10	§ 9. When fees may be recovered back	15
§ 5. Where remuneration depends on a contingency...	11		

§ 1. **Implied contract to pay fees.**—The mere fact that a professional man is employed implies an agreement to pay him reasonable remuneration (*Manson v. Baillie*, 1855, 2 Mac. H. L. Ca. 80). If it is agreed that the employer is to settle the amount of remuneration, the Court will not allow the employer to act unreasonably, but will leave it to a jury to say what is reasonable remuneration (*Bryant v. Flight*, 1839, 5 M. & W. 114). Where, for instance, the plaintiff was employed by a public board on the terms that he should receive whatever “recompense the board might allow as right and proper,” it was held that an action lay to recover a reasonable recompense, although the board had tendered what they considered right and proper (*Bird v. McGahey*, 1849, 2 C. & K. 707). (As to what is reasonable recompense, see further, § 6, *post*).

§ 2. **Various methods of providing for remuneration.**—One method of providing for an engineer's fees is to insert a clause that he shall be entitled to a fixed sum, of which one third shall be paid to him on the execution of the contract, one third when half the contract price has been paid to the contractor, and the remainder when the last payment has been made to the contractor. The advantage of such an arrangement lies in this: that if for any reason the works are not completed, the engineer is not altogether left in the lurch:

Many contracts, however, make special provision for the engineer's fees in case of failure to complete. Thus it is often well to provide that if, after working drawings have been made, the employer does not complete the contract, the engineer shall be entitled to a fixed sum to be agreed beforehand, and that the plans, etc., shall belong to the employer. (See, *e.g.*, Form III., Cl. 9, *post.*) Provision for the engineer in case of the works being partially completed may be made by inserting a clause to the effect that, if the employer proceeds only with a part of the works, the engineer shall be entitled to a proportionate part of the specified remuneration, in addition to a proportional part of the amount due in respect of plans. Inasmuch as extras and alterations often create more work for the engineer, it is generally well to provide that he shall be entitled to such remuneration in respect thereof as may be fixed by arbitration. It is well to make it clear in the agreement whether the engineer is or is not to be entitled to his travelling expenses in addition to the specified percentage fee.

§ 3. **The American practice.**—It is the practice of some American engineers (see *Specifications and Contracts*, by J. A. L. Waddell, C.E., etc. (1908), p. 72) to make arrangements for the payment of fees on account. Thus it is sometimes the practice to ask for one half of the fee upon the completion of the plans and specifications and the other half in monthly payments proportionate to the amount of contract work done on the construction. Under this system, by the time the construction is finished the fees are paid in full. American engineers also take care to provide that they shall be compensated properly for all extra expense to them which may be due to failure on the part of the contractor to complete the work within the specified time. (See, further, § 8, *post.*)

§ 4. **Who is liable for the engineer's fees.**—Whenever the engineer is the servant of the person employing the contractor, he must in general look to the employer for his fees. Just as he may be held liable for negligence in the performance of his duties which occasions injury to the employer (see Chap. V., § 5 *et seq.*), so he is entitled to hold the employer liable for his fees. And when an engineer is specially employed to measure up for extras and deviations, it is conceived that he must look to the employer for extra remuneration. In a building case

(*Beattie v. Gilroy*, 1882, 10 Ct. of Sess. Cas. (4th Ser.), 226), after the work was done, the builder brought in an account for extras. The contract provided, in the usual way, that extras should be charged for in accordance with the schedule of prices. The architect was employed by the contractor, after completion, to check the measurements and jobbing accounts, and he consequently sued the contractor for the fees for this work, which were included in the builder's accounts. It was held that it is in the interest of the employer, and not of the contractor, that an architect is asked to take the measurements for extra works, and though, according to practice, the architect's fees are included in the contractor's accounts, it is only for the sake of convenience, and without special employment no action by the architect will lie against the contractor. The builder not being liable, it is apprehended that the employer would have been held liable. It is apprehended that the same principle would apply to an engineer.

§ 5. Where remuneration depends on a contingency.—Sometimes the right of an engineer to receive payment of his fees depends on a contingency. In that case the right to payment does not accrue until the contingency happens. For instance, in *Moffatt v. Dickson*, 1853, 22 L. J. C. P. 265, the committee of a lunatic asylum agreed with an architect to pay him a certain sum for acting on their behalf and preparing probationary drawings, etc. In accordance with this agreement, the plaintiff prepared certain probationary plans and drawings and was prepared to submit others, when his employment was discontinued. In an action against the committee he was awarded £437 10s. by a jury. The Court of Appeal, however, held that probationary drawings meant drawings to be approved by the committee, the Commissioners, and the Secretary of State; and that, even if the visitors could contract for the payment of plans not approved of, yet there was no contract here which would make them liable for dismissing the plaintiff.

In another case (*Moffatt v. Laurie*, 1855, 24 L. J. C. P. 56), where the same gentleman was plaintiff, the remuneration of the architect depended upon certain land being sold for building purposes. After the architect had done a considerable amount of work, but before the land was sold, the

building owner died. It was held that the architect could recover nothing for his services.

§ 6. Amount of remuneration.—There is no fixed scale of remuneration for engineers. It is left to each member of the profession to charge what he likes; and if nothing is said beforehand he may, as we have already seen, recover what a jury considers reasonable. It is sometimes said that there is a fixed scale of charges for architects; but the schedule sanctioned by the Royal Institute of British Architects is not binding, unless agreed to. Again, "Ryde's scale," although useful as a guide, is not recognised by the Courts. For instance, in *Stenning v. Mitchell*, 1904, *Emden's Building Contracts*, p. 661, Mr. Justice Farwell said: "Ryde's scale has certainly not been established as the customary scale of the fees which surveyors can insist upon receiving. I think I might say it is a scale which surveyors usually desire to receive. It does not follow because in this case Ryde's scale applies, it is always applicable. Far from it. The Court must consider the work done in each particular case." It would seem from this that in reality the architect is not much better off than the engineer, so far as the existence of any fixed scale of remuneration is concerned. Both architect and engineer are entitled to reasonable remuneration for the services rendered; and what is reasonable remuneration is a question of fact. In deciding this question, the following matters may be taken into account: (1) the professional standing of the engineer; (2) the value of the services rendered to the employer. The latter rule has been thus expressed: If there has been no beneficial service, there shall be no pay. If there is some benefit, though not to the extent expected, it shall go to the amount of the plaintiff's demands, leaving the defendant to his action for negligence. (*Farnsworth v. Garrard*, 1807, 1 Camp. N. P. 37.) In *Cutler v. Close*, 1882, 5 C. & P. 337, the plaintiff had contracted to put the heating apparatus into a church. Upon his bringing an action for his remuneration, the defence raised was that the work as executed did not answer the purpose. The jury were told that if they thought that the work was substantial in the main, although not so complete as it ought to be under the contract, and that it could be made good at a reasonable outlay, the proper course would be to find a verdict for the plaintiff, and deduct a sum sufficient to

enable the defendant employer to do what was required. It is manifest, however, that in most cases where an engineer is employed, the employer relies on his professional skill and judgment; and if it should turn out that the work is entirely useless, an action for fees will be unsuccessful. For instance, in *Duncan v. Blundell*, 1820, 3 Stark. N. P. 6, the plaintiff erected a stove for the defendant, but owing to some defect the stove could not be used. In an action for work and labour done, the judge entered a non-suit, and held that where a person is employed on a work of skill, the employer buys both his labour and judgment, and that he ought not to undertake the work if it cannot succeed, and that he ought to know whether it will succeed or not. It is otherwise if the employer uses his own judgment instead of that of the workman. For instance, if an inventor were to employ an engineer to draw plans and designs for some new-fangled machine, and the engineer executed the commission, he could not be held responsible if the invention turned out to be a hopeless failure. (See, *e.g.*, the case of *Turner v. Garland*, 1853, 2 H. B. C. 2, noted Chap. V., § 4, *post*.)

The kind of duty which the engineer or architect may be reasonably expected to fulfil before he can successfully sue for his fees is illustrated by the following case. The plaintiff was employed as architect by the committee of the subscribers of certain funds to build a bridge across the Severn. In an action for fees for preparing plans, specifications, and extras, it was proved (1) that the plaintiff was a subscriber, and (2) that owing to his having omitted to examine the ground where the foundations were to be laid he was led into an error in his estimate, which involved the committee in an additional expenditure of £1,600. It was held by Abbott, C.J., that the architect could not recover for the plans, etc., of the works, and that being a subscriber or a shareholder he was a partner and could not maintain an action against the committee, although he subscribed as architect and engineer. (*Money-penny v. Hartland*, 1826, 2 C. & P. 378.) See also *Nelson v. Spooner*, 1860, 2 F. & F. 613, noted *post*, Chap. V., § 7.

§ 7. Fees when the employer fails to continue the employment.—The fact that an employer fails to go on with work in respect of which he has employed an engineer is a matter for which the engineer cannot be held responsible. In *Burr v.*

Ridout, 1893, *Times*, Feb. 22, an architect was employed by a building owner to prepare plans, etc., for certain buildings to cost a fixed sum. Finding the work would cost more than he was prepared to spend, the owner did not proceed with it. The architect sued for his fees, and a jury found a verdict in his favour for £200. In a Scotch case, *Landless v. Wilson*, 1880, 8 Ct. of Sess. Cas. (4th Ser.) 289, an architect was employed to prepare plans for certain buildings the erection of which was not proceeded with. The building owner, however, made some use of the plans, and the architect accordingly sued for his fees. The building owner then sought to escape liability by showing that the plans had been prepared for a competition, and that, in effect, his services were gratuitous. The Court of Session, however, held that the defendant had failed to prove that the services were gratuitous, and that the architect was entitled to succeed. The rule applicable in cases where the employer fails to continue the employment of an architect has been thus expressed by Mr. Muir Mackenzie (the Official Referee): "If, after part performance of his work by an architect, the employer refuses to continue the contract of employment, the architect can recover all sums due for services rendered before refusal, and for what he has lost by not being permitted to complete the contract of employment; or the architect may treat the contract as rescinded, and recover the value of the services he has rendered." (*Horton v. Hemsley*, 1908, *Times*, Feb. 19.)

§ 8. When fees may be recovered.—If the agreement is silent as to the time when an engineer's fees are to be paid, he may recover what is due from time to time as the work proceeds. Where, however, an engineer specially undertakes to supervise the execution of an entire contract upon the price of which he is to be paid a commission, he may find himself unable to recover anything until the entire work is completed. More often, however, the agreement specially provides for payment by instalments on the happening of certain contingencies. Thus in an American case (*Davis v. New York Steam Co.*, 1898, N.Y. 33 A. D. 401; 1 H. B. C. 122) an engineer offered to prepare plans, etc., and to supervise work for 3 per cent. on the total cost, which offer was accepted, conditioned on agreement terminating in twenty-four months, payment to be made on monthly estimates. It was held

that the monthly estimates must be furnished before any remuneration became due.

§ 9. When fees may be recovered back.—If the employer seeks to recover back fees already paid to an engineer, he must be able to show a total failure of consideration. In a recent case (*Columbus Co. v. Clowes*, 1903, 1 K. B. 244) the plaintiff company employed the defendant, an architect, to prepare plans and specifications for a factory and offices, and to engage a surveyor to take out the quantities. The defendant did not measure the proposed site, but he prepared plans, etc., in accordance with what he erroneously believed to be the true dimensions of the site, and employed a surveyor to take out the quantities. The plaintiffs, believing the plans and quantities to be correct, paid the architect £200 and the surveyor £200 for their services, but were unable to erect the buildings, owing to lack of means, and they disposed of the site. They subsequently discovered that the plans and quantities were not correct, and brought an action claiming the return of the money paid as having been paid upon a consideration which had wholly failed, or, in the alternative, damages for negligence. It was held that there had not been a total failure of consideration, but as the defendant had been negligent, the plaintiffs were entitled to damages, although, as they had sustained no loss from his negligence, those damages would only be nominal.

CHAPTER III

THE EMPLOYMENT OF AN ENGINEER IN A SALARIED POST

	PAGE		PAGE
§ 1. Preliminary	16	§ 21. Trade secrets protected by the Factory Act, 1901 ...	30
§ 2. The agreement—advisability of writing... ..	17	§ 22. Rights of an engineer under the Workmen's Compensation Act, 1906	31
§ 3. Necessity for writing ...	17	§ 23. Rights of a resident engineer as a tenant	31
§ 4. The written agreement—what it must contain ...	18	§ 24. Employment of a marine engineer	31
§ 5. What signature necessary... ..	18	§ 25. Agreement with a company to be formed ...	32
§ 6. Time for payment	19	§ 26. Employment of an engineer in relation to a contract for works	32
§ 7. Obligation to keep a man employed	19	§ 27. Employment of an engineer by local authorities ...	34
§ 8. Illness	20	(a) Municipal corporations	34
§ 9. How the service may be determined	21	(b) Urban authorities—necessity for seal ...	35
§ 10. Length of notice	21	Time for fixing seal	36
§ 11. Effect of termination of employment on salary due	22	Penalty to be prescribed	36
§ 12. Dismissal without notice... ..	23	Engineer not to be interested in contracts	36
§ 13. Measure of damages for wrongful dismissal ...	24	(c) Employment by other local authorities	37
§ 14. Gratuitous service	25	§ 28. Right to take out patents	37
§ 15. Secret commissions	25		
§ 16. Restrictive covenants—generally	26		
§ 17. Where covenant too wide	27		
§ 18. Principles of law as to restrictive covenants ...	27		
§ 19. Disclosure of secrets by a servant	28		
§ 20. Injunction to restrain the disclosure of confidential information	30		

§ 1. Preliminary.—The man who is about to accept a permanent position as engineer must bear certain things in mind before he binds himself to give his services to his new employers. In the first place, he ceases to be a free-lance. Unless it is otherwise provided for in his agreement, he must give up his whole time, and allow his interest to be their interest during the whole period of his service.

§ 2. **The agreement—Advisability of writing.**—In every case, whether it be legally required or not, the agreement should be put into writing. Everything may appear to be plain and simple at the time when the vacant post is applied for—the salary definite, the duties plain-sailing, the length of notice to terminate the employment accurately prescribed; but nevertheless it is a golden rule to have it all reduced into writing. Further, a solicitor should be consulted before the document is signed. He may not understand the technical nature of the duties which are to be performed; but he will be versed in the technicalities of the law, and ought to be able to make his client understand enough about them to know whether he is tying a millstone round his neck or not. Where the contract is with a company, it may be desirable to ascertain whether the company has power to contract. (On this point, see Chap. VI., § 6, *post.*)

§ 3. **Necessity for writing.**—In certain cases, however, an agreement cannot be enforced unless it has been reduced into writing. Thus it is provided by the Statute of Frauds that “No action shall be brought upon any agreement that is not to be performed within the space of one year from the making thereof, unless the agreement upon which such action shall be brought, or some memorandum or note thereof, shall be in writing and signed by the party to be charged therewith, or some other person thereunto by him lawfully authorised.”

The following agreements have been held to come within this provision:—An agreement for service to last more than a year, defeasible by three months’ notice on either side; an agreement for life, subject to its being determined by death, or retirement, or misconduct; and an agreement not to set up a certain trade during the joint lives of the parties to it.

A contract to serve for one year, the service to commence on the second day after that on which the contract is made, is a contract not to be performed within a year within the meaning of this provision (*Britain v. Rossiter*, 1879, 11 Q. B. D. 128). Thus, suppose an employer made a proposal in writing to an engineer to enter his service for a year; and that the engineer, taking up the proposal, were to commence work upon the strength of it three or four days afterwards: this would be a contract made on the day of the proposal. Unless the proposal was signed by the employer, the contract could

not be enforced (see *Snelling v. Lord Huntingfield*, 1880, 1 C. M. & R. 20).

Where there is a contract to serve for one year, the service to commence on the day next after that on which the contract is made, this is not a contract which is not to be performed within a year (*Smith v. Gold Coast and Ashanti Explorers, Ltd.*, 1903, 1 K. B. 538). In that case, at the board meeting of a company held on December 6, the plaintiff was virtually engaged to act as solicitor to the company for a year as from December 7. It was held that this was a valid contract, and that it need not be in writing. Applying these principles, it is obvious that in the ordinary case of an engineer taking an appointment at a yearly salary, without the duration of the employment being mentioned, the agreement must be put into writing. It should be stamped with a 6*d.* stamp on the date of execution, or within seven days thereafter. Otherwise, should it ever have to be produced in court, heavy penalties might have to be paid.

§ 4. The written agreement—what it must contain.—The note in writing must embody all the terms of the agreement, or it must be connected with some other document which does. Several documents, if sufficiently connected together, will constitute a good memorandum within the statute (*Jackson v. Lowe*, 1822, 1 Bing. 9). Thus a series of letters passing between the parties may be sufficient. Again, it has been decided that an envelope, and a letter which is shown by evidence to have been enclosed in it, are so connected together that the envelope may be used to supply the name of one of the parties to a memorandum in writing within the meaning of the statute (*Pearce v. Gardner*, 1897, 1 Q. B. 688). The contract must, of course, contain the names of the employer and the engineer (see *Champion v. Plummer*, 1805, 1 Bos. & P. 252). It must also set forth the consideration, *i.e.*, the salary at which the servant is engaged (*Wain v. Warlters*, 1804, 5 East, 10).

§ 5. What signature necessary.—The note or memorandum need not be signed by both parties to the contract. The signature of the party to be charged is quite sufficient (*Laythoarp v. Bryant*, 1836, 2 Bing. N. C. 735). It is immaterial where the signature is placed on the document, so long as it is so

placed as to authenticate and govern every part of the writing. The signature of an agent is sufficient, provided he is some third person, and not the other contracting party.

§ 6. **Time for payment.** — The agreement should state specifically the times when salary is to be paid, *i.e.*, whether quarterly or half-yearly. If no time is stated in the case of an agreement to serve at a yearly salary, each year's salary can be recovered at the end of the year.

Where the salary is a lump sum payable by quarterly instalments, the instalments can be recovered as they fall due. So where a man was employed as consulting engineer, for £500, payable in equal quarterly instalments, for fifteen months, to complete certain works, and he died after two instalments became due, but before the work was finished, his administrator was held entitled to recover the two instalments (*Stubbs v. Holywell Ry. Co.*, 1867, L. R. 2 Ex. 311).

§ 7. **Obligation to keep a man employed.**—Those who are under a contract of service sometimes have to complain not of having too much, but of having too little to do. The question has arisen in several cases whether an employer is under any obligation to find work. In one of these a foreign traveller was employed at a salary of £500 and 35s. a day for travelling expenses. By reason of bad trade his employers were compelled to give up their foreign custom, and the traveller was kept at home at his full salary. He then claimed damages because the defendants did not send him travelling, but kept him idle, thereby inflicting injury on the goodwill of his travelling connection, and because he was not able to save anything out of his travelling expenses. It was held that the defendants were not under any obligation to do more than pay him the salary of £500 and that the action was unfounded (*Lagerwall v. Wilkinson*, 80 L. T. 55).

In *Turner v. Goldsmith*, 1891, 1 Q. B. 544, it was decided that where a man employs another for a fixed period to work on commission, he must provide him a reasonable amount of work. There the defendant, a shirt manufacturer, by contract in writing agreed to employ the plaintiff, and the plaintiff agreed to serve the defendant as agent, canvasser, and traveller on the terms, first, that the agency should be determinable by either party at the end of five years by notice; secondly, that

the plaintiff should do his utmost to obtain orders for and sell the various goods "manufactured or sold by the defendant as should from time to time be forwarded or submitted by sample or pattern to T." And it was further provided that the plaintiff should be remunerated by such commission as was specified in the contract. After about two years the defendant's manufactory was burnt down, and he did not resume business, and thenceforth did not employ the plaintiff, who brought an action for damages for breach of contract. It was held by the Court of Appeal that the action was maintainable, and that the plaintiff was entitled to substantial damages, for the defendant, having agreed to employ the plaintiff for five years, did not fulfil that agreement unless he sent him a reasonable amount of samples to enable him to earn his commission; and that the defendant was not excused from fulfilling his agreement by the destruction of his manufactory by fire.

The question whether an employer is bound to provide work for one who is employed at a fixed salary does not appear to have been decided.

§ 8. *Illness.*—The fact that a servant becomes incapacitated by illness does not determine the contract, nor will it justify dismissal without regular notice (*R. v. Winterset*, 1783, Cald. 298). Nor does the illness of a servant necessarily entitle his employer to dismiss him then and there. Where, however, he becomes struck with disease so that he can never be expected to return to his work, it has been held that this is a sufficient justification for dismissal (*Cuckson v. Stones*, 1858, 1 E. & E. 248). If the illness is not of such a nature as to justify an employer in thinking that the servant will not be able to work again, dismissal may not be justified. So, in another case (*Storey v. Fulham Steel Works*, 1907, 23 T. L. R. 306), the plaintiff was engaged in 1903 to act for five years as works manager. The agreement contained no provision for the method by which the service was to be determined. In 1905 he became ill, and remained away from work down to January, 1906, when he was told that he must have complete rest. The employers rescinded the agreement in April, 1906, but in May of the same year the plaintiff was declared fit for work. In an action by him for breach of contract it was held that he was entitled to damages, inasmuch as the circumstances were not such as to justify the defendants in thinking that he

would never be able to perform a substantial part of the unexpired period of the agreement. It is well to notice that in the above case no method of determining the contract was prescribed by the contract. Had there been some provision for notice the employers would doubtless have availed themselves of it.

§ 9. How the service may be determined.—A contract of service is usually determined by notice, but it is necessary to consider in what other way it may be determined. The bankruptcy of the master is not a dissolution of the contract of hiring (*Thomas v. Williams*, 1834, 1 Ad. & E. 685). Again, dissolution of partnership between two employers is not necessarily a breach of a contract of employment by the firm. At any rate, if the person employed enters the service of the altered firm, this is evidence which will support a defence of voluntary exoneration from the first contract before breach (*Hobson v. Cowley*, 27 L. J., Ex. 205). If there is an agreement for service with two partners, the death of one of the partners puts an end to the contract, though the service was for a time certain; and no action can be maintained against the survivor for not employing the servant (*Tasker v. Shepherd*, 1861, 6 H. & N. 575).

In the case of a limited company, the passing of a resolution to wind up the company operates as a notice of dismissal to the company's servants (*Ex parte Schumann, In re Forster & Co.*, 1887, 19 L. R. Jr., 240).

§ 10. Length of notice.—When the hiring is a yearly hiring, it cannot in general be put an end to by either party before the end of the year. If, therefore, on the one hand, a master wrongfully dismiss his servant during the year, the servant may maintain an action against him for such wrongful dismissal, and a jury would in some cases be justified in assessing his damages at the amount which he would have earned had he been allowed to serve to the end of the year. (See § 13, *infra*). Care should be taken that whatever notice to determine the service is provided for, it shall be reciprocal—that is to say, an employee should see that he, as well as the employer, may give notice to determine the service.

A hiring at a salary of so much a year is *primâ facie*, and in the absence of any custom to the contrary, a hiring for a

year certain. So where the plaintiff, who was employed as engineer to the defendants at a salary of £500 a year, was dismissed at a three months' notice, he was held entitled to recover salary for the unexpired portion of the year (*Buckingham v. Surrey and Hants Canal Company*, 1882, 46 L. T. 885; 46 J. P. 774). In general, a person who is employed at a certain sum per annum simply is employed for a year, and in the absence of a custom to the contrary he cannot be discharged before the end of the year (*Foxall v. International Land Credit Co.*, 1867, 16 L. T. 637). Nor, if he himself give notice to terminate his service at some odd time during a year, can he recover anything in respect of the time elapsed since the termination of the last year's service. The law implies no engagement to pay for the services since the last quarter (*Lamburn v. Cruden*, 1841, 2 M. & G. 253).

In a case heard some years ago (*Down v. Pinto*, 1854, 9 Ex. 327), the defendant, having established smelting works at Carthagena, in Spain, offered to employ the plaintiff as foreman, by letter, containing the following passage: "I should require you to enter into an engagement to remain with me for at least *three years at my option*, salary £250 per annum." It was held that this did not enable the defendant to put an end to the service at his will, but that it was a yearly hiring with an option for the defendant to require the plaintiff's services for three years, or to put an end to it at the expiration of the first, second, or third year.

The foregoing rule, however, is subject to an exception in some cases of service with the Crown, and in cases in which the agreement of hiring is subject to some stipulation, either express or implied by custom (evidence of which is in all cases admissible, if not inconsistent with the contract), enabling either party to determine the contract by notice. In such cases, if the contract is determined by a notice, in accordance with the custom, the servant is entitled to recover wages for the fractional portion of the year during which he has served.

§ 11. **Effect of termination of employment on salary due.**—It is clear, notwithstanding a notion to the contrary which is not uncommon, that a yearly servant wrongfully quitting his master's service forfeits all claim to wages for that part of the current year during which he has served, and cannot, after

having wilfully violated the contract according to which he was hired, claim the sum to which his wages would have amounted had he kept his contract, merely deducting therefrom one month's wages.

This, at first sight, may appear rather harsh to some ; but it is believed to be not only the law, but far more consistent with common sense than to allow a man, at one and the same moment, to break a contract and claim a benefit under it, especially when, upon merely giving notice to his master, and paying (or agreeing to allow his master to deduct the amount due to him) a month's wages, he could leave at any time ; and the practical effect of adhering to the strict letter of the law is merely to compel the servant to give his master notice when he wants to leave, which can be but little trouble to him, and will in most cases save the master a great deal of unnecessary inconvenience and trouble, and sometimes loss.

§ 12. Dismissal without notice.—It is difficult to lay down any broad rule as to the causes which will justify summary dismissal without notice, or salary in lieu of notice. It has been asserted that to justify a master in dismissing a yearly servant before the expiration of the year there must be on the part of the servant either moral misconduct or, otherwise, wilful disobedience or habitual neglect (*Callo v. Brouncker*, 1831, 4 C. & P. 518). Numerous instances might be quoted, but in the majority of cases the point is raised as a simple issue of fact for a jury. To take an illustration. In one instance a man was engaged as a clerk under a contract of hiring for two years, to conduct the business of a shipping agent at Southampton. In the course of such employment it was the duty of the clerk to pay freight, dock dues, etc., to meet which the employer from time to time forwarded the necessary funds. The clerk wrote to his employer for £140, enclosing an account of the purpose for which it was required, one of them being the payment of £30 for salary due to himself. Ten days afterwards the employer forwarded a cheque for £100, with a letter, directing him to apply the money for business purposes. The clerk having appropriated £30 of the money in satisfaction of his salary, he was discharged. In an action for wrongful dismissal, the employer justified his conduct, saying that the plaintiff had wrongfully and improperly

misappropriated the money remitted. The judge left it to the jury to say whether the plaintiff had been guilty of any wrongful and improper misappropriation of the moneys entrusted to him by the defendant, or of any wrongful or improper disobedience of orders. This was held to be a proper direction, but the report does not say whether the plaintiff was successful or not (*Smith v. Thompson*, 1877, 8 C. B. 44).

There are no cases in the books in which the conduct of a station engineer has been called in question, but it is presumed that any negligence on his part which might lead to the cessation of the supply would afford good ground for dismissal. Under this head, absence without leave or a gross breach of the rules would probably justify discharge without salary, or salary in lieu of notice. (As to negligence on the part of a station engineer, see Chap. V., § 12, *post*.)

§ 13. Measure of damages for wrongful dismissal.—It is important for anyone who is wrongfully dismissed from a permanent post to remember that he must not remain idle, and expect the Court to order the employer to pay all that he was bound to pay under the agreement. He must endeavour to find similar employment elsewhere; and the damages will then be ascertained by subtracting what he actually earns from what he would have earned had his original employment continued. In a case already mentioned (*Storey v. Fulham Steel Works*, 1908, 23 T. L. R. 306), a manager, employed for five years, was dismissed after two years and eight months, at a time when he was earning £400 a year. In estimating damages, the judge said that, judging fairly between the parties, the plaintiff might earn £250 a year. That meant he would sustain a loss of £150 a year, which for two years and four months came to £350 in all. The employer was accordingly directed to pay that sum. (See also *Macdonell v. Marsden*, 1884, 1 C. & E. 281.)

Alteration in the constitution of the employer's firm may amount to dismissal, giving the employee a remedy in damages. So where a manager was employed for a fixed period of two years by a firm consisting of four partners, the agreement provided that he could be discharged on a month's written notice, in which case the employers were to pay him

the salary for the remainder of the fixed period. Before the period expired the partnership was dissolved, two members leaving the firm. The plaintiff had no notice to quit; but on hearing of the dissolution he refused the offer of the new firm to continue his employment on the old terms. It was held that there was a breach of agreement in respect of which the plaintiff was entitled to recover, but that the damages must be nominal only, as by reason of the offer of the new firm he need not have suffered any damage at all (*Brace v. Calder*, 1895, 2 Q. B. 253).

§ 14. **Gratuitous service.**—Service however long creates no claim for remuneration without a bargain for it, either express or implied from circumstances showing an understanding on both sides that there shall be payment (*Reeve v. Reeve*, 1 F. & F. 280). So, where a man performed gratuitous services for another, who gave him a promissory note with an understanding that he would accept it not only as a gift for what was past, but as a remuneration for future services to be rendered so long as he should require them, it was held that, as there was no contract binding the employee to perform future services, there was no consideration for the promissory note (*Hulse v. Hulse*, 17 C. B. 711). But where a man agreed to enter into service as a weekly manager to commence from a certain day, leaving the amount of payment he was to receive entirely to the employer, it was held that he was entitled to recover reasonable remuneration for his services (*Bryant v. Flight*, 5 M. & W. 114).

(But compare the position of an engineer employed as a professional man. See Chap. II., § 1, *supra*.)

§ 15. **Secret commissions.**—It is necessary to point out that, apart altogether from the provisions of the Act which makes it a criminal offence to take or offer a secret commission, a servant or agent who acts in this way commits a breach of duty to his employers. The receipt of a secret commission may justify an employer in dismissing his servant without notice. So in *Boston Deep Sea Fishing Co. v. Ansell*, 1888, 39 Ch. D. 339, the defendant sued (by counter-claim) for wrongful dismissal. At the trial it was shown that he had received certain commissions from a firm of shipbuilders on the price of vessels built for his employers. This was only

discovered after the commencement of the action. It was held that the receipt of the commission justified the dismissal, although the actual dismissal took place on grounds which the employers failed to prove, and the receipt of the commission was an isolated case of misconduct. In that case, Lord Justice Bowen said: "There can be no question that an agent employed by a principal or master to do business with another, who, unknown to that principal or master, takes from that other person a profit arising out of the business which he is employed to transact, is doing a wrongful act inconsistent with his duty towards his master, and the continuance of confidence between them. He does the wrongful act whether such profit be given him in return for services which he actually performs for the third party, or whether it be given him for his supposed influence, or whether it be given him on any other ground at all; if it is a profit which arises out of the transaction it belongs to his master, and the agent or servant has no right to take it, or keep it, or bargain for it, or to receive it without bargain, unless his master knows it."

In *Hovenden v. Millhoff*, 1900, 83 L. T. 11, Lord Justice Romer said:—"If a gift be made to a confidential agent with a view to inducing him to act in favour of the donor in relation to transactions between the donor and the agent's principal, and that gift is secret as between the donor and the agent—that is to say, without the knowledge and consent of the principal—the gift is a bribe in the view of the law. The Court will not inquire into the motive of the vendor in giving the bribe; there is an irrefutable presumption that the agent was influenced by it."

§ 16. Restrictive covenants—generally.—It is sometimes necessary for an employer to make his employee enter into what is known as a restrictive covenant, in order to prevent him competing with his late employer at the end of the contract of service.

Broadly speaking, a covenant of this kind may be enforced, provided it is reasonable, and reasonably necessary for the protection of the master. To give an illustration:—Suppose the owner of a cotton mill inserted a clause in the agreement with his manager to the effect that the manager, after leaving the service, should never again be employed in connection with, or himself carry on, the manufacture of cotton. Such

a covenant would be unreasonable, and as such it would be void, as being in restraint of trade and against public policy. Where, however, the covenant provides that the manager shall not for the space of ten years take any part in the manufacture of cotton, say, in Lancashire, such a covenant might be said to be reasonably necessary for the protection of the master's business, and therefore valid. It is obvious that, unless some exception of this kind is grafted on the rule which renders contracts in restraint of trade invalid, an agreement to employ would be exceedingly dangerous.

§ 17. *Where covenant too wide.*—The question whether a covenant is or is not too wide is for the Court to decide. Regard is had to the nature of the interests which require protection. Thus it has been held that it was unreasonable to seek to prevent a dentist carrying on his practice within 200 miles of York, it being considered that the limit of 200 miles was too wide (*Horner v. Graves*, 7 Bing. 735). Where, however, a particular trade or industry is world-wide in its character, a world-wide covenant may be held reasonable. Thus a man was prevented from manufacturing certain explosives in any part of the world under a covenant of this kind.

It is, indeed, for the Court to say whether a covenant is reasonable or not. In *Mitchell v. Reynolds* (*Smith's Leading Cases*, Vol. I., p. 301), Lord Maclesfield thus declared the law:—"In all restraints of trade, where nothing more appears, the law presumes them bad; but if the circumstances are set forth, that presumption is excluded, and the Court is to judge of those circumstances and to declare accordingly."

§ 18. *Principles of law as to restrictive covenants.*—The principles to be deduced from the decided cases may be thus applied to the employment of an engineer, or to the manager of an engineering business. Suppose an engineering firm at Birmingham were to employ a manager, they would naturally desire to prevent his setting up in business in competition with them, and to insure this they would have to put him under a restrictive covenant. The question then would be: What kind of covenant would be wide enough? Beyond that it would be unsafe for them to go. It may safely be assumed that a covenant not to set up in a similar line of business in

Birmingham would not be considered too wide. The Court, however, will study the facts of each case in order to see whether the covenant is too wide. Thus, suppose the firm were manufacturers of a particular kind of engine made only by them, and that their custom extended all over the British Islands; in such a case it is conceived that a covenant by the manager not to carry on business in that line anywhere in England, Scotland, or Ireland might be enforced. Further than this, the trend of decision has been to enlarge the boundary of restriction if it can be shown that the business sought to be protected has a wide field. In one case, indeed, as we have seen, a world-wide covenant was enforced. Nevertheless, an employer will act prudently in not asking his managers and assistants to sign any covenant which is wider than what he reasonably requires for his protection. He should also be careful to put the covenant in such a form that it can be severed. In the hypothetical case of the employer at Birmingham he might frame his covenant so as to prevent the manager setting up for himself in "Birmingham, Liverpool, and Leeds." If the Court was of opinion that such a covenant was too wide, it would be possible to limit its operation to Birmingham.

§ 19. **Disclosure of secrets by a servant.**—While dealing with the relationship of master and servant, it may be useful to consider how far the law will protect a master from the disclosure of his trade secrets by those who are or who have been in his employment.

If it were competent for a workman to acquire information while in the employment of A.; for him then to terminate his engagement with A., and take employment with B. for the express purpose of selling to B. the information so acquired, it would never be safe for any man of business to employ a clerk or servant except in accordance with the terms of a stringent agreement.

The law, however, implies an agreement to the effect that the employee shall keep his master's secrets. Further, it will give effect to this implied agreement by allowing the master to obtain an injunction to restrain the improper use of information obtained from him by persons at one time in his employment.

In the case of *Morison v. Moat*, 1851, 9 Hare, 241, an

injunction was granted to restrain the use of a secret in the compounding of a medicine not being the subject of a patent, and to restrain the sale of such medicine by a defendant who acquired a knowledge of the secret in violation of the contract with the party by whom it was communicated, and in breach of trust and confidence. It was also established by that case that the plaintiff, not having the privileges of a patentee, might have no title to be protected in the exclusive manufacture and sale of the medicine against all the world, yet he might, notwithstanding, have a good title to protection against the particular defendant.

The law on the subject was more clearly enunciated in the more recent case of *Robb v. Green*, 1895, 2 Q. B. 1. The defendant, being employed by the plaintiff as manager of his business, secretly copied from his master's order-book a list of the names and addresses of the customers, with the intention of using it for the purpose of soliciting orders from them after he had left the plaintiff's service and set up a similar business on his own account. Subsequently, his service with the plaintiff having terminated, he did so use the list. It was decided that it was an implied term of the contract of service that the defendant would not use, to the detriment of the plaintiff, information to which he had access in the course of the service, and therefore that the defendant was liable for any loss caused to the plaintiff by reason of the breach. In the course of his judgment in this case, Mr. Justice Hawkins said:—"It is good law that a servant, having left his master, may, unless restrained by contract, lawfully set up in the same line of business as his late master, and in the same locality; and that he may, without fear of legal consequences, canvass for the custom of his late master's customers, whose names and addresses he has learned *bonâ fide* accidentally during the period of his service. . . . But here we are dealing with a flagrant breach of trust during service, with intent to reap the advantage contemplated afterwards. In such a case, too, it seems to me that the fraud in service with intent to use afterwards, and the use afterwards, are both discountenanced by law. The breach of confidence in service can hardly be said to be a duty of imperfect obligation, for the law will imply a promise to perform it; and the utilisation of the fraud cannot be legalised by the fact that, though that utilisation was contemplated when the fraud was committed, the relation of

master and servant had terminated before it was carried out. So to hold would be a great encouragement to fraud. In what I have said I do not intend to convey that while the contract of service exists a person intending to enter into business for himself may not do anything by way of preparation, provided only that he does not, when serving his master, fraudulently undermine him by breaking the confidence reposed in him."

§ 20. Injunction to restrain disclosure of confidential information.—Not only will the Court grant an injunction, but if the injunction is disobeyed the defendant may be imprisoned for contempt of Court. That is what happened in the case of *Helmore v. Smith*, 1886, 35 Ch. D. 449. In that case the defendant had been employed by his father in business. The business having been placed in the hands of a receiver and manager, under an order of Court, the son proceeded to circularise the customers, stating that the original business had been wound up, and that he was in a position to execute orders. In doing this he made use of information acquired by him while his father carried on the business. Upon his refusing to desist from this course, the judge sent him to prison for contempt of Court.

In *Lamb v. Evans*, 1893, 1 Ch. 218, certain canvassers who had been employed under agreements which bound them to devote themselves in a particular district exclusively to obtaining from traders advertisements to be inserted in a directory, and to supply the blocks and materials necessary for producing such advertisements, proposed at the expiration of their agreements to assist a rival publication in procuring similar advertisements. It was decided that they were not entitled to use for the purposes of any other publication the materials which they had obtained for the purpose of this particular directory while in the plaintiff's employ.

§ 21. Trade secrets protected by the Factory Act, 1901.—The fact that trade secrets are the property of the employer is recognised by the Factory Act, 1901. By sect. 116 of that Act, which specifies the particulars of work or wages which must be given to piece-workers, it is provided in sub-sect. (3) that if any one engaged as a worker in a factory, having received any such particulars, whether they are furnished

directly to him or to a fellow workman, discloses the particulars for the purpose of divulging a trade secret, he shall be liable to a fine not exceeding £10. Sub-sect. (4) also provides that if anyone, for the purpose of obtaining knowledge of or divulging a trade secret, solicits or procures a person so engaged in a factory to disclose any such particulars, or with that object pays or rewards any such person, or causes any such person to be paid or rewarded for disclosing any such particulars, he shall be liable to a fine not exceeding £10.

§ 22. **Rights of an engineer under Workmen's Compensation Act, 1906.**—In addition to the remedies which a central station engineer may have against his employer under the agreement between them, he may also enjoy certain statutory rights. Thus he may be entitled to compensation under the Workmen's Compensation Act, 1906, if his salary does not exceed £250 a year. In estimating salary for this purpose, board and allowances must be taken into account. For further information with regard to this Act, the reader is referred to the numerous legal treatises on the subject.

§ 23. **Rights of a resident engineer as a tenant.**—The tenure of an engineer who occupies premises of the employer for the more easy performance of his duties depends upon the terms of the contract of such service. But if there is no special provision on this head, the law provides that he has thereby conferred upon him no estate in the premises, and may be turned out at the pleasure of the employer (*White v. Bayley*, 1861, 10 C. B. N. S. 227). In other words he is only a tenant at will. He has no right to insist on a notice to quit, as he would have if he were a tenant in the ordinary sense.

§ 24. **Employment of a marine engineer.**—Where a marine engineer is employed to serve on a particular ship, it seems that he is entitled to insist that he shall be employed on that ship and no other. Where a seaman was employed to undertake certain specified voyages on a particular ship, it was held to be a breach of contract to sell the ship before those voyages were completed, without procuring employment for him on that particular vessel. The mere acceptance by him of money on account of wages on another vessel which was to sail for a different voyage, and on board which the plaintiff



did not enter, was held not to be conclusive evidence either of accord or satisfaction or of a substituted contract (*Driscoll v. Australian Mail Co.*, 1860, 1 F. & F. 458). As to certificates of competency of marine engineers, see the Merchant Shipping Act, 1894, s. 96.

§ 25. **Agreement with a company to be formed.**—The terms of an agreement with a manager as recited in the memorandum and articles of a company are not necessarily binding as between the manager and the company. The articles may only constitute an agreement between the shareholders and the company. For instance, in a case where a man was to be the managing director of a company when formed, it was agreed between him and a trustee for the company that he should have a salary of “£800 per annum.” The articles provided that this salary should be “payable quarterly”; and the company, after its formation, expressly ratified the “former agreement.” The managing director, on being summarily dismissed for misconduct, claimed the salary due for the quarter which had accrued due previous to his dismissal. It was held, however, that the salary was payable annually and that the whole was forfeited (*Boston Deep Sea Fishing Co. v. Ansell*, 1888, 39 Ch. D. 339).

§ 26. **Employment of an engineer in relation to a contract for works.**—Although hardly germane to the subject-matter of this chapter, it may be well to draw attention to certain points relating to the employment of an engineer in connection with a contract. Where an engineer is employed in connection with a contract for works some reference is made to the fact in the body of the agreement between the employer and the contractor. For instance, the form of model general conditions approved by the Institute of Electrical Engineers provides that “The engineer shall mean Mr. A. B., or other the engineer for the time being, or from time to time duly authorised and appointed in writing by the purchasers to superintend the construction and erection of the work or works the subject of the contract.” (See Form II., A, cl. 1, *post.*) In *Kellett v. Mayor of Stockport*, 1906, 70 J. P. 154, it was held that the duly appointed successor to the engineer named in the contract had jurisdiction to determine the price to be paid for work which was begun before his appointment.

The question whether the engineer has power to appoint a substitute, and the powers of the engineer generally, must depend upon the terms of his agreement with the employers.

(As to the powers and duties of an assistant engineer, see Chap. XVIII., *post.*)

It would seem that, if there is some complete alteration in the character of the work undertaken, the rights of the engineer may be affected. In one case (*Brunlees v. Mersey Ry. Co.*, *Engineering*, Dec. 30, 1904) a curious question arose as to the rights of a consulting engineer.

The facts may be stated very shortly. It appears that an agreement, dated May 24, 1881, was entered into between the Mersey Railway Company, of the first part, the late Mr. James Brunlees and Sir Douglas Fox, of the second part, and the plaintiff and Mr. Francis Fox, of the third part. Under this document the Mersey Railway Company confirmed the appointment of the late Mr. James Brunlees and Sir Douglas Fox as joint engineers of the company, such appointment to apply to and to cover all extensions of the company's railway or undertaking which might be thereafter authorised. The parties of the second part, and also those of the third part, when called upon to do so under the agreement, agreed to act as such engineers. All the engineers were to be paid by the company for their services and expenses in connection with any application to Parliament at the usual rates, and for their services and expenses in connection with any rolling stock or with future extension or deviation works, stations, or machinery, 5 per cent. upon the cost. It was also provided that, in the event of the death or retirement of Mr. James Brunlees, Mr. John Brunlees, the plaintiff, should be appointed engineer in his place, with all his rights and responsibilities. It was also provided that Sir Douglas Fox should be succeeded by Mr. Francis Fox. After the death of Mr. James Brunlees, the plaintiff did in some measure act as engineer to the railway company. The company having got into difficulties, a receiver was appointed, such work as had to be done being still superintended by the plaintiff and Sir Douglas Fox. In 1899 the company had almost come to a standstill, when a Mr. Falconer became chairman. He conceived the idea of working the line by electricity, and with that object an application was made to Parliament, the deposited plans being signed by Sir Douglas Fox and Mr. John Brunlees. Mr. Falconer said

he had never heard of the agreement to which we have referred, and refused to be bound by it. Accordingly, the plaintiff brought an action, claiming a declaration that the agreement in question was subsisting and valid, and damages for its breach. In giving evidence, the plaintiff said that he was not a specialist in electrical engineering, but that this did not matter, inasmuch as he could get the best possible assistance. He also claimed that, apart from the question of electrification, he was at least able to attend to the permanent way and carriages, in respect of which he was entitled to remuneration at the rate of 5 per cent. The answer of the defendants was that the whole of the work had to be handed over to the Westinghouse Company, who were to undertake it on their own responsibility. In giving judgment, Mr. Justice Lawrance said:—"The question is, whether the contract is still in existence, or whether the fact of the electrification of the railway made a difference, so as to relieve the company. . . . Neither party contemplated the possibility of any other system than that of ordinary traction, and all I can do is to look at the condition of things when the contract was made, and then say whether it was confined to that state of things, and had ceased to have effect when electrification was decided upon. In my view, as neither party contemplated any change from the original state of things—namely, the use of steam traction—this contract is no longer binding upon the company." This decision, which was not appealed from, is somewhat extraordinary. If the plaintiff and his colleagues were to hold their respective appointments only so long as the railway company continued to use steam traction, this should have been made a term of the contract. If the change was made without the consent of the engineers, they ought to have been able to recover the damages sustained. Whatever the effect of electrification upon the terms of employment, it is difficult to see the answer to the claim for 5 per cent. upon the cost of the rolling stock.

§ 27. *Employment of an engineer by local authorities—(a) Municipal corporations.*—Contracts made with a municipal corporation must be under seal in cases where the contract is executory. The only exception to this rule is where the contract is small and of an unimportant character. So, if an engineer were called in to advise the mayor and corporation

on a single occasion in reference to some small matter, it is conceived that he could recover his remuneration without producing a contract under seal. But if he were to be employed by them at a salary for a term of years, a sealed document would be necessary. It is to be observed, however, that although a corporation are entitled to rely on the absence of a seal in order to resist a legitimate claim, they are not bound to do so. Thus, in an old case, the Norwich Corporation passed a resolution to pay certain sums, each exceeding 50*l.*, to contractors, in respect of which there was no sealed contract. This was held not to be a misapplication of the funds (*R. v. Norwich Corporation*, 1882, 30 W. R. 752). It is to be remembered that if the contract is not sealed, this fact may be set up by the other party as a defence to a claim by the corporation (*Wandsworth District Board v. Heaver*, 1885, 2 T. L. R. 130).

(b) *Urban authorities.*—Engineers who contract with town councils in municipal boroughs, or with district councils in urban districts, should always make sure of having the contract reduced into writing and sealed; for it is provided by the Public Health Act, 1875, s. 174 (1), that every contract made by an urban authority, whereof the value or amount exceeds £50, shall be in writing and sealed with the common seal of such authority. It has been decided that this section applies not merely to an executory contract (*i.e.*, a contract about to be performed), but to a contract of which the urban authority has had the full benefit and enjoyment (*Young v. Royal Leamington Spa Corporation*, 1883, L. R. 8 A. C. 517). In one case the surveyor to a local board was employed under verbal directions to prepare plans for offices. It was held that, as the contract was not under seal, the surveyor could recover nothing for his plans (*Hunt v. Wimbledon Local Board*, 1878, L. R. 4 C. P. D. 48). This was a case of particular hardship, because the plans in question were partially used.

The reader will have noticed that the necessity for sealing only arises "where the value or amount exceeds £50." Where an engineer is employed, the value may not be known to the parties. Thus if he is employed at so much a day for an indefinite period, it is conceived that the necessity for sealing would not arise on this ground alone (see *Eaton v. Basker*, 1881, 7 Q. B. D. 529).

Time for fixing seal.—The seal may be affixed at any time so long as the contract is still open. In a case where an engineer and the surveyor of a local board sued the board for their charges for services in drawing out plans for a scheme of drainage, the agreement was contained in a letter. No seal was attached until the following year, when the board, after the work had been nearly completed, ratified the agreement by a document under seal. The Court held that the ratification was good, inasmuch as the contractor's promise to complete the work was a sufficient consideration for the ratification (*Melliss v. Shirley Local Board*, 1885, L. R. 14 Q. B. D. 911).

Penalty to be prescribed.—There is another formality which must be observed when contracting with a municipal authority or an urban district council. The contract must specify the pecuniary penalty to be paid in case the terms of the contract are not duly performed (Public Health Act, 1875, s. 174 (3)). Where a contract has been inadvertently entered into without a penalty being prescribed, the Local Government Board may, it seems, sanction payments under it, and order the execution of a fresh contract with a proper penalty clause (*British Insulated Wire Co. v. Prescott Urban District Council*, 1895, 11 T. L. R. 557, 595).

Engineer not to be interested in contracts.—An engineer employed by a local authority must avoid anything like dealing with contractors who are working for the board. Thus it is provided that officers or servants employed by a local authority must not in any wise be concerned or interested in any bargain or contract made with such authority for any of the purposes of the Public Health Act (Public Health Act, 1875, s. 193). Failure to observe this rule, or the receipt of any fee or reward other than his proper salary, wages and allowances, may involve a penalty of £50, and incapacity for holding any office or employment under the Act (*ib.*). In one case (*Melliss v. Shirley Local Board*, 1885, L. R. 14 Q. B. D. 911) a firm of engineers, one of the partners in which was the surveyor of a local board, sued the board for their charges for services in drawing out plans for a scheme of drainage. It was contended that, as the surveyor was an officer of the board, he could not contract with the board, and it being a joint contract, it was illegal as to the engineer also. The Court held that the contract was void. In another case (*Whiteley v. Barley*, 1888, 21 Q. B. D. 154) a surveyor to the local authority, by a provision

in contracts entered into by them, was to take out the quantities and to be paid by the successful competitor, and to superintend drainage works as their engineer. His remuneration was to be calculated as a percentage on the outlay. It was held that he was liable to a penalty under the section.

(c) *Employment by other local authorities.*—The other local authorities with which an engineer may from time to time be brought into contact are county councils, boards of guardians, rural district councils, drainage boards, colleges, school boards, education authorities, and deans and chapters. In entering into professional relations with all of these the golden rule is to insist on a contract under seal. Where, however, engineering contractors undertake work which is of an essential character the seal will not be insisted upon. So where there was an order for new iron gates to a workhouse (*Sanders v. St. Neots Union*, 1846, 8 Q. B. 810), and, in another instance, a contract for the erection of water closets in a workhouse, the seal was not insisted on.

§ 28. *Right to take out patents.*—The engineer who occupies a salaried position is sometimes troubled to know whether the products of his inventive genius are the property of his employer. It may be stated at once that there is no case which lays down that the invention of a servant, even when made in the employer's time, with the use of the employer's materials, and at the expense of the employer, becomes the property of the employer, so as to prevent the person employed taking out a patent for it (see *Heald's Case*, 8 R. P. C. 430). Nor would an inventor be bound to assign his patent to his employer, unless he was under agreement to do so. But if an employee were to steal an idea, either before or after the termination of his service, the employer would be entitled to oppose the grant of a patent in respect of it (*Thwaites' Application*, 9 R. P. C. 515. See also *Marshall & Naylor's Patent*, 17 R. P. C. 553; *Edisonia, Ltd. v. Forse*, 1908, 25 R. P. C. 546).

CHAPTER IV

THE ENGINEER AS WITNESS

	PAGE		PAGE
§ 1. Generally	38	§ 14. The use of plans and models	44
§ 2. Expert evidence—generally	38	§ 15. Consequences of non-attendance	44
§ 3. The duties of an expert witness—generally	39	§ 16. Fees and expenses of witness—generally	45
§ 4. The expert should warn the clients of their difficulties	40	§ 17. Who is liable for witness's expenses	45
§ 5. Duty of expert in consultation	40	§ 18. Witness subpoenaed but not called	46
§ 6. Duty of the expert in Court	40	§ 19. Fees and expenses in particular Courts—generally	46
§ 7. Hints on prompting counsel	41	§ 20. In the High Court	47
§ 8. Hints on giving evidence ...	41	§ 21. Special allowances to experts	47
§ 9. Views of an expert witness on expert evidence	42	§ 22. In the County Court	48
§ 10. The use of documents to refresh the memory	42	§ 23. Criminal Courts	49
§ 11. Cross-examination	43	§ 24. Parliamentary Committees	49
§ 12. Previous statements of witness	43	§ 25. Courts of Arbitration	50
§ 13. When a witness is justified in refusing to answer questions	44		

§ 1. **Generally.**—While the engineer is not often brought into Court as a party to an action, he frequently appears there to give evidence. Sometimes he is a mere witness to facts; but he is more often called as an expert. The engineer who is summoned to attend on *subpœna* is subject to the rules applicable to all witnesses. He should remember, however, that he need not attend unless his conduct money is paid or tendered with the *subpœna*.

§ 2. **Expert evidence—Generally.**—An “expert witness” has been defined in America to be “one who has made the subject upon which he speaks a matter of particular study, practice, or observation; and he must have a particular and special knowledge of the subject” (*Dole v. Johnson*, 50 N. Hamp. 454).

The opinion of a witness is admissible on a scientific

question. So where the question was whether a bank which had been erected to prevent the overflowing of the sea had caused the choking up of a harbour, the opinions of scientific men as to the effect of such an embankment upon the harbour was held to be admissible (*Folkes v. Chadd*, 1782, 3 Doug. 157).

Accordingly, the opinion of an engineer would be admissible in relation to works or structures which he had never seen ; although of course the fact that he had seen and inspected for himself would increase the value of his testimony.

§ 3. **The duties of an expert witness—Generally.**—Engineers are often called both as witnesses upon facts and matters of scientific opinion. Thus in the case of a dispute between an employer and a contractor as to the quality of the works which have been executed, it will be the duty of the engineer, who has probably had the supervision of the work throughout, to state in detail in what way the contractor has failed to comply with the specifications. But the engineer is sometimes called to criticise work which he has not seen in the course of erection ; and his testimony will then be largely of an expert character. He will be asked to assume certain facts and give his opinion upon the facts assumed.

When he is consulted as an expert pure and simple, his first introduction to the dispute takes place in the following way. He is approached by a firm of solicitors whose clients desire him to give evidence on their behalf. Plans, drawings, and a copy of the correspondence between the parties will be submitted to him ; and he may also be asked to view the works which form the subject-matter of the dispute. Until he has read all the documents and considered the whole position from the point of view of an expert, he should, it is submitted, refrain from giving any undertaking to appear as a witness ; for it may be that, knowing the facts, he will be unable to support the case which those who instruct him are anxious to put forward. In this particular his position is wholly different from that of the solicitor or advocate acting on behalf of a client. A lawyer may advise his client that he has no case, but it may still be his duty to fight it to the best of his ability ; but the expert who rushes blindly in to the support of a case into which he has not inquired runs grave risk of doing more harm than good. His evidence in chief may be plausible enough ; his proof may contain nothing which he does not

know to be accurate both in the letter and the spirit; but a few telling questions in cross-examination may upset the whole fabric which he has desired to support.

§ 4. **The expert should warn the clients of their difficulties.**—Assuming that the expert is satisfied, after perusing the documents, that the case is one which he can support in the main, he should not hesitate to point out, at the earliest possible moment, the existence of any difficulties which have presented themselves to his mind. If such difficulties have occurred to him, it may be assumed that they have occurred to the experts on the other side. The advocate who is to conduct a case wants to know what can be said against his client in order that he may not be taken by surprise. The maxim “Forewarned is forearmed” applies to legal contests. Further, it may well be that a technical difficulty is not a legal difficulty; and that, when the legal mind is applied to the case, that which appears to a technical expert to be important is wholly immaterial to the cause of action, or to the defence.

§ 5. **Duty of expert in consultation.**—After he has charged himself with the facts of the case under consideration, it is probable that the next appearance of the expert witness will be in consultation with solicitor and counsel. At the consultation, all points which tell in favour of the plaintiff or defendant will be fully discussed, and the expert must not be surprised to find himself closely cross-examined by the counsel who is eventually to support his view of the case. The engineer may generally assume that the counsel engaged have at least an elementary knowledge of the scientific questions upon which the case depends. The work of the legal profession has of late years become so highly specialised that the solicitor has but little difficulty in finding a barrister who has had a scientific education. Much time may, therefore, be saved by assuming that counsel have special knowledge. If he has no such knowledge he will soon say so.

§ 6. **Duty of the expert in Court.**—The next appearance of the expert will be in Court. He must not always assume that the judge and opposing counsel have no knowledge of technical matters. The judge may have tried many similar cases in the

course of his experience ; the cross-examiner will have been coached up by his own expert. Part of the duty of the expert in Court is to listen to the evidence and prompt counsel as to the questions which should be put in cross-examination. The importance of adequately performing this duty cannot be over-rated, especially when the expert is to give evidence on the part of a defendant. An expert called on behalf of the plaintiff may put forward a new theory for which the defendant is wholly unprepared, and with which he and his witnesses entirely disagree. That expert must, therefore, be cross-examined with regard to it, and the views of the opposing witnesses have to be specifically put to him. Further, as he sits in Court and hears what is given in evidence on the part of the plaintiff, an expert may think of something which is not in his proof. It will not, therefore, be known to his own counsel. He should at once bring it forward in order that the view of the plaintiff's witnesses may be taken upon it in cross-examination. The reason for this will be apparent when it is remembered that the judge has to decide which expert is to be believed. If the plaintiff's expert says "A." and the defendant's says "B.," it is essential that the first shall be asked why he prefers "A." to "B."

§ 7. Hints on prompting counsel.—To descend to a very minor detail. The expert should, if possible, avoid interrupting counsel by speaking to him when cross-examining. He should bring to Court with him a note-book from which the pages can be easily torn, and write his point clearly on a small piece of paper. When counsel has to have his eye on the judge, and both ears straining to hear the answers to his questions, it is almost impossible for him to catch the drift of a whispered utterance.

§ 8. Hints on giving evidence.—In giving evidence himself the expert should refrain from disputing every point unless he is compelled to do so. It may not be necessary for him to disagree with the experts who have been called on the other side on all points; and the graceful concession of a point often creates the most favourable impression on the mind of the judge.

Expert testimony has from time to time been the subject of criticism in Courts of justice, on the ground that the witness

must necessarily be a partisan. The engineer, therefore, who is called to aid the Court with his professional knowledge should not show bias in favour of one side or other. "Do not fight the case; leave that to me," is a piece of advice which the writer once heard given to an engineer by an eminent King's counsel. To deal with the awkward points which arise is the function of the advocate; it forms no part of the expert's duty to try and explain them away. If the judge begins to suspect that the expert witness is a partisan, he is more than likely to attach little weight to the whole of his evidence.

§ 9. **Views of an expert witness on expert evidence.**—The author has been favoured by an eminent engineer who has often given scientific evidence with the following statement of the duties of an expert witness: "Concerning the art of giving evidence, the expert must be able to comprehend what is material to the vital points in the case as he understands it. He must not only understand what is material, and its bearing upon the points with regard to which there may be a difference of opinion, but he must be able to explain, as briefly as possible, in what way the facts to which he can speak elucidate the points raised, and clear away the ground for difference of opinion. It is therefore necessary that he should see and know how far any questions put to him in cross-examination are framed upon a perverted knowledge of the scientific question under consideration. Specious questions are often put with a view to weaken his statements of fact, and to give them the appearance of mere personal opinion. Again, counsel will often endeavour to elicit a 'yes' or 'no' reply which the witness knows is unsatisfactory and likely to be misinterpreted, but which he does not at the moment see how to reject or to expose."

With regard to the last point, witnesses are often pressed to say "yes" or "no" to questions which cannot be satisfactorily answered by either word. In such a case the witness is always entitled to explain his answer.

§ 10. **The use of documents to refresh the memory.**—Although it is a general rule of law that a witness may not read his evidence from a written document, it is most important for the expert to remember that he is entitled to refresh his memory from notes "made at the time." The rule has been

thus stated: "A witness may refresh his memory by referring to any writing made by himself at the time of the transaction about which he is being examined, or at any subsequent time, if the Court considers it was then fresh in his memory, or even if made by another person, if read within such time by the witness, and if, when he read it, he knew it to be correct" (*Yearly Practice*, 1908, p. 474). So the engineer called as an expert to report as to the condition of the foundations of a bridge would be entitled to refresh his memory by reference to notes made by him or his assistant at the time. Indeed, if it were not so, the task of giving evidence in reliance upon the frailties of human memory would be hard indeed. An expert may also refresh his memory by reference to professional treatises upon the subjects under discussion. It should be remembered, however, that where any written memorandum or treatise is used to refresh the memory, the witness must be prepared to produce it for inspection to the other side, who are entitled to cross-examine him upon it. Some degree of caution should therefore be used in making a reference to a text-book. It may be out of date, and the author may have embodied a different view of some particular theory in a later edition.

§ 11. **Cross-examination.**—The man who is prepared to give evidence must be ready to withstand cross-examination. He can best qualify himself for this ordeal by giving close attention to the case which has been, or which may be, put forward by the other side. It is not enough that he should be able to show that his own view is right, he must be prepared to show that the other views are wrong; and, if it is a jury case, he must be able to explain himself in such a way that a juror can understand him. It is true, of course, that many of the judges are familiar with technical matters. Some, indeed, have a considerable knowledge of scientific principles. Nevertheless, the expert witness should remember that he may have to convince the mind of the layman.

§ 12. **Previous statements of witness.**—A witness may be cross-examined as to any previous statement made by him relative to the subject-matter of the cause, and inconsistent with his present testimony; and if he either denies or does not admit it, proof may be given that he did make it (Common

Law Procedure Act, 1854, s. 23). In such a case previous statements in writing need not be produced unless required by the judge, but if the witness is to be contradicted by the writing, his attention must be drawn to the parts to be used for that purpose (*ib.*, s. 24).

Counsel whose duty it is to cross-examine are glad to get hold and avail themselves of some previous statement made by an expert, whether on oath or otherwise. The importance to the witness of ransacking his memory as to how he has committed himself upon the subject in question will therefore be manifest. He should remember, however, that when charged with having put his opinion into writing, he is entitled, according to the rule above enunciated, to have the writing produced to him.

§ 13. **When a witness is justified in refusing to answer questions.**—No witness can be compelled to answer any question the result of which will be to expose him to any kind of criminal charge, or to any penalty of forfeiture. It is for the judge to decide whether a particular question would have this effect (*Ex p. Reynolds*, 1882, 20 Ch. D. 298). A witness must, however, answer any question although his answer may tend to bring other persons into disrepute; but it need hardly be pointed out that no action for libel or slander can be brought against him in respect of any such answer.

§ 14. **The use of plans and models.**—If the subject under discussion is capable of being shown on a plan, the engineer, if called into the case at an early stage, should at once point out the advisability of having a plan. A model, or, if the case relates to a machine, a working model, may also be very useful, and should in all cases be prepared if possible.

§ 15. **Consequences of non-attendance.**—It is hardly necessary to enter at any length upon a discussion as to the consequences of non-attendance as a witness. Nevertheless a knowledge of a few of the rules which guide the Court in determining whether the witness shall be punished for his omission may be found useful. In the first place the person who applies for the attachment must be in a position to show that everything has been done which was necessary in order to secure the attendance of the witness. The fact of the immateriality

of the evidence will sometimes be taken into consideration (*Dicas v. Lawson*, 1835, 3 Dowl. 427). The illness of a witness, or the fact that leave to depart has been given him by the solicitor of the party requiring his attendance, will afford an ample excuse. But it should always be borne in mind that the duty of attending a Court of justice is paramount to the duty of obedience to the commands of any master (*Goff v. Mills*, 1844, 13 L. J. Q. B. 227).

A witness subpoenaed to attend the Court at an assize town must remain there from day to day until the case is reached, although the *subpoena* relates only to commission day (*Vaughan v. Brine*, 1840, 9 Dowl. 179).

A witness refusing to attend is liable to an action of damages at the hands of the party who issued the *subpoena*. In such an action the plaintiff must prove (1) that the witness was material; (2) that the trial could not safely proceed without him; and (3) that in point of fact the party has sustained some damage owing to his absence.

§ 16. Fees and expenses of witness—Generally.—When the engineer appears as an expert witness the payment of his fees and expenses is generally provided for beforehand. Where, however, he is required to attend upon *subpoena*, the law provides certain means by which payment of his fees, etc., may be enforced. Thus he may refuse to give evidence, and cannot be attacked for so refusing, unless his expenses have been paid or tendered (*Newton v. Harland*, 1840, 1 M. & G. 956). It is probable that a cheque would not be a good tender for this purpose. To avoid any difficulty in this respect when requested to give evidence on behalf of parties who are complete strangers to him, the engineer should take the precaution of having his fees in advance.

§ 17. Who is liable for witness's expenses.—The person liable to pay a witness's expenses is the party to the suit by whom he is called. Therefore, if payment is made the subject of agreement, the engineer who is summoned as a witness should take care that the party has become bound; for no action lies against the solicitor by whom the *subpoena* was served, unless he expressly contracted to make himself personally liable (*Lee v. Everest*, 1857, 26 L. J. Ex. 334). In the absence of agreement a witness may recover from the party to the suit

not only the bare out-of-pocket expenses of his journey, etc., but also the remuneration provided for by the scale.

The law relating to the recovery of expenses may be summed up as follows:

1. A witness can only maintain an action against the party who has subpoenaed him if an express or implied contract upon the subject can be shown.

2. The jury may in some circumstances reasonably infer a promise to pay from the mere fact of the attendance of the witness at the trial (*Pell v. Daubney*, 1850, 5 Ex. 955.)

3. A witness cannot recover any larger amount than the sum specified in the scale of allowances as fixed by the judges, even though he rest his claim on an express promise.

4. No action can be maintained against the solicitor upon an implied contract to pay the expenses of attendance, although such an action will succeed if an express agreement for any payment can be established.

§ 18. **Witness subpoenaed but not called.**—If a witness be subpoenaed but not actually called, the question whether the unsuccessful party must pay his fees is for the Taxing Master to decide (*East Stonehouse L. Bd. v. Victoria Brewery Co.*, 1895, 2 Ch. 514). In such a case, the fact that the counsel has advised his attendance is usually regarded as a sufficient reason for allowing his attendance (*Gregg v. Gardner*, 1897, 2 Ir. R. 122).

§ 19. **Fees and expenses in particular Courts—Generally.**—Many of the rules of Court which relate to the costs and expenses of expert witnesses deal with the subject from the point of view of a taxation between party and party. So, if the plaintiff succeeds in his action, and is awarded costs, the defendant will have to pay the taxed costs of the plaintiff's expert witnesses. The question of taxation scarcely concerns the witness; for he can always look to the plaintiff for that portion of his agreed fees which the defendant has not been directed to pay. Nevertheless agreements to accept such fees as may be allowed on taxation are not altogether unknown; and the rules, therefore, form a guide to enable the engineer to ascertain what he may expect to receive in case no prior arrangement has been made.

§ 20. In the High Court.—The following table forms part of a complete table set out in the *Yearly Practice*, 1909, at p. 2006. It has no statutory authority, but is used by Taxing Masters as a guide.

—	If resident in the town where the cause is tried.	If resident at a distance from the place of trial.
Engineers and Surveyors per diem.	£1 1s. 0d.	£1 1s. 0d. to £3 3s. 0d.

If the witnesses attend in one cause only they will be entitled to the full allowance. If they attend in more than one cause they will be entitled to a proportionate part in each cause only.

The travelling expenses of witnesses shall be allowed according to the sums reasonably and actually paid, but in no case shall exceed 1s. per mile one way.

The following rules are also observed by the Taxing Masters:—"A party, if a material and necessary witness, will be allowed for loss of time as if he were a stranger to the suit. To a witness in public service, or employ of railway company, an allowance for loss of time on the basis of witness' salary will be made by way of recoupment to employer. If witnesses for a railway or other company are carried or kept nominally 'free' by the company, the ordinary cost of tickets or keep will be allowed by way of recoupment."

Keeping witness after evidence given.—In very exceptional cases, involving scientific or technical evidence, it may be proper to allow a plaintiff to keep one expert until the defendant's experts have given their evidence (see *Yearly Practice*, 1909, p. 2007).

§ 21. Special allowances to experts.—The Rules of the High Court provide that upon the taxation of costs "such just and reasonable charges and expenses as appear to have been properly incurred in procuring evidence and the attendance of witnesses are to be allowed." For instance, in one case tried so long ago as 1877 (*Mackley v. Chillingworth*, 1877, 2 C. P. D. 273), the fees paid to two surveyors employed by

the plaintiff for their surveys and reports were allowed on taxation, and the same practice has been followed since 1877.

A moderate fee, such as 7*l.* 7*s.* a day, may be allowed for a scientific witness to read up a case for the purpose of giving evidence (*Smith v. Buller*, 1875, 19 Eq. 473). Cases relating to the employment of medical men may be usefully quoted in this connection. In *Ryan v. Dolan*, 1872, L. R. Ir. Eq. 92, which was decided in Dublin, a fee of 7*l.* 7*s.* a day was declared to be reasonable remuneration for a medical expert. It was also decided in this case that the remuneration for loss of time which medical witnesses attending during the examination of other witnesses fairly claim may be paid to them and charged to the opposite side. In the above cases the question as to the amount of the expert's fee was not in issue between him and the party who retained him, but between the parties to the action upon taxation of the bill of costs. We may assume, however, that in cases where an expert finds it necessary to sue for his fee, the Court in arriving at a decision upon the matter would observe the rules which guide the Taxing Master. Thus the length or complexity of the suit, and the necessity for the constant attendance of the witness at Court, might be taken into consideration.

§ 22. In the County Court.—As might be supposed, the engineer summoned to give evidence at a County Court is not usually allowed as much as he would obtain for similar services in the High Court. The following table serves to indicate how much will be allowed him on a taxation in the County Court:—

SCALES OF ALLOWANCES TO WITNESSES IN COUNTY COURT.

Gentlemen, merchants, bankers, and professional men, per diem 15*s.* to £1 1*s.*

Expert and Scientific Witnesses.

—	If costs taxed on column B of Scale.	If costs taxed on column C of Scale.
For qualifying to give evidence.	£1 1 <i>s.</i> 0 <i>d.</i> to £3 3 <i>s.</i> 0 <i>d.</i>	£1 1 <i>s.</i> 0 <i>d.</i> to £5 5 <i>s.</i> 0 <i>d.</i>
Attending Court on trial, per diem.	£1 1 <i>s.</i> 0 <i>d.</i> to £2 2 <i>s.</i> 0 <i>d.</i>	£1 1 <i>s.</i> 0 <i>d.</i> to £3 3 <i>s.</i> 0 <i>d.</i>

The costs of a witness in a county court may be allowed, although he has not been actually called (*County Court Rules*, Or. LIII. r. 41). He may be allowed all travelling expenses actually incurred and reasonably paid by him.

§ 23. **Criminal Courts.**—Certain regulations made by the Home Secretary, dated Nov. 12, 1903, govern the allowances payable to prosecutors and witnesses in criminal prosecutions (*Weekly Notes*, 1904, p. 1).

According to § 2 of these regulations "there may be allowed to expert witnesses such allowances for attending to give expert evidence as the Court may consider reasonable, including where necessary, an allowance for qualifying to give evidence."

There may be allowed to witnesses attending Court to give evidence from a distance of more than two miles their railway fares actually paid, or (where a railway is not available) reasonable expenses of conveyance actually incurred. Provided—

(1) That the railway-fare, except for special reasons allowed by the Court, shall be third-class fare; and that if return tickets are available, only return rates shall be allowed. In the case of police witnesses, the reduced rates under the Cheap Trains Act, 1883, shall not be exceeded, except for special reasons allowed by the Court.

(2) That the expenses of conveyance, otherwise than by railway, shall not in any case (except where a special conveyance is required for a witness suffering from serious illness) exceed 1s. a mile one way. Such expenses shall be allowed separately as mileage.

§ 24. **Parliamentary Committees.**—Engineers are frequently summoned before committees of one or other of the Houses of Parliament. If so summoned at the instance of a party to a private bill—*i.e.*, a promoter or an opponent, the expenses of the witness are defrayed by the party employing him; but when summoned for any public inquiry, as for instance before a select committee, his expenses are paid by the Paymaster-General, under orders signed by the Clerk of the Parliaments, the Clerk of the House of Commons, or by the Chairman of Committees in either House. An engineer summoned before a parliamentary committee should report himself to the committee clerk on his arrival in London, or he will not be allowed

his expenses for residence prior to the day of making his report. (See *May's Parliamentary Practice*, 1906, p. 434.)

A civil engineer or architect is allowed his actual travelling expenses, and for every day or part of a day that he is necessarily kept from home £3 3s. per day. Special allowances have also been made to defray the expenses of official substitutes.

§ 25. **Courts of Arbitration.**—Engineers are frequently summoned as witnesses in arbitration proceedings which involve protracted inquiry into matters of technical and scientific interest. A party to an arbitration held under the Arbitration Act, 1889, may *subpœna* a witness to attend at the arbitration to give evidence, and to produce documents (Arbitration Act, 1889, s. 8). In such a case the attendance of a witness may be enforced. He is entitled to his fees and expenses just as if he were being examined in a case in Court. Fees amounting to considerable sums are often allowed in these cases. In *Brocklebank v. Lancashire and Yorkshire Railway*, 1887, 3 T. L. R. 575, a claim for compensation to be paid to the plaintiff by the defendant railway company was referred to arbitration, the railway company agreeing to pay all costs, charges, and expenses. The plaintiff called certain surveyors as witnesses, who would not accept less than Ryde's scale. It was held that as the skilled evidence called by the plaintiff was not disproportionate to that called by the railway, and as the experts were necessary to the plaintiff's case, and would only give evidence on the payment of these fees, they ought to be allowed on taxation. But the Court said that nothing in their judgment must lead to the supposition that they expressed any approval of that scale of charges. In another case (*Drew v. Josolyne*, 1888, 4 T. L. R. 717) the Court allowed a surveyor £30 as a qualifying fee, and £3 3s. a day for attendance for the six days during which the arbitration lasted. These were the sums allowed on taxation; the surveyor had preferred a larger claim which was presumably met by the person employing him.

CHAPTER V

ENGINEERS AND THE LAW OF NEGLIGENCE

	PAGE		PAGE
§ 1. Generally	51	§ 8. Negligence in not certifying	55
§ 2. Negligence of a consulting engineer	51	§ 9. Liability for acts of assistant	57
§ 3. Degree of skill required ...	52	§ 10. Who may sue the engineer for negligence	57
§ 4. Engineer carrying out employer's orders ...	52	§ 11. Measure of damages ...	59
§ 5. Engineer to know the law	53	§ 12. Negligence of a station engineer	61
§ 6. Negligence in supervising...	54	§ 13. Liability for injuries to strangers	62
§ 7. Negligence in preparing plans, estimates, etc. ...	54		

§ 1. **Generally.**—Although the consulting engineer is but seldom heard of as defendant in an action for negligence, he is, nevertheless, exposed to attack, and may, at some time or another have to justify his actions. His liability, however, is always limited by this—that he is generally employed either to give his professional opinion, or carry out work in the manner which he considers best. He cannot be held responsible for an erroneous opinion, or for an error in judgment. Just as a doctor cannot guarantee a cure; and just as the lawyer cannot undertake to win a case, so the engineer cannot ensure the feasibility of every scheme which he devises.

§ 2. **Negligence of a consulting engineer.**—There is no English case in which a distinction has been drawn between the skill required of an engineer and that required of a consulting engineer. But in America—to borrow an example from one of the other learned professions—the Courts make a difference between the consulting surgeon, or specialist, and general practitioner. The specialist, it has been stated, must evince a degree of skill which accords with his position: in other words, he must not profess to a degree of special knowledge which he does not possess. It is presumed that, should the point ever arise in an English Court, the conduct of a consulting engineer would be judged according to a similar standard.

Thus a consulting engineer who held himself out as an authority on some particular branch of his subject, would be required to carry out his pretensions in practice.

§ 3. Degree of skill required.—The question—What is the reasonable care which an engineer ought to display in the performance of his work?—is one which must be answered by reference to all the surrounding circumstances. “The degree of skill requisite is such as may be expected in the circumstances of time and place from an average person in the profession—one neither specially gifted nor extraordinarily dull. Where this reasonable amount of information and skill proportionate to the duties that are undertaken is found, there is no liability for errors of judgment in the application of knowledge. Each case must depend on its own circumstances; with the paramount consideration that when an injury has been sustained that could not have arisen from the absence of reasonable skill or diligence, then there is liability” (*Beven’s Law of Negligence*, p. 1366). To render a professional man liable for negligence, it is not enough that there has been a less degree of skill than some other professional man might have shown. Extraordinary skill is not required unless professed or contracted for; a fair average degree of skill is all that can be insisted on. Or, as it has been laid down (in *Lamphier v. Phipos*, 1838, 8 Car. & P. 475), a person who enters a learned profession undertakes to bring to the exercise of his business nothing more than a reasonable degree of skill and care. He does not undertake, if he is an attorney, that he will gain a cause at all events; or, if he is a physician, that he will effect a cure; nor does he undertake to use the highest possible degree of skill. There may be persons who have higher education and greater advantages than he has, but he undertakes to bring a fair, reasonable and competent degree of skill.

As an illustration of this principle reference may be made to *School Board for London v. Northcroft*, 1889, 2 H. B. C. 142, where a mere clerical error on the part of a clerk employed by a quantity surveyor was held not to be due to negligence. The facts of this case are fully set out in Chap. IX., § 4, *post*.

§ 4. Engineer carrying out employer’s orders.—While an engineer may be held liable for negligence if he is found to be

wanting in the competent skill of an engineer, he will not be responsible for defects resulting from methods of construction which his employer orders him to adopt. This principle has been applied to the case of an architect. In the case of *Turner v. Garland*, 1853, 2 H. B. C. 2, an architect was employed to prepare plans for, and superintend the erection of, certain model lodging-houses in accordance with the latest improvements. Amongst other things, his employer told him to put in a new patent concrete roofing, which cost only a quarter of what a lead or slate roof would have cost. This roof proved a failure, and had to be replaced in a few years at a cost of £230. The architect was sued for negligence. In summing up Erle, J., said: "If the architect possesses competent skill, and was guilty of gross negligence, although of competent skill, he might become liable. If he were of competent skill, and paid careful attention to what he undertook, he would not be liable. You should bear in mind that if the building is of an ordinary description, in which he has had abundance of experience, and it proved a failure, this is evidence of want of skill or attention. But if the building is out of the ordinary course, and you employ him about a novel thing, about which he has had little experience, if it has not had the test of experience, failure may be consistent with skill." In the event the architect was held not liable. In this case it will be observed that the use of the roof in question was suggested by the employer himself; had it been recommended by the architect, he would probably have been held responsible for its ultimate failure. (As to the effect of the employer approving plans, see Chap. XI., § 7, *post*.)

§ 5. Engineer to know the law.—It would seem that an engineer is bound to have some slight acquaintance with the law in order to protect his clients from the risk of having actions for trespass brought against them.

In the Irish case of *Monks v. Dillon*, 1884, 12 L. R. Ir. 321, works were executed by a contractor for a drainage board under the superintendence of their engineer, who had prepared the plans and often saw the works while in progress. Some of the works amounted to a trespass on the plaintiff's land. It was decided that the engineer was liable for the trespass committed. Similarly, it is apprehended that an engineer should be acquainted with local bye-laws, etc., in order that he

may protect his client. Within the metropolitan area, for instance, the provisions of the London Building Act may have to be observed.

§ 6. **Negligence in supervising.**—The results of negligence in supervising were illustrated in the case of *Jameson v. Simon*, 1889, 1 F. 1211. There the defendant, an architect, was employed in the usual way in connection with a building of a house, in part of which there was to be a cement floor. The foundations for this floor were made of improper materials, with the result that dry-rot broke out in the woodwork after the house was completed. The building-owner sued the architect for negligence and for passing, as sound, work which was really unsound. It was held that the architect was liable as he had failed to exercise proper supervision, and that it is the duty of an architect to give such supervision as will reasonably enable him to certify that the work of the contractors is according to contract. The duty of an architect was thus declared by the Lord Justice Clerk: "He, or some one representing him, should undoubtedly see to the principal parts of the work before they are hid from view, and if need be, I think he should require a contractor to give notice before an operation is to be done which will prevent his so inspecting an important part of the work as to be able to give his certificate upon knowledge, and not on assumption, as to how work hidden from view had been done" (see this case further considered, Chap. XVIII., § 4, *post.*) Every contract for works should contain a clause providing that the engineer may order work which has been closed up to be re-opened. (See, *e.g.*, Form I., Cl. 14 (b), *post.*)

§ 7. **Negligence in preparing plans, estimates, etc.**—There are cases which appear to establish that an engineer may be held liable for negligence in preparing an estimate of the price of work done. He must exercise reasonable care, and may be held responsible if he relies on erroneous calculations.

In the case of an architect, in order to ascertain what is reasonable care, it must be remembered that if the architect's estimate is made before working drawings and specifications are prepared, he has but sketch-plans and a rough description of materials to estimate upon, for it is to avoid the expense of preparing working plans and specifications that the building-

owner asks, as a rule, for an estimate of the cost at this stage of the work. It is a question for a jury whether it is a condition, express or implied, of the contract that the estimate shall be reasonably near the actual cost. (*Nelson v. Spooner*, 1861, 2 F. & F. 613.)

In *Money Penny v. Hartland*, 1826, 2 C. & P. 379, the plaintiff was employed as an architect by a committee to build Mythe Bridge across the Severn. In estimating for the erection of the bridge and the approaches thereto, he relied on the bearings taken by a surveyor who had been previously employed by the committee, and took no steps to ascertain for himself the character of the ground forming the site of the intended works. The soil proved bad for the foundations, and it turned out that much deeper foundations were necessary than the plaintiff had anticipated. It was held that he could not recover his fees. Best, C. J., in giving judgment said: "If a surveyor delivers an estimate greatly below the sum at which a work can be done, and thereby induces a private person to undertake what he would not otherwise do, then I think he is not entitled to recover his fees. I think it is of great importance to the public that gentlemen in the situation of the plaintiff should know that if they make estimates, and do not use all reasonable care to make themselves informed, they are not entitled to recover anything." (For another case illustrating the liability of an architect for negligence, see *Columbus Co. v. Clowes*, at p. 15, *ante*, Chap. II., § 9.)

§ 8. Negligence in not certifying.—If an engineer does not certify, and the employers take advantages of his failure to do so in order to escape liability under the contract, there is one case which decides that, the contractor may sue for and obtain his money. In *Kellett v. New Mills Urban District Council*, 1900, 2 H. B. C., 329, a contractor brought an action for the balance of the price of work done under a contract and for extras. The defendants, in answer to the claim, alleged that no final certificate for the contract had been made out by the engineers, and that the engineers had not certified that the whole was in a good and substantial state of repair or delivered up to their satisfaction as executed in compliance with the contract. By way of reply to this defence, the contractor alleged that he had done all the work

which he agreed to do under the contract. He also claimed that the engineers were the servants or agents of the employers for the purpose of certifying the date of completion of the works to be done by the contractor, and the amounts payable on such completion. It was further alleged that instead of determining the date of completion, or certifying what was due, the engineers had wilfully, arbitrarily and persistently refused to determine and certify either the date or the amount, and that, in the result they were discharged from their position as engineers. It was also urged that the defendants took advantage of this conduct of the engineers so as to prevent the contractor from receiving or recovering payment of the amount due to him for the completed works. Fraud was not suggested. A jury found that the works were completed; that the engineers had failed to certify, and that the defendants, being aware of such refusal, had taken advantage of it so as to refuse or unreasonably delay payment. It was held that the contractor could recover from the defendants without a certificate. Mr. Justice Phillimore said: "I am of opinion that the decisions are clear that where the employer colludes with the engineer, surveyor, or valuer, it is right to pass the engineer, surveyor, or valuer by, and to seek the determination of the Courts as in an ordinary contract; and I see no difference between the misconduct of the engineer, surveyor, or valuer being procured by the employer, and the employer knowingly taking advantage of the man's original misconduct. . . . I think they knew here not merely that the engineer was not certifying, but that he was going through the process of pretended inquiry, which was almost worse than his refusing to inquire." With all respect, the author ventures to think that this decision can only be explained by saying that the learned judge did, in effect, find that there was fraud on the part of the defendants. For better or worse, a contractor places himself in the hands of the engineer nominated by the employer; and unless there is fraud or collusion, the terms of the contract cannot be ignored. As there is no wrong without a remedy, the contractor can recover against the employer, or else call upon the employer to appoint, or concur in the appointment of an engineer who will grant the necessary certificate. (An action for not granting a certificate will not, however, lie against the engineer. See Chap. XIV., § 10, *post.*)

§ 9. **Liability for acts of assistant** (and see Chap. XVIII., § 3, *post*).—If an engineer employs an assistant, he may be held responsible for the consequences of negligence on the part of his servant. To entrust detail work to an assistant may be perfectly lawful, but the blame will attach to the engineer if anything goes wrong (see *Lord North's Case*, 1794, Dy. 161; *Mackersy v. Ramsays*, 1842, 9 C. & F. 818; *Jameson v. Simon*, Chap. XVIII., § 4, *post*). Omission on the part of an engineer to verify and test the calculations and to supervise erection would be laid to his account. Cases on this head are not numerous—especially in direct relation to engineers; but it seems that the Courts will not impose upon an architect the duty of supervising every minute portion of the work which the builder undertakes. So in *Graham v. Commissioner of Works*, 1902, *Emden's Building Contracts*, 670, an architect employed on the terms of an ordinary building agreement, having first ascertained that portions of the timber sent on to the job were not of the stipulated quality, delegated to the clerk of the works the duty of particularising what timbers were to be removed. It was held that he was entitled to do this. Arguing by an analogy, it is probable that an engineer will be justified in leaving much of the actual labour of supervision to his subordinates. The importance—to the employer—of an engineer being responsible for the act of an assistant, lies in the fact that the employer could not in many cases sue the assistant at all. (See *Cobb v. Becke*, 1845, 6 Q. B. 930.)

§ 10. **Who may sue the engineer for negligence.**—A question may sometimes arise as to who is entitled to sue the engineer for negligence. He acts as an intermediary between employer and contractor. Which of these two parties may support a claim for damage?

It cannot be too often pointed out that the relation of the engineer or architect to the contractor is not the same as his relation to the employer. So far as the contractor is concerned, the engineer cannot be held liable for negligence. The contractor accepts him as an intermediary between himself and the employer: to determine questions arising under the contract, and an opinion or decision, honestly given, cannot be questioned in a court of law. Thus the contractor cannot sue the engineer if it turns out that owing to some mistake in the specifications, what seems to be a profitable turns out to

be a disastrous undertaking. With the employer, however, the relations of the architect or engineer are very different. He is the servant of the employer, and can be held liable for negligence which involves his master in any loss. The leading case on this subject is *Rogers v. James*, 1891, 2 H. B. C., 185. There an architect was employed to design and superintend the erection of a house, and by the terms of the contract with the builder, his decision in all matters between the builder and the building-owner was to be final. Having given his final certificate, the architect sued the builder-owner for his fees. By way of counter-claim, it was alleged that the architect had been guilty of negligence in supervision which led to defects in the work, and damages were sought on this head. To this the architect replied that in granting his final certificate he had taken the defects in question into account, and that the certificate was final. It was held that the final certificate was only final in a dispute between the building-owner and the builder, and not as between the building-owner and the architect, and that the building-owner was entitled to recover damages for negligence in supervision, in spite of the certificate.

To the rule that the contractor may not sue the architect there appears to be only one exception—namely, that if the contractor is paying for the calculation of quantities, the architect may be sued for negligence if those quantities are not reasonably correct. The following case (*Bolt v. Thomas*), which is referred to in *Beven on Negligence*, p. 1370, illustrates this proposition.

The plaintiff sued the defendant, an architect, to recover damages for supplying to the plaintiff an inaccurate statement of the quantities of work and materials required for the erection of a building which the plaintiff had contracted to erect. The defendant advertised for tenders for the erection of a Baptist chapel, stating that the plans and specifications could be seen, and that the quantities of work and material would be furnished. The plaintiff obtained from the defendant's office a table of such quantities, headed by a statement that it was to be paid for by the successful competitor. From this table the plaintiff calculated his tender, which was accepted. For the plaintiff it was contended that, independently of the computation, there was an implied undertaking in law that the bill of quantities paid for by the plaintiff should be reasonably correct. For the defendant it was contended that

there was no contract between the architect and the builder, that the committee had stipulated with the plaintiff that he should pay the architect, and that the architect was not liable to the builder for any inaccuracy in the quantities.

Mr. Justice Byles, in summing up, directed the jury that the defendant had stipulated that the plaintiff should pay him for the calculation of the quantities, and, having been paid for them by him, the defendant was liable to compensate him if the bill was not reasonably correct. The jury found for the plaintiff.

(Compare the case of *Young v. Blake*, 1887, 2 H. B. C., 106, noted *post*, Chap. IX., § 4.)

If an engineer order extras, and it is subsequently ascertained that he really has no authority to do so, the contractor might possibly sue him as for breach of warranty of authority. (See *Randall v. Trimmen*, 1856, 18 C. B. 786, noted Chap. XII. § 6, *post*.)

§ 11. Measure of damages.—The amount of the fees which the engineer was to have earned is not the full measure of damages. Thus, to take an illustration from the law as applied to a valuer, whose position resembles that of an engineer, it has been decided that a valuer employed to value property proposed as security for a mortgage is liable to his employer for omission to use due skill, care, and diligence in making the valuation. The measure of damages is the loss and expense caused to the employer in direct consequence of the negligence. But to recover the damage it must be shown that the employer acted on the faith of the valuation, and did not use his own judgment in making the advance (*Crabb v. Brinsley*, 1888, 4 T. L. R., 14). So it is presumed that an engineer would incur an equally serious liability in the like case.

In spite of the above cases, the measure of damages which may be awarded against an engineer or architect who has been guilty of negligence in superintending is not easy to define. In one case an architect was alleged to have been negligent in granting certificates for work which ought not to have been certified as being in accordance with the contract. Baron Fitzgerald told the jury that the measure of damages could not by any possibility be what would be necessary to put the work in the condition required by the contract—that would be as against the party who was paid for the performance of the work. The damages should be measured as to what loss the plaintiff had suffered by reason of the negligent performance

of his duty of superintendence. (*Armstrong v. Jones*, 1896, 2 H. B. C. 15.)

The fact that the damages which may be recovered against an engineer for negligence in supervising are not limited to the amount of fees earned by the engineer, was emphasised in the extraordinary case of *Saunders v. Broadstairs Local Board*, 1890, 2 H. B. C. 160. There the plaintiffs, two engineers, sued for £521 12s. 6d. for work done by them in preparing surveys, schemes, estimates, specifications, etc., for certain drainage work at Broadstairs, and for obtaining tenders for and superintending the execution of the contract for the works. The defendants counter-claimed for negligence under various heads, including the unskilful preparation of bills of quantities, faulty measuring up, and careless supervision. Negligence was denied by the plaintiffs, but the official referee found against them and awarded £4,691 12s. 6d. damages, made up as follows: (a) £2,046 12s. 6d., amount overpaid to the contractor by reason of the negligence of the engineers in over-certifying the quantities; (b) £2,400, estimated cost of doing bad work over again; and (c) £240, actual cost of repairs already done to defective work. This verdict was upheld by the Court of Appeal, although the whole amount of the contract which the engineers were instructed to superintend was a sum of about £5,000.

The following case also throws some light upon what may be the consequences of negligence on the part of an engineer:

A ship was to be lengthened and repaired to the satisfaction of the consulting engineer of the employer. Before the vessel was delivered, the engineer and employers had abundant opportunity of seeing whether the lengthening and repairs were or were not duly carried out. There was no fraud of any sort, and the existence of a defect might easily have been ascertained before and at the time of delivery of the vessel, and the fact that it was not ascertained was owing to the neglect and default of the employer's agents. Defects having become apparent after the ship was delivered over, the owners brought an action to recover damages in respect thereof. It was decided that the utmost which was recoverable from the builders was the amount which it would have cost to have rectified the defect at the time when the vessel was delivered, and before she was sent on any voyage. (*In re Trent and Humber Company*, 1868, L. R. 6 Eq. 396.)

The consequences of negligence do not, however, stop short at making good the immediate monetary loss which may be sustained. A faulty design may involve disaster and personal injuries, for which the engineer may be held civilly responsible.

In *Mosdell v. Mitchell* and others (*Times*, Jan. 20, 1891) the widow of a workman brought an action under Lord Campbell's Act against a building-owner, his contractor, and architect, for the loss of her husband. It appeared that the plaintiff's husband had been one of the workmen engaged in erecting certain houses, of which one of the defendants was the architect, and another the builder. After the houses had been partly erected they fell, and the plaintiff's husband was buried among the falling walls and killed. It was shown that the fall of the building was due to a wall being too slight to bear the strain put upon it. During the hearing the jury, on the suggestion of the judge (Lord Coleridge, C.J.) stopped the case as against the building-owner; but in the result they gave a verdict of £500 against the builder and the architect jointly. Arguing by analogy, it is possible that if a bridge were to fall owing to the faulty design of an engineer he might be held responsible in damages.

§ 12. *Negligence of a station engineer.*—The question of liability for negligence is of considerable importance to the station engineer. Suppose that the working "set" in the station suddenly fails, and, through some oversight on his part, the "stand-by" set is also out of order. The result may be to plunge a whole town in darkness. Is the engineer liable for the consequences? So long as a breakdown can be explained on the ground of the *force majeure*, or inevitable accident, the supply authority are not liable to pay penalties (see *Electric Lighting (Clauses) Act, 1899, Sched. s. 30*); but if the company are unable to show that the stoppage was due to circumstances over which they had no control, very serious consequences may result, blame for which would naturally attach to the engineer. To illustrate the nature of this liability, it may be mentioned that where a cable laid down proved to be defective, with the result that the supply of energy broke down, this was held to be inevitable accident (*Sun Insurance Co. v. Dublin Corporation, Electrician, Dec. 9, 1899, p. 240*). Where, on the other hand, a company was summoned for making default in supply, it was held to be no

excuse for them to say that it was essential that some part of the district of the company should be cut off, and that the part of the district where the complainant lived was selected as causing the least public inconvenience. It is apprehended that if a breakdown were to occur owing to the negligence of the station engineer, he would be guilty of conduct which would justify his instant dismissal. But it would be for the employers to prove their case; and if he could retort that the accident was due to their ignoring his advice as to the purchase of new plant, etc., he would probably be acquitted of the charge. If an accident occurred which was due to the negligence of a subordinate, it is not easy to define the position of the engineer. Of course, if he had the selection and appointment of the men employed at the station he would, to a certain extent, be responsible for their good behaviour. But if he could show that he took all proper steps to select competent artificers it is anticipated that he would not be personally liable for accidents which happened through their carelessness.

§ 13. *Liability for injuries to strangers.*—The engineer in charge of a generating station or other place where there is moving machinery, should take the precaution of posting near the entrance to the machinery-room a notice to the effect that there is “No admission except on business.” Great care should be exercised in allowing visitors to inspect the machinery, for when a man comes into a dangerous place by invitation the person inviting him may have to pay damages if there is an accident. Of course, a mere trespasser takes the risk upon himself. So that a person entering the station without leave or licence would only have himself to blame in case of accident. With regard to children, however, steps should be taken to prevent their having access to the works on any consideration; for if a door abutting on the street is left open, and a child comes in “to see the wheels go round” and is injured, the supply company may be held responsible, although the child was a trespasser. This rule is founded on good sense, for it is the instinct of a child to meddle with dangerous machinery (see *Harold v. Watney*, 1898, 2 Q. B. 320). Danger of this kind may be avoided by placing a half-door at the front entrance and keeping it always shut. (See further as to employers’ liability for accidents, Chap. XVII., § 12 *post*.)

CHAPTER VI

ENGINEERING CONTRACTS GENERALLY DEALT WITH

		PAGE			PAGE
§ 1.	Preliminary	63	§ 20.	When relief will be granted for mistake	76
§ 2.	Necessity for writing	64	§ 21.	Completion of contract	76
§ 3.	Contract in more than one document	65	§ 22.	Failure to complete work on a lump-sum contract	77
§ 4.	The parties	66	§ 23.	Completion of a lump-sum contract	77
§ 5.	Disabilities of parties	66	§ 24.	At what time the contract price may be recovered... ..	79
§ 6.	Authority of persons contracting	66	§ 25.	Price where the contract is severable... ..	79
§ 7.	Stamp duty	67	§ 26.	Payment by instalments... ..	80
§ 8.	Form of contract	67	§ 27.	What is whole or complete work	80
§ 9.	Consideration	69	§ 28.	Deviations from the contract and extras	81
§ 10.	Construction of a contract	69	§ 29.	Impracticability of the works	82
§ 11.	Whether parol evidence is admissible in relation to a written contract	70	§ 30.	New contract arising out of an old contract	82
§ 12.	Cases in which parol evidence has been admitted to explain written contracts	71	§ 31.	Work superior to contract	83
§ 13.	How far a custom may be implied	72	§ 32.	What conditions implied as to workmanship	83
§ 14.	Customs held to be valid... ..	72	§ 33.	Summary of the law as to performance and completion of contract	84
§ 15.	Customs and usages held bad	73	§ 34.	Words and phrases used in contracts	85
§ 16.	Implied terms in contracts	73			
§ 17.	What will not be implied	75			
§ 18.	Rectification of contracts	75			
§ 19.	Grave results of mistakes	75			

§ 1. Preliminary.—The performance of all engineering works involves the making of a contract. It may be express or implied. It may be made verbally or be reduced into writing, or it may be partly verbal or partly written. It imposes duties on the employer and the contractor, the violation of which may lead to all kinds of unpleasant consequences. It is manifest, therefore, that the utmost care should be exercised in drawing the contract, especially if it involves the execution of large works and the expenditure of much money. At the outset of a negotiation everything may appear to be simple

and straightforward: it is only when the contractor has embarked upon his undertaking that difficulties begin to manifest themselves. To foresee and provide for those difficulties is the duty of the person who is called upon to prepare the contract. In carrying out this duty he will (if he is wise) consult a lawyer. If the employer, or an engineer acting for the employer, endeavours to put together a satisfactory contract, he cannot, in the nature of things, bring to bear upon his task the skill of a lawyer, whose training endows him with the faculty of looking at both sides of the question and foreseeing difficulties. He will tend, moreover, to adhere too closely to the forms and precedents which are generally made use of in preparing contracts of this kind. Common forms of contract are not, however, to be despised. They may suggest a number of provisions which appear to be useless, and which do not always occur to the mind of the most skilful conveyancer; but, on the other hand, it is often dangerous to adhere too closely to a mere form without making allowance for the peculiar difficulties attending the work under execution.

It is proposed to give in the present chapter an outline of the law as it affects contracts for engineering works. The various points which require further elucidation will be considered in subsequent chapters.

§ 2. *Necessity for writing.*—Although certain contracts for the sale of goods must be put into writing, an engineering contract, being generally an agreement for work and labour, need not generally be written. For instance, where a man contracted to build a steam-engine of 109 h.p. for a colliery, to be completed and fixed for £2,500. The engine was forwarded in parts and put together at the colliery. It was held that this was a contract for work and labour and material used, and need not be in writing (*Clark v. Bulmer*, 1843, 11 M. & W. 243). A contract for the mere sale of goods of the value of £10 or upwards is not, however, enforceable by action unless the buyer shall accept part of the goods so sold and actually received the same, or give something in earnest to bind the contract or in part payment, or unless some note or memorandum in writing of the contract be made and signed by the party to be charged or his agent in that behalf (Sale of Goods Act, 1893, s. 4). It

follows, therefore, that contracts for the mere sale of machinery above a certain value must be in writing; but as these contracts do not form the subject of this work, the provisions of this statute need not be further considered. Where, however, there is an agreement for the supply and erection of machinery there need be no writing, for this is a contract involving work and labour (see *Lee v. Griffin*, 1861, 1 B. & S. 272).

There are two other classes of contracts, the terms of which must be reduced into writing. These are (1) contracts of guarantee; and (2) contracts not to be performed within a year. For instance, if one man guarantees the debt of another, he cannot be sued on his guarantee unless a written agreement can be produced. A contract to pay the debt of another must not, however, be confused with a contract involving direct personal liability. In one case a contractor undertook to do certain drainage work for a local board. The board gave notice to certain persons to make connections with the drain, and upon these persons disregarding the notice, the chairman of the board said to the contractor, "You go on and do the work, and I will see you paid." It was held that these words were evidence to sustain a claim against the chairman personally, but that they did not constitute a promise to pay the debt of another (*Lakeman v. Mountstephen*, 1874, L. R. 7 H. L. 17). Another kind of contract which must be in writing is a contract which is not to be performed within a year. Thus, suppose it is intended that the execution of works proposed to be undertaken shall not be completed within a year, the contract cannot be enforced unless it is in writing, or unless there has been part performance. Contracts with local authorities, too, must in general be put into writing.

§ 3. Contract in more than one document.—A written contract need not be contained in one document. It may consist of many documents, and in the case of a contract for engineering works of any magnitude, it nearly always happens that the terms of the agreement between the parties can only be ascertained by reference to a number of different documents. The general conditions, the specifications, the plans and drawings—all these form part of the contract. The fact that the plans and specifications are part of the contract is generally made plain by a clause in the general conditions which expressly incorporates them. (See, *e.g.*, Form IIC., *post.*)

§ 4. **The parties.**—The parties to a contract are usually described with care at the commencement of the document. The person for whom the work is to be done is described as the “employer,” or “building-owner,” as the case may be (the term “employer” being generally used throughout this work), and the party doing the work is generally described as “the contractor.” Where the engineer is frequently referred to in the contract, it is often convenient to secure the insertion of a clause providing that “the engineer shall mean Mr. A. B. or other the engineer for the time being, or from time to time duly authorised and appointed in writing by the employers to superintend the construction and erection of the works the subject of the contract.” (See, *e.g.*, Form IIA., Cl. 1, *post.*)

§ 5. **Disabilities of parties.**—It is necessary to point out that a member of Parliament is prohibited by statute (22 Geo. 3, c. 45; 41 Geo. 3, c. 52) from being interested otherwise than as a member of an incorporated trading company in contracts for the public service. Other cases of disability to contract exist, but it is not necessary to deal with them in this work.

§ 6. **Authority of persons contracting.**—It is sometimes necessary to consider the question whether the parties entering into the contract are competent to do so. In the case of a company, for instance, it may be necessary to inquire whether the proper formalities have been complied with; whether, for instance, the company has power to enter into the contract at all. Thus a company may only contract for such objects as are within the purposes of its memorandum of association. In one case (*Ashbury Carriage Co. v. Riche*, 1875, L. R. 7 H. L. 653) the plaintiff company was formed for the purpose of carrying on the business of mechanical engineers and other purposes incidental thereto. It entered into a contract with the defendant for the construction of a railway by the defendant. It was held that the company was not bound by the contract as being *ultra vires*. Again, it is dangerous to enter into a contract with directors or other officials without first ascertaining that they are vested with the proper authority. In *Pierce v. Jersey Waterworks Co.*, 1870, L. R. 5 Ex. 209, a company was formed with the object, as described in the memorandum of association, of making a waterworks in Jersey. By the articles of association it was

provided that the powers of the company were only to commence when 3,000 shares had been subscribed. Mr. Pierce, the plaintiff, was appointed engineer and surveyor at a salary of £1,000 a year by a resolution of the directors passed at a board meeting. He went to Jersey, made plans and specifications, and drew up a report, and then sued for half a year's salary. It was held that, inasmuch as the 3,000 shares had not been subscribed, the directors had no power to contract, and that, therefore, the action could not be maintained against the company.

§ 7. **Stamp duty.**—The stamp duty on a building contract or other similar instrument, the matter of which is of the value of £5 or upwards when under hand only, is sixpence. The stamp used may be adhesive; if so it must be cancelled by the person who first executes the contract. If an adhesive stamp is not used, the contract must be stamped at the Stamp Office, either before execution, or within fourteen days of execution, otherwise it cannot be stamped without payment of a £10 penalty. The stamp duty on a building contract, or other like instrument when under seal—as where, for instance, it is made with a local authority—is ten shillings. The contract must be stamped at the Stamp Office, either before execution, or within thirty days after execution, otherwise it cannot be stamped without payment of a £10 penalty. The necessity of a stamp only becomes apparent when it is sought to put a contract in evidence in a court of law or before an arbitrator. Suppose, for instance, the employer were suing the contractor for damages for breach of contract. He could not prove his case without referring to the contract; and if it were not stamped the judge might refuse to look at it unless an undertaking were given to stamp it. Although a penalty of £10 is prescribed by statute, it generally happens that the revenue authorities at Somerset House will remit £8 or £9 of the penalty, if it be shown to their satisfaction that there was no intention to cheat the revenue.

§ 8. **Form of contract.**—The form and legal incidents appertaining to a contract for large works is of the utmost importance to the engineer or architect. Not only does it often fall to his lot to draw up or approve the actual terms of the document, but it frequently rests with him to decide, as

between the employer and the contractor, whether the agreement has been performed or not. The fact that the specification which often forms part of the contract between the parties, is usually drawn by the engineer or architect without legal assistance renders it all the more necessary that he should realise the nature of the obligations which are thereby imposed. Accuracy in the preparation of the bills of quantities is also of importance.

As has been pointed out above, a contract for large works usually consists of several distinct documents—namely, the agreement (see Form IIC., *post*), the general conditions (see Form IIA., *post*), the specifications and the schedule of prices. All these documents must be consistent with each other, otherwise there may be trouble between the parties. This point is favourably illustrated by a Canadian case (*Neelon v. Toronto City*, 1895, 25 Can. S.C. Rep. 579). There a contract for the construction of public works contained a clause to the following effect: "In case the works are not carried on with such expedition and with such materials and workmanship as the architect or clerk of the works may deem proper the architect shall be at liberty to give the contractors ten days' notice in writing to supply such additional force or material as in the opinion of the said architect is necessary, and if the contractors fail to supply the same, it shall then be lawful for the said architect to dismiss the said contractors, and to employ other persons to finish the work." It was also provided that "the general conditions are made part of this contract (except so far as inconsistent herewith) in which case the terms of this contract shall govern." It was provided by the "general conditions" that: "In case the works from the want of sufficient or proper workmen or materials, are not proceeding with all necessary despatch, then the architect may give ten days' notice to do what is necessary, and upon the contractor's failure to do so, the architect shall have the power at his discretion, with the consent in writing of the committee (*i.e.* the employer), without process or suit at law, to take the work or any part thereof mentioned in such notice out of the hands of the contractor." It was held by the majority of the Court that this last clause was inconsistent with the clause in the contract, and that the latter must govern. The architect, therefore, had power to dismiss the contractor without the consent in writing of the committee.

§ 9. **Consideration.**—There must be consideration for every contract which is not under seal (*Chitty on Contracts*, 14th Ed., p. 8), the consideration need not be adequate; that is a matter with which the Court will not concern itself. So long as the consideration has some value it will suffice. A mere voluntary courtesy is not a good consideration for a promise. So if a contractor, out of courtesy to A., were to build a wall on A.'s land, A. would not be bound to pay him therefor. The consideration, however, must not be illegal. Thus if it were part of the object of the contract to stifle a criminal prosecution, it could not be enforced. In *Windhill Local Board of Health v. Vint*, 1890, 45 Ch. D. 351, the plaintiffs, who were a local board, prosecuted the defendants for interfering with and obstructing a road. At the trial of the indictment, an agreement for compromise was made whereby the defendants covenanted to restore the road, which they had broken up, for seven years, and the board of health covenanted that, in consideration of this, they would consent to a verdict of "not guilty." Subsequently the defendants failed to restore the road, and the plaintiffs, relying on the agreement, brought this action claiming specific performance and damages. It was held that as the contract in question was based on an illegal consideration it could not be enforced, and that therefore the action could not be maintained.

§ 10. **Construction of a contract.**—It is for the Court to interpret the various phrases and expressions used in a contract. For this reason it is advisable for an engineer who is drawing a specification which shall form part of a contract, to use language which is as free as possible from technicality. Technical phrases must of course be used occasionally, but it is as well to select those which have a well-known and definite meaning. The common principle of construction is that an agreement ought to receive that construction which its language will admit, and will best effectuate the intention of the parties, and that greater regard is to be had to the clear intent of the parties than to any particular word which they may have used in the expression of their intent (*Ford v. Beech*, 1848, 11 Q. B. 852, 866).

In general, the popular meaning of words will be adopted, unless by the known usage of a trade the particular word has acquired a special sense. The whole of a contract is to be looked at, so that words may be construed by the context.

Where parties have used language which admits of two constructions, the one contrary to the apparent general intent, and the other consistent with it, the law assumes the latter to be the true construction (*Walker v. Giles*, 1848, 6 C. B. 662, 702). The legal meaning of a number of words and phrases which are commonly used in contracts will be found in § 34, *post*.

§ 11. **Whether parol evidence admissible in relation to a written contract.**—Inasmuch as engineering contracts are generally reduced into writing, it may be necessary to consider whether, in case of a dispute, that writing can be varied or explained by parol evidence. Generally speaking, where there is no ambiguity in the terms of a written contract, the agreement or document itself is the only criterion of the intention of the parties. Hence parol evidence contradictory to the writing itself must be excluded, even though such evidence might show that the real intention of the parties was at variance with the particular expressions used in the written instrument (*Hitchin v. Groom*, 1848, 5 C. B. 515). But the proviso that this rule only applies where there is no ambiguity makes a world of difference; and it may be laid down as a general principle that parol evidence will be admitted :

(i.) To show that words in the contract were used in a particular sense ;

(ii.) To explain a latent ambiguity ;

(iii.) To prove a custom or usage of trade to which the agreement was subject (see §§ 13, 14, 15, *post*) ;

(iv.) To show that one or other of the parties was acting as agent for some third person ;

(v.) To identify the subject-matter of the contract if it be uncertain ;

(vi.) To show that the alleged agreement is not the whole agreement between the parties ;

(vii.) To defeat an agreement on the ground of illegality, duress, or fraud.

The law was thus stated in *Myers v. Sarl*, 1860, 30 L. J. Q. B. 9: “Where terms in the particular contract have, besides their ordinary and proper sense, also a scientific or peculiar meaning, the parties who have drawn up the contract with reference to that particular department of trade or business must fairly be taken to have intended that the words

should be used not in their ordinary, but in their popular acceptance. This can only be attained by means of parol evidence, to show what is the particular signification of the words in the contract, as distinguished from their peculiar acceptance." In that case it was held admissible to show, that, by the usage of the building trade, "weekly accounts" meant accounts of the day-work only, and did not extend to extra work capable of being measured.

(As to what conditions will be implied as to workmanship, see § 32, *post.*)

§ 12. Cases in which parol evidence has been admitted to explain written contracts.—In a work of this kind it would not be possible to touch upon all the cases where written contracts have been varied by parol evidence. It may be useful, however, to refer to a few examples of cases in which it was found necessary, and held to be lawful, to adduce parol evidence.

In one of these a contract for the construction of certain steamships contained a clause to the effect that: "The following specification is subject to plans which are to be submitted and approved by the owners before the work is commenced, and which shall in all cases of divergence be held to over-rule." The plans showed the vessels with straight keels, but as actually built the keels were "cambered"—*i.e.*, arched, so as to curve inwards. The shipowners having brought an action for damages for breach of contract in respect of the cambering of the vessels, the defenders contended that the pursuers were barred from basing their case on the cambering, inasmuch as they had orally agreed to it while the vessels were in the course of construction. It was held that the plans were part of the contract, and that parol evidence to prove the alleged agreement to deviate from the plans was inadmissible (*Burrell v. Russell*, 1900, 2 F. (H. L.) 80). Lord Davey, in giving judgment in that case, said: "If the wisdom of the rules of law (common to England and Scotland) which says that a contract in writing shall not be varied except by another writing, required illustration, you would surely find it in this case."

In *Symonds v. Lloyd*, 1859, 6 C. B. N. S. 691, the plaintiffs contracted (in writing) to build for the defendant the front and back walls of a house "for the sum of 3s. per superficial yard

of work nine inches thick, and finding all materials, deducting all lights." The lower part of the walls, to a height of eleven feet, were of *stone*, two feet thick, the remainder of brick, fourteen inches thick. It was held that evidence of the usage of builders at the place to reduce brickwork for the purpose of measurement to nine inches, but not to reduce stonework, unless exceeding two feet in thickness, was admissible; and that, the proper construction of the contract was that it provided only for the price of the brickwork, leaving the stonework to be paid for as on a *quantum meruit*. As an example of another usage mention may be made of an American case, in which a plasterer, who worked at so much a foot, was held entitled to prove a custom to the effect that the whole wall including openings for windows might be taken into account for this purpose.

In *Bank of New Zealand v. Simpson*, 1900, A. C. 182, the House of Lords laid it down that words with a fixed meaning in a written contract cannot be explained by oral evidence to mean something different from what they express; but where the words used are susceptible of more than one meaning, extrinsic evidence is admissible to show what were the facts which the negotiating parties had in their minds. So it was held that where a written contract provided that the respondent, a railway engineer, should receive extra commission "on the estimate of £35,000 in the event of my being able to reduce the total cost of the works below £30,000," evidence was rightly admitted to show to what items of cost the estimate related.

§ 13. **How far a custom may be imported.**—The question whether a contract is to be read and construed in the light of a custom or usage depends upon several things. The custom must be reasonable and certain. It must also be well known not only to the immediate parties to the contract, but generally (*Kirchner v. Venus*, 1859, 12 Moo. P. C. 361).

§ 14. **Customs held to be valid.**—A number of customs or usages are so well known that contracts are every day entered into upon the footing of their validity. For instance, if a manufacturer were employed to repair a machine, he would have a lien on the machine for his proper costs and charges, although nothing to that effect was said at the time of the

contract. There are but few cases in the reports which draw attention to customs affecting engineers and engineering contracts. One custom may, however, be mentioned: there is a usage of the building-trade that the builder whose tender is accepted is liable to the quantity-surveyor for the amount due for taking out the quantities; but that, if no tender is accepted, the building-owner or architect is liable. This was held to be a reasonable usage, and therefore valid (*North v. Bassett*, 1892, 1 Q. B. 333). A further statement of the facts of this case will be found in Chap. IX., § 9, *post*.

§ 15. Customs and usages held bad.—The following customs and usages relating to engineering and similar contracts have been held *bad*:

(a) A custom to the effect that an architect is entitled to charge a percentage on the estimated probable cost of a building (*Gwyther v. Gaze*, 1875, 2 H. B. C. 21);

(b) A custom or usage to the effect that an architect who has been dismissed and paid for his plans, may retain them (*Ebby v. McGowan*, 1870, 2 H. B. C. 18);

(c) A usage to the effect that a person asking for tenders for the performance of works implicitly warrants that the works can be successfully executed according to the plans and specification (*Thorn v. Mayor of London*, 1876, 1 A. C. 120);

(d) A custom or usage to the effect that an estimate for work to be done has not the same legal effect as a tender (*Croshaw v. Pritchard*, 1899, 2 H. B. C. 300).

§ 16. Implied terms in contracts.—In addition to the express terms which are set out in a contract, the parties may also be bound by implied terms. But an implied term or promise can only exist in law where there is no *express* promise between the parties dealing with the same point (*Cutter v. Powell*, 1795, 6 T. R. 320, 324). Thus no party can be bound by an implied contract, when he has made an express contract dealing with the same subject-matter (see *Jones v. St. John's College*, 1870, L. R. 6 Q. B. 115). A good example of an implied term or condition is that where a party enters into an agreement, which can only take effect by the continuance of a certain existing state of circumstances, there is an implied engagement on his part that he will not, of his own mere motion, do anything to put an end to that state of circumstances under

which alone the agreement can be operative (*Stirling v. Maitland*, 1864, 5 B. & S. 840).

In *Barr v. Dumferline Railway*, 1855, 17 Ct. of Sess. Cas. (2nd Ser.) (Dunlop), 582, the defendant company employed the plaintiff, a contractor, to erect part of their line, in accordance with a contract which specified the rates at which the work should be executed, and named an arbitrator for the settlement of all disputes. When the contractors had executed part of the work, this company obtained an Act of Parliament for the deviation of the line, whereupon the contractors executed the deviations in accordance with the plans furnished to them, and charged for the whole work the rate specified in the original contract. It was held that the arbitration clause in the original contract remained effectual in reference to the making of the deviation. In other words it was an implied term of the contract between the parties.

The case of *Knight v. Gravesend Waterworks Co.*, 1857, 27 L. J. Ex. 73, illustrates the way in which a covenant to do something may be implied from the terms of the contract. It appeared that the plaintiff agreed to construct for the defendants a well and other works mentioned in a specification; and to provide all engines, pumps, etc., and all other implements and things mentioned in it as required to be provided by the person contracting to perform the work. The specification which was under the seal of the defendant company, contained this clause: "The contractor will be required to sink the well to a depth of 120 feet, after which the company will undertake the erection of a permanent steam-engine, and permit the pumping to be performed by it." It was held that this amounted to an implied covenant on the part of the water-company to erect the permanent steam-engine. Pollock, C. B., in giving judgment said: "The question, after all, is this—from everything that has occurred between the parties, which can be referred to for the purpose of ascertaining whether there is a covenant, or what is the meaning of a covenant, What is the reasonable conclusion to be drawn from the entire matter? It appears to me that the undertaking by the water-company amounts to an implied covenant to undertake to erect the permanent steam-engine and to permit the pumping to be performed by it." (See also *Jackson v. Eastbourne Local Board*, 1886, 2 H. B. C. p. 671.)

It is an implied condition of every contract for works that

the employer will do nothing to delay the contractor's access to the site; that access to the whole site will be given within a reasonable time, and that, if the contractor is to work to plans, those plans will be delivered to him within a reasonable time. (See *McAlpine v. Lanarkshire, etc. Railway*, 1889, 17 Ct. of Sess. Cas. (4th Ser.) 113; see further as to delay in supplying plans, Chap. XI., § 13, *post.*)

§ 17. **What will not be implied.**—Without going closely into the cases it may be stated that a contract between the employer and a sub-contractor will not be implied (see Chap. XVII., § 5, *post.*). Further, where one contract is abandoned, and the work in question is done upon the terms of a general contract, the special terms of the first contract will not be implied.

§ 18. **Rectification of contracts.**—In spite of the utmost care in drawing contracts, mistakes will creep in. In some cases the mistake benefits the employer, in others the contractor; and it may be taken for granted that each will try to avoid the mistake if possible. But he may not be able to do so. Where a contract has by reason of a mistake common to the contracting parties been drawn up to an effect militating against the intentions of both, the Court will rectify the contract so as to carry out such intentions. It is essential, however, that the extent of the mistake should be clearly ascertained and defined by evidence contemporaneous with or anterior to the contract. As a general rule, in order to secure the intervention of the Court, the mistake must be one of fact, not law (see *Chitty on Contracts*, 14th Ed., p. 727).

It is important to notice that in order to get relief on the ground of a mistake, the party must show that there was "an actual concluded contract antecedent to the instrument which is sought to be rectified." The mere fact that an error has slipped in will not suffice.

§ 19. **Grave results of mistakes.**—In a case quoted by Mr. Hudson (*Building Contracts*, Vol. I., p. 206) a contractor agreed to construct (*inter alia*) certain sewerage works. In the schedule of prices he quoted £18 per cwt. for cast-iron pipes. The correct price should have been 18s. or less! The

engineer of the local authority, who had employed the contractor, allowed this error to pass unnoticed, and eventually tried to force the contractor to do the work in question for 18s. by refusing to certify. Upon the matter coming before him, the Official Referee held that it was too late to rectify, and that the employers must pay the larger price.

In another case (*Ewing v. Hanbury*, 1900, 16 T. L. R. 140) the plaintiffs, who were boiler-makers, undertook to fashion certain plates for the defendants. The plaintiffs were supplied with a specification and then wrote to the defendants offering to do the work "at the rate of 30s. per cwt." The defendants answered by letter, referring to the plaintiffs' quotation of 30s. per cwt. and accepting the offer. When the plaintiffs had done the greater part of the work, the defendants found out that they had made a mistake, as they never intended to pay 30s. a cwt., but 30s. a ton. They claimed to have the contract rectified. It was held that as the defendants had accepted the offer in terms, they were bound by the contract, which the Court could not rectify. (For an example of the consequence of a mistake in a tender, see Chap. VIII., § 8, *post*.)

§ 20. Where relief will be granted for mistake.—In *Neill v. Midland Ry. Co.*, 1869, 17 W. R. 871, the plaintiff had agreed with the defendants to execute certain works for a gross sum of £19,923 13s. 11d. A schedule of quantities which was appended to the contract, contained a number of mistakes, which, it was alleged, were soon known to the agents of the railway company after the contract was entered into. In one case the amount of 5,086 yards of concrete at 5s. per yard was stated to be £55 19s. 2d., instead of £1,271 10s. Altogether the plaintiff had made mistakes against himself to the tune of £1,881 0s. 2d. In the circumstances the Court granted relief and rectified the contract.

§ 21. Completion of contract.—A contract for works may consist of one entire job for which the contractor is to be paid a lump sum. In that case he cannot sue or recover the lump sum until the work is complete. Where, however, the work is severable into parts which are to be paid for separately, completion of one part may enable the contractor to sue for the amount then due. Another form of contract provides for the execution of a piece of work, no mention of a price being

made. It will be convenient to deal with and illustrate these three forms of contract separately.

§ 22. **Failure to complete work on a lump-sum contract.**—Where a contract to build for a lump sum is abandoned after part execution, the builder cannot recover as upon a *quantum meruit* in respect of the part executed, as was held in a case where the employer himself completed the building (*Sumpter v. Hedges*, 1898, 1 Q. B. 673). So, in the case of a contract to carry out an engineering work for a lump sum it will be no answer for the contractor, who has not completed, to allege that the work as done will be worth so much to the employer. He must carry out his contract to the letter. If he does not do so he stands to lose, not only the contract price, but the entire value of the materials used and the cost of work and labour expended.

§ 23. **Completion of a lump-sum contract.**—A lump-sum contract cannot be said to be completed when that which is done is really done in pursuance of a fresh contract. In *Humphreys v. Jones and Pickering*, 1850, 5 Ex. 952, two persons entered into a joint agreement with a railway company, to execute a contract called the Morley Contract, for the construction of a tunnel. After this agreement, one of the parties (A.) assigned all his right and interest to the other (B.), and the latter agreed to pay A. a given sum “on completion of the said contract.” After this agreement had been entered into between A. and B., it became necessary to alter the levels of the line, and B., by agreement with the company, abandoned the contract, and another was entered into between the company and other persons, under which the tunnel at the altered level was completed. It was held that A. could not on the completion of the substituted contract maintain an action against B. for the payment of the sum stipulated by his agreement with A. “We might work injustice,” said the Court, “to the other side by holding that the original contract is completed by the completion of the one which has been substituted in its place” (see also *Newfoundland Government v. Newfoundland Railway*, 1888, 13 A. C. 199). For a case in which the non-completion of a lump sum or entire contract was held to be justifiable owing to the non-delivery of plans, see Chap. XI., § 13, *post*.

In *Forman & Co. v. Liddesdale*, 1900, A. C. 190, the plaintiffs

contracted with the agent of an absent shipowner to effect certain specified repairs to a ship (all confined to damage by stranding), and instead of doing the work as stipulated alleged that they had on the agent's authority, done the equivalent thereto or better, and in the same contract stipulated that they should be paid for repairs due to deterioration at scheduled prices stated by them. It was held that it appearing that as the agent's authority to their knowledge was limited to the specified repairs, they could not recover on the contract, which was an entire one, and in its entirety had never been performed. It was further held that the mere fact of the shipowner having taken the ship as repaired did not thereby ratify the contract. In that case the original contract price was £5,995 10s., which the plaintiffs sought to increase to £15,567 8s. 9d. by a claim for work not included in the contract and for other repairs.

In *Appleby v. Myers*, 1866, 2 C. P. 651, the plaintiffs contracted with the defendant to erect upon premises in his possession a steam-engine and machinery, the works being by the contract divided into ten different parts, and separate prices fixed upon each part, no time being fixed for payment. All the parts of the work were far advanced towards completion, and some of them were so nearly finished that the defendant had used them for the purpose of his business; but no one of them was absolutely complete, though a considerable portion of the necessary materials for that purpose were upon the building. At this time the whole premises, with the machinery and materials, were destroyed by an accidental fire. The plaintiffs sued to recover either the whole price or the proper value of the work which had been done. It was held that by reason of the fire, both parties were excused from the further performance of the contract but that the plaintiffs were not entitled to sue in respect of those portions of the work which had been completed, whether the materials used had become the property of the defendant or not. Lord Blackburn said: "The plaintiffs having contracted to do an entire work for a specific sum, can recover nothing unless the work be done, or it can be shown that it was the defendant's fault that the work was incomplete, or that there is something to justify the conclusion that the parties have entered into a fresh contract." (As to a fresh contract, see § 30, *post*.)

§ 24. At what time the contract price may be recovered.—A contract to complete certain work may involve the proposition that there shall be no remuneration until the work is completed. But if there is nothing in the case amounting to a contract to complete the work before any remuneration shall be due—as in the case of a shipwright undertaking, in the same way that shipwrights ordinarily do, to put a vessel in repair—the workman may, after he has proceeded with a portion of the work, refuse to continue it, unless he is paid for the work he has performed; and may recover to that extent (*Roberts v. Havelock*, 1832, 3 B. & Ad. 404). In general if the contract is not entire (*i.e.* to do the whole work for a lump sum), and can be divided, the Court will give relief to the contractor who has done part of what he undertook to do. The law was thus expressed by Phillimore, J., in *The Tergeste*, 1902, P., at p. 34: “A man who contracts to do a long costly piece of work does not contract, unless he expressly says so, that he will do all the work, standing out of pocket until he is paid at the end. He is entitled to say: ‘That is not my contract; it is quite true that I had contracted to do the work, and I am bound to do it; but there is an understanding all along that you are to give me, from time to time at reasonable times, payments for work done’; and if the contract here was to do certain work, it always included that term—to do it if we are paid reasonable sums in part payment as we go along, not an advance, but in part payment for work already done before we proceed to do the next thing.” (For the discussion of cases in which a certificate is made a condition precedent to payment, see Chap. XIV., § 16, *post.*)

§ 25. Price where the contract is severable.—As has already been indicated, if a contract is severable, the contractor may sue in respect of the amount of work which he has done. For instance, in *Newfoundland Government v. Newfoundland Ry. Co.*, 1888, 13 A. C. 200 (*supra*), by a contract in 1881 embodied in a statute, the plaintiff company covenanted to complete a railway in five years and thereafter to maintain and continuously operate it. In consideration of this the Government covenanted to pay the company upon the construction an annual subsidy. It appeared that the company completed a portion of the line and received from the Government on the completion of each five-mile section the proportionate part of

the subsidy which was deemed by the parties to attach thereto. Thereafter the contract was broken by the company, and the Government refused further payments. It was held that, on the true construction of the contract, (a) each claim to a grant of land was complete from the time when the section which earned it was complete; (b) on the completion of each section a proportionate part of the subsidy became payable for the specified term, but subject to the condition of continuous efficient operation.

§ 26. **Payment by instalments.**—In contracts for large works it would be difficult, if not impossible, for the contractor to provide all the capital with which to carry through the work from the start. Provision is therefore made for payment by instalments either (i.) at certain stages of the work; (ii.) by payments of certain fixed sums as they become due; or (iii.) by payment by a percentage at certain periods. Thus, to illustrate the latter case, it might be arranged that at the end of the first three months the contractor should be entitled to 75 per cent. in value of the work actually done. (As to payment on certificates, see Chap. XIV., *post*. For the terms of payment recommended by the Institute of Electrical Engineers, see Form IIA., Cl. 34, *post*.)

§ 27. **What is a whole or completed work.**—While a contractor is bound to conform to the specification, he cannot rely on that document in order to excuse himself from doing something which is essential to the completed work. For instance, in *Williams v. Fitzmaurice*, 1858, 3 H. & N. 844, the plaintiff agreed to build a house for the defendant, who prepared a specification which contained particulars of the different portions of the work. Under the head "Carpenter and Joiner" there were specified the scantling of the joists of the different floors, the rafters, ridge and wall pieces, but no mention was made of the flooring. The specification stated that "the whole of the materials mentioned or otherwise in the foregoing particulars, necessary for the completion of the work, must be provided by the contractor." The specification also contained a memorandum to the effect that: "The house is to be completed and fit for the defendant's occupation by the 1st August, 1858." The plaintiff prepared the flooring-boards, brought them to the premises and planed and fitted them to

the several rooms, but refused to lay them down without extra payment, because the flooring was not mentioned in the specification, whereupon the defendant put an end to the contract, took possession of the works, and proceeding to complete the building, used the flooring-boards so prepared and used by the plaintiff. It was held that the plaintiff was not entitled to recover for the flooring as an extra, because it was included in the contract though not mentioned in the specification. In giving judgment, Baron Channell said: "The plaintiff contracted to do the entire work in the various characters of bricklayer, carpenter, plumber, etc., for the sum of £1,100; and it is not the less a contract to do the whole, because it is specified that certain parts of the building shall be constructed in a particular way. It was a contract for the erection of a house, and though the flooring was not mentioned in express terms, it was necessarily implied."

The introduction of the words "whole" or "complete" into a contract always has an important bearing on its construction. In *Tancred, Arrol & Co. v. The Steel Company of Scotland, Ltd.*, 1890, 15 A. C. 125, there was an agreement in writing under which the steel company undertook to supply "the whole steel" required for the Forth Bridge, less 12,000 tons of plates, subject to the conditions therein contained. One of the conditions contained the following sentence: "The estimated quantity of steel we understand to be 30,000 tons, more or less." It was held that the steel company were entitled to supply the whole of the steel required for the bridge, and that their right was not qualified or affected by the statement that the estimated quantity which would be required was understood to be 30,000 tons, more or less. (As to the meaning of a "complete installation," see Chap. XIX., § 3, *post*; and as to time of completion, see Chap. XIII., § 4, *post*.)

§ 28. Deviations from the contract and extras.—The work required to be done and set forth in the specification is rarely completed in the manner provided for in the contract. There may be deviations or extras. The employer may change his mind in the course of the job, with the result that an additional burden is thrown upon the contractor. Again, it may turn out that there are unforeseen difficulties which materially increase the burden thrown on the contractor. In these circumstances the question must necessarily arise as to how

far the contractor can make a claim for extras or seek to go behind the terms of the contract. Indeed, it may be said that amongst the causes of dispute which arise in relation to engineering there is none more fruitful than the question of extras and deviations.

Without going at any length into the question of extras (which will be found fully dealt with in the chapter on extras, Chap. XII., *post*) it may be stated generally that if the contractor has undertaken to do work for a specific sum, on the terms that extras are only to be ordered by the engineer, he cannot recover anything in respect of extras unless he has obtained the necessary order. Thus the contract often contains a provision enabling the plans and specifications to be modified by the employer through the engineer, and protecting the employer from any claim for extras unless the contractor has obtained an alteration order from the engineer and has complied with a number of conditions as to notices, measurements, certificates, etc.

§ 29. *Impracticability of the works.*—The fact that the scheme which he has undertaken is impracticable or that there are unforeseen difficulties in the way of the contractor affords him no excuse for renouncing his contract or making any claim for extra payment. A carefully drawn contract always provides that the employer does not guarantee the practicability of the scheme which it is designed to put into execution; but even in the absence of such a clause, the contractor can set up no usage or custom to the effect that the employer warrants the practicability of the scheme (see § 15 (c), *ante*). The conditions of a large contract generally contain a clause specially warning the contractor to make proper investigations for himself (see sub-tit. "Statement of conditions to be observed on tendering," Chap. VIII., § 3, *post*; and Form IIA., Cls. 9 and 9A).

§ 30. *New contract arising out of an old contract.*—Where there is a contract to erect buildings or carry out works on certain terms, and this contract is allowed to lapse, but the employer then encourages the contractor to do the work, the contractor may sue as upon an implied contract. Thus in *Burn v. Miller*, 1813, 4 Taunt. 745, a landlord contracted to pay his tenant at a valuation for certain erections pursuant to

a plan to be agreed on, provided they were completed in two months. No plan was agreed on, and after the condition was thus broken, the landlord encouraged the tenant to proceed with the work. This the tenant did. It was held that having done the work, the tenant might recover as for work and labour done on an implied promise arising out of so many of the facts as were applicable to the new agreement. Things which are alleged to be extras may also be found to be the subject of a new contract (see Chap. XII., § 7, *post*).

§ 31. **Work superior to contract.**—If a contractor agrees to make an article of certain materials for a stipulated price, but puts in materials of a better kind, he is not at liberty on that account to charge more than the stipulated price, nor can he require the article to be returned because the buyer will not pay an increased price on account of the better materials (*Wilmot v. Smith*, 1828, 3 C. & P. 455 ; and see also § 23, *ante*, and the case of *Tharsis Sulphur and Copper Co. v. M'Elroy*, 1878, 3 A. C. 1040, noted *post*, Chap. XI., § 3).

§ 32. **What condition implied as to workmanship.**—Where a man contracts to make a machine which will effect a particular purpose he thereby undertakes that the machine will be suitable ; and if the employer comes forward to suggest alterations the contractor must beware lest those alterations interfere with the capacity of the machine. In *Hall v. Burke*, 1888, 3 T. L. R. 165, the plaintiff sought to recover the price of a marble-cutting machine which he had built to the defendant's order. After the contract was made the defendant ordered certain alterations which it was alleged caused the machine to break down. It was held on the facts that even if the customer had ordered alterations this did not entitle the plaintiff to escape liability. The Master of the Rolls said : " When the manufacturer is to make a machine fit for a particular purpose, and it is left to his skill to make it, even though the customer orders alterations, he is responsible for the machine under the contract. If the customer were then to insist upon them, the contract would be altered, and the machine would be made according to a given plan." The fact that the employer pays the agreed price does not necessarily imply that he has waived a claim for defects, even if he was aware of those defects at the time of payment (see Chap. XVI., *post*, §§ 14 *et seq.*).

§ 33. Summary of the law as to performance and completion of contracts.—The following principles may be deduced from the various cases decided with reference to completion.

(a) Where the contract is to complete a definite piece of work, nothing can be recovered until actual completion.

(b) It is no excuse for non-performance that the work or part of it is impracticable.

(c) Where, before actual completion, the contractor definitely refuses to carry out the work, he can be sued at once as for breach of contract (*Hochster v. De la Tour*, 1853, 2 E. & B. 678).

(d) Where the employer puts it out of the power of the contractor to complete the work in accordance with the contract, the contractor may sue for the price of what he has done as on a *quantum meruit* (*Cutter v. Powell*, 2 Sm. L. C. 11th Ed. 9 *et seq.*). And he may also recover damages in respect of the loss occasioned by the act of the employer (*Planché v. Colburn*, 1831, 8 Bing. 14). As to interference by ordering extras, see Chap. XIII., § 5, *post*.

(e) Where delay is caused by the act of the employer in not giving possession of the site, the contractor may recover damages in respect thereof. If no specific time for giving possession is mentioned, the law implies that it will begin within a reasonable time (*Freeman & Son v. Hensler*, 1900, 64 J. P. 260).

(f) If the contractor is delayed in carrying out the contract by some act of the employer, he cannot be held liable for the penalties prescribed by the penalty clause in the contract (*Holme v. Guppy*, 1838, 3 M. & W. 387).

(g) Where the contractor after part performance fails to complete, the employer may treat the contract as rescinded and maintain an action for damages. In such a case the contractor has no lien on the subject-matter of the work for the money which he has expended (*Wallis v. Smith*, 1882, 21 Ch. D. 243).

(h) Where there has been part performance, and a refusal by the contractor to complete, the mere fact that the incomplete work remains on the employer's land does not import a promise by him to pay for it (see *Sumpter v. Hedges*, 1898, 1 Q. B. 673). But where the employer, without the consent of the contractor, enters upon the work and does it himself, the law will imply a promise by him to pay for that which has

been done by the contractor as on a *quantum meruit* (*Lysaght v. Pearson, Emden's Building Contracts*, 4th Ed., p. 121).

(i) While the acceptance of work partly performed may sometimes imply an undertaking on the part of an employer to pay for it in the case of a contract which is not and need not be under seal, there can be no such implication in the case of a contract with a local authority, which must be under seal (*Lamprell v. Billericay Union*, 1849, 3 Ex. 283).

(j) When a contractor has partly performed his contract, and then refuses to go on, it is probable that the employer must pay for any materials delivered by the contractor on the site as distinguished from materials which have become fixed into the work (see *Stegman v. O'Connor*, 1900, 80 L. T. 234).

(k) Where the contract work (to be paid for by a fixed sum on completion) is destroyed by accident (*e.g.* by fire) before completion, and the employer is not at fault, the contractor must do the work over again, and cannot recover anything for the part already done.

(l) Where, however, the contract is to do certain works and provide materials and workmanship, for which payment is to be made from time to time as the work proceeds, and an accident occurs which prevents completion, a claim in respect of the completed part is valid although the whole work has been rendered useless to the employer (*Chandler v. Webster*, 1904, 1 K. B. 493).

§ 34. Words and phrases used in contracts.—“*Adjoining.*”—This phrase, when used in relation to buildings, does not necessarily mean physically touching (*Ind, Coope and Co. v. Hamblin*, 1900, 81 L. T. 779).

“*Best.*”—This phrase is often used with reference to materials. In one American case (*McIntire v. Barnes*, 1879, 4 Col. 285) the phrase “best lumber” was held to mean the best lumber to be found at a particular place.

“*Bill of quantities.*”—(See Chap. IX., § 1, *post.*)

“*Brick-built.*”—A house described as brick-built is understood to be brick-built in the ordinary sense of the word; not composed externally partly of brick and partly of timber, and lath and plaster (*Powell v. Double*, Sug. V. & P. 29).

“*Complete installation.*”—(See Chap. XIX., § 3.)

“*Completion*” (*of a work*).—Where work on a building is to

be "completed to the satisfaction of the engineer," it is complete so far as third parties are concerned, when it is complete in fact, although the certificate has not been given (*Lewis v. Hoare*, 1881, 44 L. T. 67).

"*Defect.*"—Lack or absence of something essential to completeness (*Tate v. Latham*, 1897, 66 L. J. Q. B. 351). (See further as to defects, Chapter XVI., §§ 7, 10.)

"*Delineated.*"—Where the words "land delineated on the plans" are used, the phrase includes lands sketched but not surrounded by lines on every side (*Dowling v. Pontypool Ry.*, 1874, 43 L. J. Ch. 761).

"*Dispute.*"—A phrase often used in the arbitration clause, includes dispute of law and fact; a non-feasance, such as the withholding of a certificate by the engineer.

"*Drain.*"—Broadly speaking, "drain" as contrasted with "sewer," means the duct that drains only one house; "sewer" means the duct that serves more houses than one (*Holland v. Lazarus*, 1897, 66 L. J. Q. B. 285).

"*Easement*" is a privilege that one neighbour hath of another, by writing or prescription without profit; as a way, or track through his land.

"*Engineering work.*"—A bridge forming part of the line of a railway is an engineering work within s. 14 of the Railway Clauses Consolidation Act, 1845 (*Attorney-General v. Tewkesbury Ry.*, 1863, 32 L. J. Ch. 482).

"*Extras.*"—"An extra to a contract for works, whether a building or a ship, or any such thing, is something not specified in, or fairly comprised within, the contract, but which is cognate to the subject-matter of the contract and applicable to the carrying out of its design—*e.g.*, if a deal door be specified and a subsequent order be given to substitute one of mahogany the difference in value is an extra; but if (say) the building of a house be the subject-matter, and afterwards the building-owner gives an order to the builder to furnish the house, that furniture is not an extra, for that order is an independent contract" (*Russell v. Sa da Bandeira*, 1862, 32 L. J. C. P. 68). (As to extras generally, see Chap. XII.)

"*Final certificate.*"—(See Chap. XIV., § 5.)

"*Good repair*" means such a state of repair as will satisfy a respectable occupant using the premises fairly; but not that state of repair which an owner or a tenant might fancy (*Cooke v. Cholmondeley*, 1858, 4 Drew. 328).

“*Immediately.*”—This word implies that the act to be done should be done with all convenient speed (*Thompson v. Gibson*, 1841, 10 L. J. Ex. 243).

“*Incombustible material.*”—This phrase is used in the London Building Act, 1894. It means a material which must be wholly incombustible, and not merely fire-resisting (*Payne v. Wright*, 1892, 1 Q. B. 104).

“*Latent defect*” is a defect such as the greatest attention would not enable a purchaser to discover—*e.g.*, the existence of defects in a ship’s bottom when sold afloat (*Mellish v. Motteaux*, 1820, Peake 156). See further as to latent defects, Chap. XIX., § 6, *post*.

“*Liquidated damages.*”—Where parties to a contract agree that, in the event of default by either, a sum stated shall be paid as “liquidated damages,” the primary meaning is that the sum named has been assessed between the parties (*Wallis v. Smith*, 1882, 52 L. J. Ch. 154, *per* Cotton, L. J.). Yet if the Court sees plainly that the stated sum is a penal sum then it is treated as a penalty and only proved damages are recoverable. (As to the distinction between “penalty” and liquidated damages, see further Chap. XV., § 3.)

“*Lowest tender,*” *the.*—(See Chap. VIII., § 13, *post*.)

“*Machinery.*”—This word implies the application of mechanical means to the attainment of some particular end by the help of natural forces. Operative machinery means machinery with the potentiality of operating or doing work (*Chamberlayne v. Collins*, 1894, 70 L. T. 217).

“*Omission.*”—An omission to perform a duty involves the idea that the person to act is aware that performance is required or needful (*London and South Western Railway v. Flower*, 1875, 1 C. P. D. 77). (For a clause relating to omissions, see Form IIA., Cl. 19 (a).)

“*Progress certificate.*”—(See Chap. XIV., § 3.)

“*Rebuild.*”—Dealing with the word “rebuild” in *Re Walker*, 1894, 1 Ch. 189, North, J., said: “Supposing most of a house front were pulled down and a small part left and the rest of the house was rebuilt, it could not be said that there was not a rebuilding; again, if the house were burnt and the walls were left standing and made use of in erecting the new house there would none the less be a rebuilding.”

“*Repair.*”—To “repair” means to make good defects including renewal where that is necessary (*Inglis v. Buttery*,

1878, 3 A. C. 552)—*i.e.*, patching where patching is reasonably practicable, and where it is not you must put in a new piece. In the case mentioned, a contract to “carefully overhaul and repair” the plating of an iron ship was held to include withdrawing injured plates and substituting new ones where the plating could not properly be patched. (As to the liability of a contractor under a repairing clause, see Chap. XVI., § 11.)

“*Sound machine.*”—(See Chap. X., § 4.)

“*Specification.*”—(See Chap. X., § 1, *post.*)

“*Strike.*”—A strike means the refusal by the whole body of workmen to work for their employers in consequence of either a refusal by the employers of the workmen’s demand for an increase of wages or of a refusal by the workmen to accept a diminution of wages when proposed by their employers (*King v. Parker*, 1876, 34 L. T. 889). An excuse for delay in fulfilling a contract on the ground of a strike by workmen means a strike against the employer, not a mere refusal to work because an infectious disease is prevalent, or the weather is hot or wet or such like excuse (*Stephens v. Harris*, 1887, 3 T. L. R. 720). (For an example of a strike clause, see Form IIA., Cl. 38, *post.*)

“*Tender.*”—(See Chap. VIII., § 1, *post.*)

“*Wages.*”—Though this word might be said to include payment for any services, yet, in general, the word “salary” is used for payment of the services of a higher class, and “wages” is confined to the earnings of labourers and artisans (*Gordon v. Jennings*, 1882, 51 L. J. Q. B. 417). (For a fair wages clause, see Form I., Cl. 12, *post.*)

“*Wear and tear.*”—“These words—reasonable wear and tear—no doubt, include destruction to some extent—destruction of surfaces by ordinary friction; but we do not think they include total destruction by a catastrophe which was never contemplated by either party even though such catastrophe may have resulted from the reasonable use of the premises demised” (*Manchester Bonded Warehouse Co. v. Carr*, 1880, 5 C. P. D. 507).

“*Weekly accounts.*”—Where this phrase is used in a building contract, *parol* evidence is admissible to show that by custom “weekly accounts of extras” means accounts of the day-work only, and does not extend to work capable of being measured (*Myers v. Sarl*, 1861, 30 L. J. Q. B. 9).

CHAPTER VII

OLD MATERIALS ON THE SITE

	PAGE		PAGE
§ 1. Preliminary	89	§ 5. Use of old materials in executing the works ...	91
§ 2. Duty to clear away old materials	89	§ 6. Form of clause providing for the use of old materials...	91
§ 3. Forms of clause relating to old materials	90	§ 7. Clause to prevent the re- moval of materials ...	92
§ 4. Property in old materials...	90		

§ 1. Preliminary.—In his haste to secure the erection of new buildings or works, the employer is sometimes liable to forget to provide for the disposal of materials, etc., which are already there. The contractor knows less than the employer of what is on the site, and may well imagine that so long as he clears the site sufficiently to erect the new buildings, his duty will have been performed.

There are certain matters relating to old materials which should be provided for in every contract for works. In the first place, the obligation of the contractor to clear them away should be clearly defined; in the second place, the employer should state how far they may be used for the purposes of the new works; and whether the contractor is to be entitled to take away any part of them; and if so, upon what terms.

The importance (to the employer) of some clause dealing with old materials lies in the fact that if nothing is said about them, the contractor may remove them. Having removed them he may sell them. In that case, if he were to become bankrupt, the employer could not get the goods back, but would be relegated to his right of proving for their value in the contractor's bankruptcy. In these circumstances the engineer should be careful to secure the insertion of an old materials clause in the contract by which his employer is to become bound.

§ 2. Duty to clear away old materials.—Where the contract for erecting a building, or executing other works makes no

reference to old materials, it seems that the contractor will be under an implied obligation to clear them away. There is no English case directly in point, but the principle has been laid down in several American cases. In one of these a contract provided for the construction of a wall at so much per cubic yard. Nothing was said about the excavations for the wall. It was held that no extra pay could be recovered for making them (*Shipman v. District of Columbia*, 1886, 119, U.S. 12 (Davis) 148).

§ 3. **Forms of clauses relating to old materials.**—To prevent the wholesale removal of sand and gravel, the following clause may be used: “The contractor is not to perform any excavation upon the site for the purpose of obtaining gravel or sand other than such as is shown or implied by the drawings.”

The following is a convenient form of clause relative to a bridge:—

“The existing bridge to be pulled down and materials stacked where directed. None are to be removed from the premises, and the contractor in making his estimate is not to count them in as usable except the bricks for footing and concrete, and any that are used otherwise are to be allowed for, and their value deducted from the price paid as new materials.”

§ 4. **Property in old materials.**—The next problem for solution is—Who is entitled to the old materials on the site where new buildings or works of any other description are to be erected? This is a question which is often asked in practice; it is important for the contractor to know the correct answer. Sometimes, of course, the matter is provided for in the contract entered into between the parties; and to avoid the possibility of dispute it is always best to insert a clause dealing with old materials. Such a clause may serve to disabuse the mind of a contractor; for in spite of a common belief to the contrary effect, it is fairly clear that an obligation upon a contractor to clear away old materials does not necessarily vest those materials in him. Again, where a contractor is bound by his contract to make an excavation, the materials excavated do not necessarily become vested in him. On the contrary, if a contractor make use of materials supplied to him, the employer may set off their price against

the amount due under the contract. For instance, in one case (*Newton v. Forster*, 1844, 12 M. & W. 772) the plaintiff contracted to do certain work for the defendant and to find the materials. The defendant supplied part of the materials which the plaintiff made use of in the work. It was held that the defendant was entitled to deduct the value of the materials supplied by him from the contract price.

§ 5. Use of old materials in executing new works.—In drawing his specification the engineer often inserts a clause to the following effect: “Materials on the site to be used as far as possible.” If a tender is made by a contractor on the basis of such a specification, the engineer should take care to ascertain whether the contractor has made any deduction in respect of old materials. If the contractor, having made no deduction, uses any of the materials, the engineer may set their value off against the contract price; and even if the contractor has made a deduction, but has not informed the engineer of the fact, there may still be a set-off. For instance, in a case tried in 1867 (*Harvey v. Lawrence*, 15 L. T. N. S. 571), the plaintiff, a builder, sued for the sum of £800, the contract price payable on completion of the works. The architect had certified that the work was completed. The contract contained the following clause: “All old lead to be displaced by new is to become the property of the contractor, who will make a due allowance for the same.” The defendant employer pleaded a set-off of £38, the value of old lead. It was held that as the contractor could not prove that he informed the employer or the architect that in making his estimate he had allowed for the value of the old lead, the set-off was good.

§ 6. Form of clause providing for the use of old materials.—The following is a convenient form of old material clause: “All materials upon the site or upon the space to be covered by the buildings (or contract works) at the date of the contract, and all materials and things excavated by the contractor from the works shall remain the property of the employer until paid for by the contractor. Such of them as shall be approved by the engineer for the purpose of the works shall be paid for by the contractor at a price to be named in his tender or, if not named, to be ascertained by the engineer, and all other materials, shall be removed by the contractor from or deposited,

stacked, or spread on the site as, where and when directed by the engineer."

§ 7. Clause to prevent the removal of materials.—In cases where it is desired to prevent the contractor leading away gravel, ballast, etc., the following form of clause is sometimes used: "The contractor shall not sell or otherwise dispose of, except by using the same for the purpose of the contract and the works to be constructed and erected thereunder, any sand, stone, gravel, clay, soil, or other material, or substance of any kind or description whatsoever which may be obtained from excavations or found on the ground by the contractor."

CHAPTER VIII

TENDERS

	PAGE		PAGE
§ 1. Definition—whether writing necessary	93	§ 9. Effect of a tender	97
§ 2. Advertisement for tenders...	94	§ 10. Tenders for uncertain quantities	97
§ 3. Statement of conditions to be observed on tendering	94	§ 11. Withdrawal of a tender	97
§ 4. Costs of preparing tender...	95	§ 12. Damages for withdrawal of tender	99
§ 5. Withdrawal of invitation for tenders	95	§ 13. "The lowest tender"	99
§ 6. Preparation of form of tender	95	§ 14. Fraud in relation to tender	101
§ 7. Simple form of tender	96	§ 15. Agreements not to tender	101
§ 8. Necessity for care in preparing tender	96	§ 16. Tenders to local authorities	102

§ 1. Definition — whether writing necessary. — A tender amounts to an offer to execute works upon certain terms for the person inviting the tender. Although it is usually put into writing, it need not always be written. Prudence, however, dictates that the initial step in what may be a transaction involving thousands of pounds should be taken with the utmost caution, and a written tender is much more certain than a mere verbal offer. Again, although an oral tender and acceptance may sometimes amount to a contract, where either party is a company the contract must be put into writing. In an old case, a contractor sent in a tender to a railway company for the execution of part of the works either with a double or a single line of rails. He was informed that his tender was accepted, and that intimation was confirmed by the directors upon his attendance at one of the board meetings. No document was drawn up. The line being afterwards abandoned, the contractor sought to recover from the company the loss which he had sustained in preparing for the works. His action failed. Still greater caution is necessary when dealing with a local body, for where one of the parties is a corporation, the seal of the corporation is necessary to create a valid contract. The mere sealing of a letter containing a tender

will not apparently be sufficient for this purpose. In a recent case (*Bozson v. Altrincham Urban District Council*, 1903, 67 J. P. 397), one of the conditions was that the party tendering should undertake to execute a contract for the due performance of the works, and enter into a bond with two sureties for due and satisfactory completion. The plaintiff having tendered for the work, and the council having resolved that the tender should be accepted, directed their clerk to write the plaintiff to that effect, and to affix their seal to the letter. It was held that this acceptance did not conclude a contract between the parties.

§ 2. **Advertisement for tenders.**—The duty of issuing an advertisement for tenders may sometimes devolve upon the engineer. A properly drawn advertisement should state the time and place where the tenders are to be made, and should indicate the place where the plans and specifications are to be seen. It should also contain a statement that bills of quantities (“the accuracy of which is not guaranteed”) can be obtained for a certain fee. For the sake of caution, it should be declared that the employers do not undertake to accept the lowest or any tender (as to “the lowest tender,” see § 13, *post*). An advertisement of this kind ought to be sufficient to put the most unwary contractor on his guard; but something more full and explicit is often desirable.

§ 3. **Statement of conditions to be observed on tendering.**—Owing to his placing too much reliance on the plans, bills of quantities, etc., the contractor sometimes finds that his estimate and tender are far below what they ought to have been. In the result, what promised to be a profitable undertaking often involves serious loss. When seeking the performance of works on a large scale, the engineer may find it prudent to emphasise the difficulties of the undertaking in a series of “conditions to be observed on tendering.” Mr. Hudson in his *Building Contracts* (Vol. II., p. 463), suggests the following: “The contractor must also go over the entire site or line of the works, and satisfy himself about all matters relating to the nature of the ground, subsoil and strata, levels and inclinations, the means of access thereto and egress therefrom, and all other accommodation he may require, the obstacles to the excavation of the trenches, the amount of

water to be pumped and diverted, the means to be employed for maintaining the necessary flow of any existing water, the amount of haulage, the rights and interests to be, or which may be, interfered with by the construction, completion and maintenance of the works, and all other matters referred to in the plans and drawings to be seen at the engineer's office, and in the conditions of contract and specification which may influence the contractor in making his tender. Difficulties, whether contemplated or not, which may be met with, or happen in the construction, completion, and maintenance of the works, and mistakes in the specification, drawings or quantities shall not relieve the contractor from fulfilling the terms of his contract nor entitle him to any extra payment or compensation over the contract amount. The contractor is particularly referred to the contracts between the employers and merchants or manufacturers for the supply of materials mentioned in the specification, and he must make his own inquiries as to the probable date of supply of the said materials, and take all risks of delay in such supply." No contractor who had sent in a tender for the construction (say) of a large bridge could complain of having been misled by the specifications, etc., if the extent of his liabilities had been thus fully set forth at the very outset of the negotiations.

§ 4. **Costs of preparing tender.**—Employers will find it convenient to point out that they will not be responsible for, or pay for expenses or losses which may be incurred by any tenderer in the preparation of his tender. Even where no such warning is given, it is submitted that a contractor would have no claim in respect of the time and labour expended by him on the work of preparing his tender.

§ 5. **Withdrawal of invitation for tenders.**—A firm inviting tenders may revoke the invitation. If the invitation is withdrawn, the expenses of making a tender cannot be recovered (*Harris v. Nickerson*, 1873, L. R. 8 Q. B. 286).

§ 6. **Preparation of form of tender.**—The duty of preparing the form of a tender will usually fall to the lot of the engineer. It may therefore be useful to draw attention to certain points which should be observed in discharging this duty. The form should provide that the contractor is willing to undertake the

execution and completion of the works in accordance with the drawings, specifications, conditions, and schedule or bills of quantities, and all such work as may be reasonably inferred to be included therein. An undertaking on the part of the contractor to abide in all respects by the drawings, etc., and by the instructions of the employer's engineer, may also be included. The form should also contain an undertaking by the contractor, in case his tender is accepted, to execute a contract within a specified time, and to provide sureties to be approved by the employers to secure the due and proper completion of the whole of the works. For greater security some employers insist on a further clause, to the effect that if a contract is not duly executed and the sureties found within the time specified, they will not be bound by the tender. An undertaking to abide by the rate written after each item in the schedule of quantities is sometimes required.

§ 7. Simple form of tender.—Persons who are inviting tenders usually prescribe a form to be used by the contractors who tender. Where no form is specially authorised, the following will be found convenient:—

SIR (SIRS OR GENTLEMEN),—

I (or we) estimate the cost of the work (or works) proposed to be done at _____ according to plans and specifications inspected by me (or us), and under the supervision and to the satisfaction of the engineer, for the sum of £ _____ (here state the amount in words).

Yours obediently,
Signed _____

(For the form of tender recommended by the Institution of Electrical Engineers, see Form IIB., *post.*)

§ 8. Necessity for care in preparing a tender.—Great care should be taken in preparing the terms and figures inserted in a tender. As illustrating the importance of attending to the terms, the case of *Dartford Guardians v. Trickett* (1889, 59 L. T. 754) may be mentioned. There a contractor made a tender for a supply of granite at a certain price, the tender containing the words, "*weather and other circumstances permitting.*" The guardians, to whom he made the tender, disapproved of the words in italics and caused them to be struck out, the contractor being duly informed of the fact. Upon his raising no objection the contract was sealed. Delays

occurred owing to bad weather, and it was held that the guardians were entitled to recover for breach of contract. A numerical mistake in a tender may also be attended with serious consequences. Thus, in a recent Scotch case, a man offered to execute certain work for a lump sum of £859. He subsequently found that, owing to an error in calculation, the offer ought to have been to do the work for £826 more. It was held that he could not be released from his contract (*Seaton Brick Co. v. Mitchell*, 1900, 11 F. (5th Ser.) 550). For further examples of the consequences of mistakes, see Chap. VI., § 19, *ante*. A mistake in a tender will not justify the contractor in withdrawing it (see § 12, *post*).

§ 9. Effect of a tender.—A tender implies that the contractor is willing to do the work for a certain sum, and it is none the less valid because it is headed by the word “estimate.” Where a firm of builders, in answer to a letter asking for a tender, wrote: “*Estimate*. Our estimate to carry out the sundry alterations to the above premises according to the drawings and specifications amounts to the sum of £1,230,” the Court held this was a firm offer by which they must abide. (*Croshaw v. Pritchard*, 1899, 16 T. L. R. 45; also noted, Chap. VI., § 15 (d), *ante*.)

§ 10. Tenders for uncertain quantities.—In the carrying out of large works employers sometimes invite tenders for the supply of material, the amount of which cannot be ascertained beforehand. In one case the Admiralty sought tenders for stone “in such quantities and at such times as may be required by the Admiralty.” A firm of contractors stated that they could supply 2,000,000 tons, but in accepting this offer the Admiralty specified no quantity. It was held that they were not under any obligation to take any particular quantity. (*Attorney-General v. Stewards & Co.*, 1901, 18 T. L. R. 130.)

§ 11. Withdrawal of a tender.—Suppose A. on January 1st, 1906, invites tenders for the installation of a certain plant; B. makes a tender in which he undertakes to do the work for £1,000. Has A. the right to call upon B. to fulfil his tender at any time? Has B. any right to withdraw his tender? In the case suggested we must regard B. as a person who has made an offer.



The law provides that an offer may be retracted at any time before it is accepted. So where the defendant offered to purchase a house from the plaintiff, and to give him six weeks within which to give a definite answer, it was decided that the offer might be retracted at any time before the expiration of the period. So in our supposititious case, B. might at any time before acceptance withdraw his tender. What, then, is the date of acceptance? Here we come to one of those nice distinctions which are a delight to the legal mind, and a source of dismay to men of business. An offer (*i.e.*, for our present purpose a tender) remains open until the employer has actually received notice of its retraction; whereas the acceptance of an offer is deemed to be received as soon as it is posted. In a well-known case where the defendant wrote and posted an offer (which naturally indicates that the acceptance may be communicated in the same way) and the plaintiff wrote accepting it, and posted the acceptance, and in the meantime the defendant had written withdrawing his offer, but the letter of withdrawal had not been received by the plaintiff at the time of posting his acceptance, it was held that there was a complete contract. (*Henthorn v. Fraser*, 1892, 2 Ch. 27.)

The result of the cases on this point is that the withdrawal of a tender only takes effect when it reaches the person inviting the tender, while an acceptance takes effect from the moment when the letter of acceptance is posted.

In the more recent case of *Islington Union v. Brentnall and Cleland*, 71 J. P. 407, the defendants, in answer to advertisements of the plaintiffs, tendered for a supply of coal for a period of one year, and the plaintiffs duly accepted the tender in the form prescribed by the Local Government Board. On hearing of the acceptance the defendants withdrew their tender, on the ground that the price stated therein was so stated by mistake. The plaintiffs bought coal elsewhere at a higher price, and sued the defendants for the difference. It was decided that the tender and acceptance, in the form prescribed by the Local Government Board, constituted a complete contract; that the defendants were not entitled to withdraw their tender after such acceptance; and that, in the absence of evidence of *mala fides*, the plaintiffs were entitled to hold the defendants to the terms of such contract.

Where, however, those who advertise for tenders make it

plain that the signing of a written contract is an essential part of their advertisement, if no contract is signed the tenderer does not become bound. Thus, upon one occasion the guardians of the poor of Kingston-upon-Hull advertised for a butcher to supply their workhouse with meat, stipulating that "all contractors would have to sign a written contract after acceptance of the tender." The tender of one butcher was accepted, but no contract was drawn up. In the meantime he wrote withdrawing his offer. It was held that the acceptance did not form a binding contract so as to render the butcher liable for refusing to supply meat to the guardians upon the terms quoted by him. (*Kingston-upon-Hull Guardians v. Petch*, 1854, 24 L. J. Ex. 23.)

§ 12. Damages for withdrawal of tender.—Withdrawal of a tender may involve the contractor in a claim for damages. In another case, the defendant, finding that he had made a mistake in his calculations, withdrew his tender, with the result that the plaintiff had to employ another builder. He then sued the defendant to recover the amount which he had to pay in excess of the defendant's tender. It was held that he could recover, inasmuch as there was a binding contract. (*Lewis v. Brass*, 1877, L. R. 3 Q. B. D. 667.)

§ 13. The lowest tender.—As a general rule, those who advertise expressly state that they do not undertake to accept the lowest or any tender; but even when the advertisement is silent on this point, there is no implied term in the request for tenders that the lowest—or highest, as the case may be—will be accepted. In an old case the defendants offered for sale by tender the stock-in-trade of a certain firm, amounting as per stock-book to £2,503, and which would be sold at a discount in one lot. They also stated the day and the hour when the tenders would be received and opened at their offices. The plaintiffs made a tender, which they alleged was the highest. In an action brought against the defendants for not accepting such tender, it was decided that the circular was only an invitation for offers, and that there was no implied undertaking. (*Spencer v. Harding*, 1870, L. R. 5 C. P. 561.)

But the custom of the trade may have a bearing on this question. In *Pauling v. Pontifex* (1 W. R. 64) the plaintiff sent to the defendants' agent a tender for the execution of

certain buildings. It was decided that the judge was right, having regard to the evidence before him, in concluding that, according to the custom in the trade, the plaintiff's, being the lowest tender, had been accepted, although their agent had no absolute authority to accept the lowest.

Contractors who are anxious to secure a job at all costs sometimes adopt the following course. They write to the employer saying: "We shall do the work for £200 less than the amount specified in the lowest tender received by you."

In a case tried some years ago (*South Hetton Coal Co. v. Haswell, etc., Co.*, 1898, 1 Ch. 465) the question arose whether this form of tender was legal.

There a company agreed to accept the highest net money tender they should receive (other things being equal) from one of two rival purchasers, for the royalties accruing in respect of certain collieries. One of the parties offered £31,000, while his rival offered "such a sum as will exceed by £200 the amount to-day offered by my opponent." This was, of course, made without reference to the sum offered by the opponent. The offer of £31,000 having been accepted, the gentleman who made the second offer brought an action for specific performance on the ground that his was the highest tender. The then Master of the Rolls said: "The plaintiff's offer was illusory. It does not answer to the description of the highest money-tender either in the business or in the legal sense of the words. To hold that the plaintiff's offer answered that description would be to encourage trickery and chicanery. It would be opening the door to the grossest fraud not only towards purchasers, but towards the vendors also." From this statement of the law it may be safely inferred that a man who offers to do a piece of work for a price lower than that demanded by any of his rivals would find his object defeated.

In dealing with local authorities, contractors are prone to imagine that these bodies will always accept the lowest tender. Moreover, it has often been assumed that a local authority *must* accept the lowest tender. That this is not so was made plain in the recent case of *Rex v. Roberts (Ex p. Bailey)*, 1908, 24 T. L. R. 226. There the facts were that a district auditor acting under Sec. 247 of the Public Health Act, 1875, made certain surcharges against the Highways Committee in respect of a contract for the supply of goods, upon the ground that the tender accepted was not the lowest tender, and he

disallowed the amount which he estimated as the loss to the ratepayers therefrom. The Highways Committee stated that they had accepted the tender which they considered the most advantageous. An application was made for a writ of *certiorari* to bring up and quash the disallowance. It was held that, with regard to the contract for the supply of goods, the Highways Committee had acted honestly in the matter, that there was no evidence of negligence, and that the acceptance of the tender was proper. (See further as to tenders to local authorities, § 16, *post*.)

§ 14. **Fraud in relation to tender.**—If a contractor secures the acceptance of his tender by fraud—*i.e.*, by offering and paying a bribe to the employer's engineer—the employer may have the contract set aside. Where he allows the contract to go on, he may recover the bribe from the engineer, and sue the contractor for damages. (See *Salford (Mayor of) v. Lever*, 1891, 1 Q. B. 168.)

§ 15. **Agreements not to tender.**—An important question sometimes arises as to the validity of an agreement amongst a number of contractors not to tender for a particular piece of work. This course is sometimes adopted in order to leave the field clear for an independent contractor, who may be under agreement to share profits with those who have stood out of the way. The principle that an agreement on these lines is not void was declared in the case of *Jones v. North*, 1875, L. R. 19 Eq. 426. There it appeared that tenders for the supply of stone were invited by a corporation. Four quarry-owners entered into an agreement that they should each supply a certain proportion of the stone, and that the plaintiffs should make the lowest tender to the corporation. The plaintiffs entered into contracts with other quarry-owners to purchase the proportion of stone agreed upon from each. Notwithstanding the agreement, one of the quarry-owners sent in a tender which was accepted by the corporation. The other owners, who had been parties to the agreement, thereupon applied to the Court for an injunction to restrain the supply of stone to the corporation by the defendant. It was held, over-ruling an objection by the defendant, that the agreement was not void either as against public policy or on any other ground.

An agreement not to tender in competition appears to extend to work other than that which may be within the immediate contemplation of the parties at the time of the contract. So, in another case, A. and B. agreed not to tender in competition with each other for gas-tar. In answer to an advertisement, and acting upon his agreement with B., A. sent in a merely nominal tender, with the result that B. got the contract. Later, fresh advertisements were issued, and a tender by B. was rejected, whereupon A., without communicating with B., sent in a tender on his own account. It was decided that the agreement between them was still pending, and that A. was liable for the breach of it (*Metcalf v. Bouck*, 1871, 25 L. T. 539).

§ 16. **Tenders to local authorities.**—Urban authorities are compelled by law to offer certain contracts for public tender. Thus it is provided by Sec. 174 (4) of the Public Health Act, 1875, that before any contract of the value or amount of £100 or upwards is entered into by an urban authority, ten days' public notice at the least shall be given, expressing the nature and purpose thereof, and inviting tenders for the execution of the same, and such authority shall require and take sufficient security for the due performance of the same. Interesting questions have arisen in practice as to the legal effect of this provision. Thus in one instance (see the *Electrical Review*, March 2, 1906) a certain municipal council, having resolved to extend its electricity plant, sent out to a number of electrical manufacturers a specification in which a special type of engine (one firm's exclusive speciality) was asked for, the type of generator being left open. The matter was not advertised. A firm of engine-builders not making the type specified by the engineer obtained permission to tender, but, contrary to specification, they quoted for *their own* type of engine. Their price was lowest, but they were ruled out as having failed to comply with specification.

The following points arise: (1) Should the matter have been settled without the contract being publicly advertised? (2) Was the engineer acting within his rights in specifying a particular type of engine—a fact which conceivably might allow of the price being increased because of the "monopoly" given to that favoured type? It is a frequent practice for dynamo-builders to submit alternative tenders for their

machines driven by different types of engines. In this way the engineer can obtain his end without leaving an opening for unfair competition. Bearing in mind that the local authority in question was a *municipal* body, the legality of this particular method of obtaining tenders would seem to be open to question. The object of the legislation is manifestly clear; it is to give to the public an assurance that there shall be no favouritism, and that the ratepayers' money shall be expended as economically as possible. A further question has also arisen. Is a municipal body at liberty to state that no tender will be considered unless it include a particular type of engine? Although there does not appear to be any direct authority on the point, it constitutes, in the author's view, an abuse of the powers which are conferred upon local bodies by Parliament, and opens the door to unfair dealing.

The section of the Public Health Act, 1875, above considered also provides that there must be a specification in the case of any contract with a local authority. (See Chap. X., § 7, *post*.)

CHAPTER IX

BILLS OF QUANTITIES

	PAGE		PAGE
§ 1. Bill of quantities defined ...	104	§ 7. Clause drawing attention	
§ 2. Duty of quantity-surveyor	104	of the contractor to the	
§ 3. Whether bound to disclose		bills of quantities ...	109
his calculations	105	§ 8. Rectification of bills of	
§ 4. Liability of quantity-sur-		quantities	109
veyor	105	§ 9. Who is to pay the quantity-	
§ 5. Whether bills of quantities		surveyor	109
part of contract	107	§ 10. Amount of quantity-sur-	
§ 6. Accuracy of bills of quanti-		veyor's fees	111
ties	108		

§ 1. **Bill of quantities defined.**—A bill of quantities professes to be a correct list of the quantities of work and materials required to be done and provided in the erection of a building, or in the completion of a contract for large works (*Scrivener v. Pask*, 1866, L. R. 1 C. P. at p. 716). It is a well-ascertained practice that the building owner places before the builder documents specifying the materials on which he is to make his tender. But a bill of quantities, whether it forms part of the specification or is a special document, is not intended to be a representation in the sense of being a warranty. It is an estimate which the builder may act on as an honest estimate made by a qualified person, but it is not a warranty. It cannot be pushed beyond an estimate and turned into a warranty (see *per Collins, M. R., in Re Bemrose, Ford v. Bemrose*, 1902, 18 T. L. R. 443). See further as to the definition of bills of quantities, § 6, *post*.

§ 2. **Duty of quantity-surveyor.**—The duty of the quantity-surveyor in an ordinary case was thus very tersely explained by Lord Esher in *Priestley v. Stone*, 1888, 2 H. B. C., at p. 137: “Now what is it that the man who is employed to take out the quantities is employed to do for the architect? He is employed to take out the quantities for the architect, and to give those quantities to the architect; and he has no

control over what may be done with those quantities; he has no knowledge of anybody to whom those quantities will be shown. At the moment he has given details to the architect, the architect and his employer may change their minds as to the plan, may reject those quantities, may never use them, and may never offer to anybody a contract based on them at all. . . . Now, do they make a representation to the architect that they are true in fact? Certainly not."

§ 3. **Whether bound to disclose his calculations.**—While it has been decided (in *School Board for London v. Northcroft*, 1889, 2 H. B. C. 142) that a quantity-surveyor need not produce his memoranda and calculations *after* he has done his work, it seems that he must do so if required before he has completed his work. In that case Mr. Justice A. L. Smith said (at p. 145): "If the building-owner wanted to measure up the work, and he made a demand from the quantity-surveyor: 'Give me those details which you have, because I want to measure up and finish this work which you have initiated by your quantities,' I think it would be the duty there (assuming he had them) of the quantity-surveyor to hand them over to his principal, because, in my judgment, his duty would be to do the best he could for his principal until the whole work had been finished, completed, measured up, and done with."

§ 4. **Liability of quantity-surveyor.**—The builder or contractor who desires to avoid the loss which may be occasioned by errors on the part of a quantity-surveyor, should be careful to have the quantities made part of his contract; for it has been decided that a quantity-surveyor employed by the architect or employer is not liable to the accepted builder, either by contract or representation, for errors in quantities (*Priestley v. Stone*, *supra*, 1888, 4 T. L. R. 730). In that case the defendant was employed by an architect to take out the quantities in accordance with certain plans. These plans were altered by the architect, who, without altering the quantities, invited tenders based on the plans and unaltered quantities. The plaintiff, who was accepted as contractor, suffered loss owing to the alleged inaccuracy of the quantities, and sued for damages. It was successfully urged that the action did not lie as there was no priority of contract between the builder and the quantity-surveyor; and that any representation

contained in the contract as to the accuracy of the bills of quantities only affected the relations between the builder and the building-owner. It was pointed out, however, that the quantity-surveyor, if he did anything wrong, would be liable to his architect and the building-owner for any damage caused to them.

While an architect may be held liable, at the suit of a builder, for mistakes in a bill of quantities, if he was expressly employed to take them out (see *Bolt v. Thomas*, reported in *Beven on Negligence*, 1895, Vol. II., p. 1370, and noted Chap. V., § 10, *ante*), he cannot be held liable when the quantities are not made the basis of the contract. Thus in a later case (*Young v. Blake*, 1887, 2 H. B. C. 106) a firm of architects took out quantities and supplied them to the builders, and were paid by them. The contract contained the usual clause which stated that the quantities were believed to be correct, "but should any error be found therein . . . it shall be lawful and in the power of the architects to measure any or all the works contained and described in the said bills of quantities and to adjust the same." On completion of the work the builder sued both the building-owner and the architect for damages occasioned by alleged errors in the bills. The building-owner was excused because there was no warranty; and the architects were held not liable because they occupied a *quasi-judicial* capacity, and must be taken to have exercised their judgment under the clause above set out. Commenting on this, Mr. Justice Grove said: "I think the meaning of that must be that it must be left to the discretion of the architect to re-measure if he finds there is reasonable ground to think that there is an error or mis-statement of the works, and that then he may re-measure and may adjust them. . . . Then he may adjust them between the parties. That being so, it appears to me that the architect stands in a *quasi-judicial* position between the parties; he is architect not merely as a person who is employed as the agent of the building-owner for all purposes, nor is he a person who is employed by the builder in any sense so as to be liable to him as a person at his will and pleasure to be ordered to do anything because the builder is dissatisfied."

The liabilities of a quantity-surveyor were fully discussed in the case of *School Board for London v. Northcroft*, 1889, 2 H. B. C. 142. There the plaintiffs had employed the

defendants, as quantity-surveyors and measurers, on certain buildings of the value of £12,000. The defendants drew up the bills upon which a builder made a tender, and the buildings were ultimately completed in June, 1887, on which date matters also came to an end as between the plaintiffs and the defendants. As the plaintiffs were not satisfied with the way in which the buildings had been executed, they sought to blame the quantity-surveyors in some degree. They employed another surveyor at an expense of £38. They then brought this action claiming (1) certain papers of calculations which had been drawn up by the defendants in preparing the bills; (2) for negligence in a clerical error in the calculation, owing to which it was alleged that they had overpaid the builder to the extent of about £130; and (3) the sum of £74 which had been charged by the defendants for lithography. It was held, as to (1), that the work having been completed, the plaintiffs had no right to the papers or memoranda, nor to damages for their detention. As to the charge of negligence (2), Mr. Justice A. L. Smith said that as the mistake arose owing to a mere clerical error on the part of a clerk who had not been proved to be incompetent, the defendants could not be held responsible. With regard to the charge for lithography (3), it was held that although the defendants being the plaintiffs' agents, the payment of any commission to the defendants was illegal and improper, yet as it was agreed in this case the defendants should employ their own lithographer, they might retain this which was really a discount for cash.

§ 5. Whether bills of quantities part of contract.—In order to avoid making the bills of quantities part of the contract, a clause is often inserted in the conditions providing that, "any reference in the said conditions to the bills of quantities shall not have the effect of constituting them part of the contract." In the absence of such a clause, the bills and plans may be put together for the purpose of defining the amount of work which the contractor is to do under the contract; and if, in the course of carrying out the work, the contractor is called upon to do anything more, he may be in a position to charge for it as an extra (see *Patman and Fotheringham v. Pilditch*, 1904, *Emden's Building Contracts*, p. 674). It is obviously impossible to know beforehand exactly how much material will be required in order to carry out a particular undertaking.

§ 6. Accuracy of bills of quantities.—An employer does not warrant the accuracy of bills of quantities; and the prudent contractor will verify them for himself before making his tender. In one case a builder who had contracted to build a church for £1,998 found that it really cost him with extras £3,600. The increase in cost was due to inaccuracies in the bills of quantities. It was held that the builder could not recover the excess (*Sherren v. Harrison*, 1860, *Times*, Feb. 8; and see further as to the results of mistakes, Chap. VI., § 19, *ante*). In another case it was sought to establish a custom or usage to the effect that when tenders are invited for the erection of works in accordance with plans, the person tendering is not expected to verify the quantities for himself, but is expected and intended to assume their correctness, and that if such quantities turn out to be greater or less than the actual quantities, the price is to be reduced or increased by an amount ascertained and determined by the scale of prices given in the tender as the scale by which payments are to be determined. The Court of Appeal refused to recognise any such custom which, in effect, contradicted the terms of the contract (*Re Bemrose, Ford v. Bemrose, supra*, 1902, 18 T. L. R. 443). Speaking of the bills of quantities and specification in that case, the Master of the Rolls said: "It is an estimate—an estimate which a reasonable person such as a builder would probably act on as being an honest representation made by a skilled person—but beyond that it does not go. The builder has the right to make his own estimate, and, in point of fact, in this particular contract, when you come to look at one of the provisions of the specification which accompanied it, it is made a term that 'the person whose tender is accepted must deposit with the architect, within fourteen days of acceptance of tender, a priced bill of quantities of all the works, the same as that on which the tender is based.' So he accepts the obligation of himself furnishing a bill of quantities, and of course it is much easier for him, and much shorter for him, to put the prices on the specification that has been sent to him, and, if need be, adopt the quantities that have been sent to him, but it is part of his obligation to furnish one, and he is not relieved from the obligation because he chooses to take the quantities which are furnished him by the building-owner. That he has done in this case. It is a perfectly reasonable thing to do, because there is no suggestion of anything but

perfect honesty in this matter, and the builder would naturally rely on the honest estimate of a skilled person.”

§ 7. Clause drawing attention of the contractor to the bills of quantities.—It is sometimes considered wise to draw the attention of the contractor to the effect of the bill of quantities. Thus a clause is occasionally inserted in the contract to the effect that the quantities stated are not guaranteed either by the engineer or the employer, and are only supplied as an aid whereby to enable the contractor to check his own measurements. The contractor should be made to understand that if he adopts the quantities or any of them in forming his tender, it will be at his own risk, as no allowance can be made on account of any omissions or errors which may subsequently be found in the quantities.

§ 8. Rectification of bills of quantities.—By far the fairest method of dealing with the quantities is to insert a special clause providing that if any errors shall be discovered therein, the same shall be rectified, and that an addition to or deduction from the amount payable to the builders under the contract shall be made accordingly. It should, however, be provided that such errors shall be notified to the architect or engineer within a prescribed limit of time. (Compare the powers conferred upon an engineer to vary or omit work; see Form IIA., Cl. 20, *post.*)

§ 9. Who is to pay the quantity-surveyor.—A properly drawn contract usually provides for payment of the fees of the quantity-surveyor. Thus the form sanctioned by the Royal Institute of British Architects provides for the payment of these fees by the contractor out of and immediately after receiving the amount of the certificate or certificates in which they shall be included. It is, apparently, the duty of the architect to decide whether anything for the quantity-surveyor is to be included in the first certificate. (See *per* Field, J., *Young v. Smith*, 1879, 2 H. B. C. p. 61.)

In *Birdseye v. Dover Harbour Board*, 1881, 1 H. B. C. 62, a custom was successfully relied on to the effect that an architect employed by a building-owner may call in a quantity-surveyor at the employer's expense. In *North v. Bassett*, 1892, 1 Q. B. 333, the plaintiff, a quantity-surveyor, was employed by an

architect to take out quantities for a building about to be erected. The defendant, a builder, tendered for the work upon the basis of a specification, containing the following clause: "To provide for copies of quantities and plans, 25 guineas, to be paid to the surveyor," naming North, the plaintiff, "out of the first certificate." The defendant's tender was accepted, and he received the first instalment of the price of his work from the building-owner. The quantity-surveyor sued to recover the 25 guineas from the builder whose tender was accepted. It was held that, by the usage of the building-trade, the plaintiff was entitled to recover. Mr. Justice Mathew pointed out that the result of the employment was that there was not a contract by the building-owner to pay the quantity-surveyor in any event, but that the latter was to be paid by the builder if his tender was accepted. He also said: "What is the usage which upon these facts it is sought to set up? It is one which I should have thought to be notorious: a usage that the fees of the quantity-surveyor are paid by the builder whose tender has been accepted by the building-owner. This is a sensible and convenient usage; it brings all the people together, the builder, the building-owner, and the quantity-surveyor, and they all assent to it. In the present case the fact that this course was followed is corroborated by the documents, which contain abundant evidence of a promise to pay on the part of the defendant; while the assent of the plaintiff is clearly shown by his bringing this action." It is important to notice that, in the circumstances just considered, there is really no contract between the building-owner and the quantity-surveyor. So that if the builder becomes bankrupt, or for some other reason cannot pay the fees, the surveyor cannot sue the owner (*Young v. Smith*, 1879, 2 H. B. C. 59). As was pointed out by Mr. Justice Field in that case, the employer or building-owner, in effect, says to the quantity-surveyor: "I am going to ask if they will tender upon your quantities, and what sum they will do the work for. It is not intended that I shall pay you, but that the successful person shall pay you. I will obtain a contractor who will enter into an implied contract with you (the quantity-surveyor), that if I will add to the sum mentioned in the contract the sum due to you, he (the builder) will pay you." Unless there is something binding the owner, some understanding between the parties to be gathered from correspondence or words making

himself liable for the taking out of the quantities, he is not so liable (*per* Grove, J., in *Young v. Blake*, 1887, 2 H. B. C. p. 115). The builder cannot divest himself of his liability to the quantity-surveyor by taking an assignment of the property from the building-owner (*Mellor v. Brittain*, 1900, 16 T. L. R. 465). Nor will abandonment of the contract release a builder who has expressly contracted to pay the fees of a quantity-surveyor. In an Irish case (*McConnell v. Kilgallen*, 1878, L. R. Ir. 2 C. L. 119) a builder agreed to pay a surveyor for quantities in connection with a projected building. Payment was to be made out of the first instalment. He subsequently abandoned the building contract. In an action for fees by the surveyor, it was held that there was an implied agreement by the builder to proceed with the contract, and that, having made performance impossible by his own act, he was bound to pay for the quantities furnished. Nor was it a condition precedent that the first instalment under the contract should be previously paid.

§ 10. Amount of quantity-surveyor's fees. — Where the amount of fees for taking out quantities is not settled beforehand, it will be for the Court to decide what is reasonable remuneration. In *Gwyther v. Gaze*, *Times*, Feb. 8, 1875, a jury having found as a fact that the architect had power to employ a quantity-surveyor, the judge was asked to decide the question of remuneration. He held that an alleged custom to pay $2\frac{1}{2}$ per cent. on the lowest tender was unreasonable, and he awarded $1\frac{1}{2}$ per cent. It may be mentioned, in this connection, that Ryde's scale is not necessarily applicable in all cases; but if remuneration ought to be assessed in accordance with that scale it will be awarded. (See *Stenning v. Mitchell*, *Emden's Building Contracts*, 661.)

CHAPTER X

SPECIFICATIONS

	PAGE		PAGE
§ 1. Preliminary... ..	112	§ 7. Specification in contracts with urban authorities...	117
§ 2. Commencement of a specification	113	§ 8. Clause to secure conformity to specification	117
§ 3. How far contractor is bound by specification	113	§ 9. Consequences of negligence in drawing a specification	117
§ 4. Specification for "a sound machine"... ..	115	§ 10. Fraud in relation to a specification	118
§ 5. How the specification becomes part of the contract	116		
§ 6. Works omitted from specification not necessarily extras	116		

§ 1. **Preliminary.**—A specification has been defined as “a written description and plans more or less complete, defining the methods of construction, material, etc., to be used, prepared by the engineer for the approval of the employer, and for the guidance of the contractor.” All these written documents together form the specifications. They form part of the contract between the employer and the contractor, and serve to delimit and define the work which is to be done. The contractor need not do anything which is not set out in the specifications; the employer need not pay for anything which is not defined.

A specification is a legal document and must, therefore, be drawn with the utmost care. As it is often long and elaborate, the engineer may sometimes find a difficulty in keeping all the details in his head. In such a case he will find it prudent to make notes for the draft specification concurrently with the progress of the working drawings. The actual preparation of the draft specification should not, however, be commenced until the whole of the drawings have been completed in pencil. There should be added to the specification a complete schedule of the working drawings, which are complete at the time the contract is signed. To facilitate identification these should be

either lettered or serially numbered. The clauses of a specification should also be serially numbered, and to facilitate reference it will be found most convenient to make a marginal reference to the subject-matter of each clause. Marginal sketches may be used if their insertion makes for greater exactness.

§ 2. Commencement of a specification.—Every specification should begin with the particulars suggested by the blank spaces in the following form :—

Specification of Works required to be executed in erecting (*or altering, extending, etc.*) at in accordance with the terms of the Contract dated entered into between (Employer) of the one part, and (Contractor) of the other part; and also in conformity with the Drawings numbered 1 to (inclusive), under the superintendence and to the satisfaction of (Engineer).

§ 3. How far contractor is bound by specification.—It is a fundamental principle of the law relating to engineering-contracts that the contractor must verify for himself the possibility and feasibility of the works which are described in the specification. Having made his tender in accordance with the plans, drawings, and specification, he cannot be heard to complain if he finds that his obligations are greater than he at first anticipated. The law on this point is so well settled that it is not necessary to do more than refer to one or two cases by way of practical illustration. In *Thorn v. Mayor of London*, 1876, L. R. 1 A. C. 120, the Corporation of London invited contractors to tender for the execution of certain works for the building of Blackfriars Bridge, according to plans and specifications prepared by the engineer to the corporation. The specification provided that the contractors were to take out their own quantities, and that the accuracy of the plans was not guaranteed by the corporation. The contractors were warned particularly that they must satisfy themselves as to the nature of the ground through which the foundations had to be carried. Iron caissons were specified to be used in the construction of the works, but when the contractors whose tender was accepted proceeded to use the caissons as designed, it was found that they would not resist the pressure of the water, and the plan of the work had to be altered and the use of the caissons abandoned. The contractors claimed for the

loss occasioned to them in attempting to use caissons, and contended that the corporation had warranted, although not expressly, that the work could be done inexpensively by the use of caissons according to the specification. The House of Lords held that no warranty could be implied. The following passage from the judgment of Lord Chelmsford has become historic. He said: "There can be no doubt that the plaintiff, in the exercise of common prudence, before he made his tender, ought to have informed himself of all the particulars connected with the work, and especially as to the practicability of executing every part of the work contained in the specification according to the specified terms and conditions. It is said that it would be very inconvenient to require an intended contractor to make himself thoroughly acquainted with the specification, as it would be necessary upon each occasion for him to have an engineer by his side. . . . But if the contractor ought prudently and properly to have full information of the nature of the work he is preparing to undertake, and the advice of a skilful person is necessary to enable him to understand the specification, is it any reason for not employing such a person that it would add to the expense of the contractor before making his tender? It is also said that it is the usage of contractors to rely on the specification and not to examine it particularly for themselves; if so it is an usage of blind confidence of the most unreasonable description."

The following cases may also be referred to in this connection: *Williams v. Fitzmaurice*, 1858, 3 H. & N. 844; *Scrivener v. Pask*, 1865, 18 C. B. N. S. 785 (where, owing to inaccurate quantities, a builder expended much more than he anticipated); *Sharpe v. San Paulo Railway*, 1873, L. R. 8 Ch. 597 (where contractors for the building of a railway found themselves liable to excavate 2,000,000 cubic yards of earth in excess of what they had anticipated); and *Tharsis Sulphur and Copper Co. v. M'Elroy*, 1878, 3 A. C. 1040. In the latter case, contractors had undertaken to erect certain iron buildings in accordance with a specification. The girders proved too thin and liable to twist. It was held that they were not entitled to charge as an extra the cost of providing stronger girders. (See further, as to work superior to specification, Chap. VI., §§ 23, 31.)

The principle of the decided cases may be stated by saying that it is no defence to an action for damages for faulty construction or bad foundations that the works so far as they

were carried out, were constructed in accordance with the specifications. So in *Brown v. Laurie*, 1851, 1 L. C. R. 343, a builder brought an action for a balance due upon a contract for the excavation, and masons' and bricklayers' work, of certain houses. To this it was replied that as the houses were set upon insufficient foundation, the builder had not carried out his contract. It was held that the builder was liable for the defects of the soil, and was bound to take usual and proper means for ascertaining the nature of the ground and putting in proper foundations.

In view of the foregoing principles, and of the fact that many contractors do not examine foundations, etc., for themselves, it is obvious that the engineer who desires to avoid future trouble between his employer and the contractor must observe the greatest care in drawing specifications. In its ultimate result, the error caused by an omission is nearly as important as that caused by an inaccurate table of quantities or an underestimate of the strength of a particular type of girder.

§ 4. Specification for "a sound machine."—A contract to erect a sound machine will not be properly executed by the mere close adherence to the specification and plans. The contractor must satisfy himself that if the specification is complied with the machine will be sound.

In *Hydraulic Co. v. Spencer*, 1886, 2 T. L. R. 554, the defendant contracted to cast certain cylinders according to specification and plans, the cylinders to stand a pressure of twenty-four hundredweights to the square inch. It turned out that if the cylinders were cast according to the specification there would be an unavoidable defect. It was held that the defendant had contracted to supply sound cylinders, and that as he had not done so, although he had adhered to the plans, he was liable in damages. Lord Esher said: "The cylinders were cracked, but they were to be made according to a pattern, and the defence was that they could not be so made without being cracked. No doubt if that were all there would be a defence. But it is contended that the manufacturers had contracted for something more, and on the letters it appeared that they had undertaken to make sound cylinders. They thought they could do so working according to the pattern; they found they could not, and so they were liable for damages."

§ 5. **How the specification becomes part of the contract.**—As a general rule the contract between employer and contractor expressly refers to and incorporates the specification as part of it. But it requires no great formality to bring about this result. So if a man engages to do certain work in conformity to drawings and a specification, the offer incorporates the drawings and the specification, and if the specification mentions a time for completion, and the offer is accepted, completion within the time referred to in the specification is a part of the contract. In *Wimshurst v. Deely*, 1845, 2 C. B. 253, the defendants had been applied to by the plaintiff to make for him an engine and boilers for a steamship, the engine to be constructed upon a new principle patented by a Mr. Barrie, and to be made according to certain drawings and a specification produced by Barrie. The specification contained a condition that the engine, boilers, etc., should be completed and delivered within two months. The defendants offered to supply the engine “in conformity to the drawings and specification” (in which the time was mentioned), the engine “to be got up under the superintendence of Mr. Barrie, and when approved by him at the works, to be delivered by us at the East India Docks.” This offer was accepted. There was a six months’ delay in delivery, in respect of which the plaintiff claimed damages. In giving judgment, Tindal, C. J., said: “The fair interpretation of the contract—the offer on the one side, and the acceptance on the other—appears to me to be, that the engine and boilers should be completed and delivered within two months. Time might have been a most important consideration for the plaintiff. Without the machinery the vessel would be useless, and the plaintiff may have entered into engagements from which he could not recede.” The plaintiff, therefore, was awarded damages. Where the drawings and the specification both form part of the contract, it is well to provide that, in case of a discrepancy, the specification shall prevail. (See, *e.g.*, Form IIA., Cl. 11 (a), *post.*)

A mere tender and a specification may form a contract (*Allen v. Yoxall*, 1844, 1 C. & K. 315).

§ 6. **Works omitted from specification not necessarily extras.**—It follows as a necessary consequence of the principles above stated, that works omitted from a specification are not necessarily extras; for if the contractor undertake to carry out

certain work for a lump sum he must do the work in accordance with his contract. The plea that it is costing so much that his profit is reduced to the vanishing-point will not avail him in a court of justice. (See further as to extras, Chap. XII., § 3, *post.*)

§ 7. **Specification in contracts with urban authorities.**—While it is optional for the parties to an ordinary engineering contract to have a specification, it is important to notice that it is provided by Sec. 174 (2) of the Public Health Act, 1875, that every contract with an urban authority shall specify the work, materials, matters and things to be furnished, had or done, the price to be paid and the times within which the contract is to be performed, and shall specify the pecuniary penalty to be paid in case the terms of the contract are not duly performed. It has been decided, however, that this provision is only directory, and that the whole of the sub-section applies only to cases where work materials, matters or things, are to be furnished, had or done, to or for an urban authority for a price in money to be paid by such authority. (*Soothill Urban District Council v. Wakefield Rural District Council*, 1905, 1 Ch. 53.)

§ 8. **Clause to secure conformity to the specification.**—In order to ensure that the contractor shall work to the specification the following clause (or a clause to the same effect) is inserted either in the introduction to the specification or in the general conditions: "All work done and materials provided by the contractor for the purposes of the contract, or in any manner connected therewith, shall be deemed to be subject to the provisions of this specification and of the contract, unless the same be done or provided in pursuance of a separate written agreement."

§ 9. **Consequences of negligence in drawing a specification.**—The result of negligence in drawing a specification may be to impose on the employer a liability greater than that which he was prepared to undertake. For instance, if the engineer, owing to a negligent or too hasty survey, fails to perceive and allow for some difficulty, extra work may have to be carried out. In one case (*Money Penny v. Hartland*, 1828, 2 C. & P. 378) failure on the part of an architect to examine the ground

for the foundations of a bridge involved an additional expense of £1,600. It was held that he could not recover his fees. The judge said: "If a surveyor delivers an estimate greatly below the sum at which a work can be done, and thereby induces a private person to undertake what he would not otherwise do, then I think he is not entitled to recover." Not only might an engineer lose his fees in such a case, but he might be liable to an action for damages at the suit of his employer. (See further as to negligence on the part of an engineer, Chap. V., § 7, *ante*.)

(For examples of the grave consequence which may follow from verbal errors in a specification that forms part of a contract, see Chap. VI., § 19, and cases there cited.)

§ 10. **Fraud in relation to a specification.**—We have seen that, as a general rule, a specification does not amount to a warranty. The contractor enters upon the work at his own risk. But if the specification or the plans contain or involve statements of fact which are false to the knowledge of the employer, the question of fraud enters into the matter, and the contractor may be in a position to claim relief. In this connection it should be mentioned that a statement made by a person recklessly and without caring whether it be true or false, is deemed fraudulent in the eye of the law.

The case of *Pearson v. Dublin Corporation*, 1907, A. C. 357, which was recently decided in the House of Lords, affords an illustration of this proposition. In a contract to execute certain sewage works, Messrs. Pearson covenanted to do the works described in the drawings, specifications, etc., and the defendants covenanted to pay for the works on the receipt of the certificate in writing of their engineer as provided by the conditions. The specification provided, *inter alia*, that the plaintiffs must verify all representations, and not rely upon their accuracy. The works in question involved the transformation of an old harbour in the Liffey into a sewerage tank. On completion the plaintiffs claimed £36,574 from the defendants on the grounds—first, that the plans showed a certain existing wall extending some nine feet below the ordnance datum line, which could be utilised for the purposes of the works; that this wall did not exist, and that consequently the plans for the works had been altered, and the plaintiffs, at the direction of the engineer, had completed the

works at this extra cost: secondly, that the defendants had fraudulently misrepresented the structure and existence of this wall, and had thereby induced the plaintiffs to enter into the contract to their detriment. The defendants relied on the absence of a certificate from their engineer and on the conditions of the specification, and they denied the making of any representation and any fraud. It was held that the specification only protected the defendants in respect of honest mistakes by themselves or their agents, and that it was for a jury to say whether there was fraud or not. In giving judgment, the Lord Chancellor pointed out that evidence was adduced at the trial from which the jury might, if they thought right, conclude that the plaintiffs were induced to enter into the contract by statements made on behalf of the defendants. There was also evidence for the jury that those statements were made either with a knowledge of their falsity or (which was the same thing) with a reckless indifference whether they were true or false, on the part of the engineers employed by the defendants to make the plans which were submitted as the basis of the tender. Having referred to the clauses which pointed out that the plaintiffs were not to rely on the plans, he said: "Now it seems clear that no one can escape liability for his own fraudulent statements by inserting in a contract a clause that the other party shall not rely on them. I will not say that a man, himself innocent, may not under any circumstances, however peculiar, guard himself by apt and express clauses from liability for the fraud of his own agents. It suffices to say that in my opinion the clauses before us do not admit of such a construction. They contemplate honesty on both sides and protect only against honest mistakes. The principal and the agent are one, and it does not signify which of them made the incriminated statement or which of them possessed the guilty knowledge."

The moral of the above case is clear. It was laid to the charge of the engineers that they had made certain representations which misled the contractors; and it was decided by the House of Lords that, if those charges were proved, they must be deemed to have been made on behalf of the employers. In these circumstances it is essential that in drawing a specification no statement shall be made in reckless disregard of the question whether it be true or false.

CHAPTER XI

PLANS, DRAWINGS, AND DESIGNS

	PAGE		PAGE
§ 1. Preliminary... ..	120	§ 8. Plans for competition ...	123
§ 2. Requirements as to drawings to be observed by persons tendering ...	120	§ 9. Drawings part of the contract	123
§ 3. Plans and drawings to be furnished by person tendering	121	§ 10. Deviation from plans ...	124
§ 4. Matters to be considered in the preparation of plans and designs	121	§ 11. Approval of plans by local authority	124
§ 5. Plans are no warranty ...	121	§ 12. Compliance with statutes	124
§ 6. Preliminary plans and sketches	122	§ 13. Delay in supplying plans	125
§ 7. Effect of approval of plans, etc., by employer ...	122	§ 14. Payment for plans where estimates exceeded ...	126
		§ 15. Payment for plans dependent on contingency ...	126
		§ 16. Property in plans and drawings... ..	127

§ 1. **Preliminary.**—Questions of difficulty occasionally arise with regard to plans and drawings, the preparation of which forms such an important part of the work of the architect or engineer. Who owns the plans when prepared? Who is bound to pay for them? How far do they amount to a warranty that a given piece of work can be executed?—All these points may arise.

§ 2. **Requirements as to drawings to be observed by persons tendering.**—In advertising for tenders it is well to provide that the tenderer shall submit with his tender drawings of the work for which he is tendering drawn to as large a scale as convenient. Persons tendering should also be notified that detailed drawings are not required to be submitted with the tender; but that, if the tenderer wishes to call special attention to any detail of construction, he may submit a drawing of the same with his tender. A note should be added to the effect that all drawings submitted by unsuccessful tenderers shall be returned within fourteen days of the date of the adjudication of the employers upon the tenders. The observance of these precautions is recommended by the Institute of

Electrical Engineers in their form of model general conditions. (See Form IIA., Cls. 6 *et seq.*, *post.*)

§ 3. **Plans and drawings to be furnished by person tendering.**—When contractors are invited to make tenders for work it is not unusual to make provision for the drawings to be supplied with the tenders in the general conditions. In the model conditions published by the Institute of Electrical Engineers, it is provided that the contractor must submit, within a certain time, preliminary sets of drawings to be approved by the engineer (see Form IIA., Cl. 11, *post.*). The engineer then signifies his approval or disapproval within fourteen days. If he approves, it is further provided that within fourteen days of that approval, two additional sets of drawings, in ink on tracing-cloth, or ferrogallic prints mounted on cloth, of the drawings as approved, shall be supplied to the engineer by the contractor. These are signed by the engineer and the contractor respectively, and are thereafter known as the “contract drawings.” These are not to be departed from in any way except by the written order of the engineer. Inasmuch as the contract drawings may have a small scale which does not show sufficient detail, it is generally prudent to require that “the contractor shall supply from time to time such additional drawings of any details as the engineer may deem necessary for the execution of the work, but the contractor shall not be called upon to furnish drawings of instructional details further than those which in the opinion of the engineer are required for the purposes of the contract.”

§ 4. **Matters to be considered in the preparation of plans and designs.**—When preparing designs and plans the engineer must consider other matters besides the soundness of the structure. His work may be objected to on various grounds. It may not accord with the instructions of the employer. He may have overlooked the provisions of some local by-law, or he may have failed to comply with an Act of Parliament (see § 12, *post.*). Again, he may have overlooked the fact that his work, when completed, will infringe the rights of some private person with the result that a heavy liability is thrown on his employer.

§ 5. **Plans are no warranty.**—In preparing plans and drawings for the guidance of the contractor, the engineer acts as

the agent of the employer, but he has no authority to warrant that the plans, etc., are correct. If the contractor assumes that they are correct, and omits to make the necessary inquiries and measurements for himself, he may incur a serious liability (*Thorn v. Mayor of London*, 1876, 1 A. C. 120, the facts of which are set out in Chap. X., § 3, *ante*), and it is for this reason that a clause is usually inserted pointing out that the accuracy of plans, etc., is not warranted (see *e.g.* Form 1, Cl. 2, *post*). If the engineer has power to furnish detailed or working drawings during the progress of the works, he may supplement the original drawings by giving further details, but he must not alter the original design (*R. v. Peto*, 1826, 1 Y. & J. 37). The question of warranty must, however, be re-considered if fraud is alleged. (See *Pearson v. Dublin Corporation*, 1907, A. C. 357, *ante*, Chap. X., § 9.)

§ 6. **Preliminary plans and sketches.**—It has been decided that an architect is not entitled to be paid anything for preliminary plans and drawings, inasmuch as these are in the nature of mere estimates which will lead up to a possible contract (*Moffatt v. Laurie*, 1855, 24 L. J. C. P. 56). In that case the judge said: "It is of every-day occurrence for architects to send in plans for public buildings, taking the chance of being paid for their labour, or not, as they may be adopted or rejected."

§ 7. **Effect of approval of plans, etc., by employer.**—Where an engineer is employed to prepare plans and specifications, it may be taken that the arrangement between him and the employer embodies an implied term that the employer shall approve the drawings. But what is the effect of approval by the employer? Does it estop him from preferring a charge of negligence against the engineer in case the design prove faulty, or the drawing inaccurate? In this connection it is material to notice that when a person undertakes and is employed to perform a work of skill and labour, and fails therein, so that his employer derives no benefit from the work, that person is not entitled to recover his demand, as the employer buys both his labour and his judgment, and he ought not to undertake the work if he does not know whether he can succeed or not (*Duncan v. Blundell*, 1820, 3 Stark. 6).

It would seem to follow from this that where the employer relies on the engineer to advise him as to the feasibility of plans, etc., the engineer cannot shield himself behind the fact that the employer has approved the plans. The principle is illustrated by the case of *Smith v. Barton*, 1886, 15 L. T. 294, where an agent for the purchase of a public-house was held liable in damages to his employer for negligently conducting the purchase, although he had advised his employer to go and examine the business for himself and the employer did so. (See this subject discussed under the head of negligence, Chap. V., § 4, *ante*.)

§ 8. **Plans for competition.**—Where engineers and others are asked to send in plans for a competition, it has been held that those who advertise for the plans are not entitled to use them if the competition is not proceeded with. If the plans are used they must be paid for (*Landless v. Wilson*, 1880, 8 Ct. of Sess. Cas. 289). In that case an architect was employed to prepare plans for the erection of certain buildings which were not proceeded with. The owner, however, made some use of the plans, and the architect sued him for his fees. The owner pleaded in defence that the plans had been drawn on the footing of there being a competition. The sheriff gave judgment for the plaintiff. On appeal the Court of Session held that it lay on the owner to prove that the architect's employment was gratuitous, which he had failed to do, and they accordingly affirmed the decision of the sheriff.

In *Ward v. Lowndes*, 1859, 28 L. J. Q. B. 265, certain commissioners published an advertisement offering a premium of £20 to the architect who should produce the best plan for a covered market-house and hotel, provided that the person furnishing the selected plan should not afterwards be employed as architect for the said buildings. The plaintiffs produced a plan which they alleged was the best and most approved for the covered markets, but the £20 was not paid. They were awarded the sum of £20 by a jury, but it was held that the verdict could not stand.

§ 9. **Drawings part of the contract.**—The fact that the drawings are usually made part of the contract makes it essential for the contractor to pay close attention to them. Any deviation may involve him in a claim for damages for

breach of contract, and he would certainly not be entitled to recover anything from the building-owner in respect of such deviation; for if a builder undertakes a work of specified dimensions and with specified materials, and deviates from the specification, he cannot recover on a *quantum valebat* for the work, labour, and materials (*Ellis v. Hamlen*, 1810, 3 Taunt. 52). In the case of any discrepancy between plans and specifications, the contract usually provides that the specification shall prevail. (See Form IIA., Cl. 11 (a), *post.*)

§ 10. **Deviation from plans.**—The mere fact that unforeseen difficulties crop up in the progress of works will not justify a deviation from the plans in order to meet those difficulties; and if a contractor undertakes to erect a building according to plans and a specification, under the supervision of an architect, the architect cannot change the terms without special authority (*Cooper v. Langdon*, 1841, 9 M. & W. 60). The same principle would apply to the case of an engineer.

§ 11. **Approval of plans by local authority.**—Local authorities have power, notably under Sec. 157 of the Public Health Act, 1875, to make by-laws as to the deposit of plans by persons intending to lay out streets or to construct buildings. No action lies against a local authority for maliciously refusing to approve of plans submitted to them for the drainage of a building in their district (*Davis v. Mayor, etc., of Bromley*, 1907, 24 T. L. R. 11).

§ 12. **Compliance with statutes.**—The engineer ought to take steps to ascertain that the work upon which he is about to embark involves no breach of any statute. Thus if his works are within the county of London, he must be satisfied that he will not infringe the provisions of the London Building Acts. These matters often have to be taken into account before the plans are prepared. There have been several cases in which difficulties have arisen owing to statutes not having been complied with. In one case the plaintiff agreed to grant a lease for a term of years of certain premises to the defendant upon the terms that the defendant should erect thereon a house according to plans to be approved by the plaintiff, and according to any Acts of Parliament in force for the regulation of buildings, etc. The house projected three feet beyond that

of the adjoining owner, who promptly complained to the Board of Works. The Board of Works gave the defendant notice that he must build in a line with the adjoining house, whereupon the defendant refused to go on with the work. The plaintiff brought an action to compel the defendant to proceed to erect a house, when it was held that he was bound to rebuild in conformity with the plan modified to meet statutory requirements (*Cubitt v. Smith*, 1864, 11 L. T. 298).

§ 13. **Delay in supplying plans.**—It is an implied term of every contract for works that the employer shall deliver the plans in time (see Chap. VI., § 16). Where an architect or engineer is guilty of delay in providing plans, this may excuse the builder or contractor who is alleged to have delayed the execution of the works. This is on the principle that one of two contracting parties will be excused from the performance of a contract, when he is prevented by the wrongful act of the other party or his agent (*Roberts v. Bury Commissioners*, 1869, L. R. 5 C. P. 310). But there is apparently a duty cast upon the builder or contractor to apply for plans; otherwise mere delay in supplying them will not avail him. So in a case where the building-owner was to be at liberty to re-enter in case of default by the builder, the builder sought to show that he had been delayed some time waiting for plans. As it did not appear that he had ever applied for the plans, the Court held that this was no excuse for delay (*Stevens v. Taylor*, 1860, 2 F. & F. 419).

In *Kingdom v. Cox*, 1848, 17 L. J. C. P. 155, the defendant agreed to supply the plaintiff with 150 tons weight of iron girders at a certain price per ton, and according to plans to be furnished by the plaintiff. Plans were furnished within a reasonable time from the date of the agreement, and at the same time fourteen tons weight of girders were ordered. Four months after the date of the agreement the fourteen tons were demanded; and other plans were furnished, orders being given for sixty tons more girders. The defendant then repudiated the contract. It was held that the contract was entire; and that as the plaintiff had not furnished plans for the whole 150 tons within a reasonable time from the date of the agreement, he could not recover for the non-delivery of the fourteen tons for which plans had been delivered within a reasonable time. This may appear to have been a somewhat

technical decision ; but the substance of the matter was that there had been a rise in the price of iron, which made it more difficult for the plaintiff to fulfil his contract.

§ 14. **Payment for plans where estimates exceeded.**—Where an architect's plans are rejected after acceptance, on the ground that the work cannot be done for the amount of the estimate, it is for the jury to say whether it is an express or implied condition of the contract that the estimates shall be reasonably near the actual cost (*Nelson v. Spooner*, 1861, 2 F. & F. 613). In another case (*Money Penny v. Hartland*, 1828, 2 C. & P. 378), an engineer had prepared estimates for the building of a bridge and approaches thereto. Owing to his relying on the work of another man, he did not take means to ascertain for himself the character of the soil. In consequence of this the estimates were greatly exceeded, and the Court held that he was not entitled to recover his fees. Best, C. J., said: "If a surveyor delivers an estimate greatly below the sum at which a work can be done, and thereby induces a private person to undertake what he would not otherwise do, then I think he is not entitled to recover."

§ 15. **Payment for plans dependent on contingency.**—Payment for plans is sometimes made to depend on an event which may or may not happen. The following case is a good example of how undesirable it is from the engineer's point of view to enter into any such agreement. It appeared that the plaintiff, an architect, agreed to lay out certain land of the defendant for building purposes, and to make all requisite plans on the terms that he should make no charge for his services, but that in the event of the land being disposed of for building purposes, the plaintiff should be appointed the architect on behalf of the defendant. Alternative provision was made for the payment of the plaintiff in case the land was laid out for building and he was not appointed architect, and for payment for his time and trouble in making the preparations in case the defendant or his executors should dispense with his services. The land was not disposed of for building purposes, and after the defendant's death, his executors dispensed with the plaintiff's services without paying him any compensation. He thereupon brought an action claiming in respect of his time and trouble. It was held that he was

not entitled to recover, as there was no understanding on the part of the defendant to dispose of the land for building purposes only; and the land not having been in fact so disposed of, the plaintiff was not according to the contract to be remunerated (*Moffatt v. Laurie*, 1855, 15 C. B. 583). (For a case in which an architect was deprived of his fees owing to his employment not being under seal, see *Hunt v. Wimbledon Local Board*, 1878, L. R. 4 C. P. D. 48, noted, Chap. V., § 27 (b), *ante*.)

To prevent any dispute arising as to payment for plans, etc., in cases where the work is not carried through, the engineer should insist on the insertion in the agreement of some such clause as this: "If the employer abandon the intention of executing the building, the said engineer shall be entitled to a sum to be fixed beforehand, and to the return of his plans, drawings, and specifications." (Compare Form III., Cls. 8 and 9, *post*, which make special provision for part payment in case the work is not proceeded with.)

§ 16. Property in plans and drawings.—Attempts have sometimes been made to establish it as a principle that the architect or engineer is entitled to retain plans and drawings which he has prepared. That there is no such rule of law was made plain in *Gibbon v. Pease*, 1905, 1 K. B. 810 (following the older case of *Ebby v. M'Gowan*, *Times*, Nov. 17, 1870). In the case of *Gibbon v. Pease*, defendant, an architect, was employed as such by the plaintiff to carry out certain alterations to a house. He prepared plans and specifications and superintended the work, which was eventually completed. The plaintiff, having paid the defendant his agreed fee, claimed to have the original plans and specifications delivered up to him. The defendant declined to surrender them, alleging that there was a custom to the effect that he was entitled to retain them in the circumstances. The Court of Appeal, before whom the case eventually came, decided that there was no such custom. The Master of the Rolls, in giving judgment, said: "It was held by the Court of Exchequer (in *Ebby v. M'Gowan*, *supra*) that such a custom, even if it were proved, would be unreasonable, and that the building-owner need not pay for plans unless he obtained them. . . . In my opinion the contract in this case resulted in the making of plans the property in which passed to the building-owner

on payment of the remuneration provided under the contract. I find no difficulty in distinguishing this case from that of a contract to paint a picture or design a coat-of-arms, as to which no question of ownership could arise."

That the rule laid down in this case is founded on good sense is thus emphasised by Lord Justice Cozens-Hardy when he said: "If one considers the matter from the point of view of the reasonableness of the custom set up, the argument seems to me to be entirely in favour of the building-owner. What would be his position after the building was completed? Unless he has the plans, how is he to know where the drains, the flues, and many other things are? Is he bound to go to the architect and make a fresh contract with him with respect to every matter that arises relating to the structure?"

CHAPTER XII

EXTRAS AND ALTERATIONS

	PAGE		PAGE
§ 1. Generally	129	§ 7. Extras wholly outside the contract	133
§ 2. Terms of the contract as to extras	130	§ 8. Limitation to the extra clause	133
§ 3. Extras in the case of a "lump-sum" contract ...	131	§ 9. Extras ordered by employer	134
§ 4. Extras where contract is under seal... ..	132	§ 10. Effect of final certificate on extras... ..	134
§ 5. Authority of engineer as to extras	132	§ 11. Whether arbitration clause applies to extras ...	135
§ 6. How extras may be authorised	132		

§ 1. **Generally.**—Extras may be defined as work not expressly or impliedly included in the original contract (for a more exhaustive definition, see Chap. VI., § 34, *ante*). Questions relating to extras are among the most difficult of those which have to be decided by the engineer. The matter has to be considered from several points of view. The employer, who probably reckons on the work being done for a fixed sum, does not want the limit to be exceeded. The contractor may find the task he has undertaken to be impossible, unless he is allowed to charge for extras. Consequently the engineer, who is in a middle position, is often in a dilemma. On the one hand he does not wish to make a slovenly job by refusing to allow as an extra something which has been inadvertently omitted from the specification; for unless his skill be something more than human it will be almost impossible to provide for everything when executing a very large contract. On the other hand he does not like to ask his employer to pay a large bill for extras.

The gravity of the liability which may be imposed on a contractor by extras is illustrated by the case of *Rigby v. Bristol (Mayor)*, 1860, 29 L. J. Ex. 359. There an Act empowered a corporation to scour an inland harbour, and they did so by taking up the mud in barges, and letting it out at the mouth of the harbour, so as to be carried down the

river. The corporation employed the plaintiff to excavate and remove certain estimated quantities of earth down the river at certain prices, the contract (not noticing the scouring prices) providing only for extra work ordered by the engineer of the corporation in writing. In consequence of the cleansing process, which was continued while the plaintiff was engaged in the work, the quantity of soil he had to remove was vastly increased by great deposits of mud. The plaintiff applied for and was refused any additional remuneration, and after the work was completed, sued the corporation for compensation; but the case of the plaintiff as stated at the trial, did not show that the method of cleansing adopted by the corporation was unusual or unreasonable, and, on the contrary, it appeared rather to be a proper mode of carrying out the powers of the Act. It was held that as it did not appear that the process was unlawful or wrongful, there was no cause of action.

It is with a view to indicating to the engineer how he should act so as to keep himself within the law, that the question of extras will be dealt with in the following pages. (As to the effect of extras on time-conditions, see Chap. XIII., § 5, *post.*)

§ 2. **Terms of the contract as to extras.**—The first thing an engineer should do when called on to decide as to extras is to look at the terms of the contract. Sometimes it defines his duty very clearly. Thus it usually provides that the contractor shall have no claim for extra payment beyond the contract price in respect of any work done by him for the employer, whether executed before or after the completion of the contract, unless such payment is expressly ordered. The duty of ordering payment is left to the engineer, the contract providing that he is to grant a written order expressly stating that the work is to be the subject of an extra charge, and then only for the amount which the engineer in his final certificate shall certify to be due to the contractor in respect of such alterations and additions. The contract should also provide that extras shall be executed subject to the same conditions as the other work specified for, and that the prices contained in the bill of quantities shall be applicable as far as possible. A very complete “extra” clause will be found in the Appendix, Form IIA., Cl. 20.

It often happens that when proceeding with the work something occurs to increase the burden which may have to be placed upon the employer. In order that the engineer shall be kept informed of any such additional expense, it is well to provide that if the contractor, in proceeding with the works in accordance with any supplementary detail or other drawing, sketch, or instruction, finds that it will cause any additional expense, he shall immediately intimate the same to the engineer.

§ 3. Extras in the case of a "lump-sum" contract.—If the contract is a "lump-sum" contract, it is obvious that anything extra must be done and paid for under some contract, express or implied, which is distinct from the original contract. Unless there is such an express or implied contract, the contractor does the extra work at his peril; he cannot recover the price of it. For instance, if work is to be done at a given price, and the contractor does the work better or uses better materials, the employer is not liable to pay any greater price (*Wilmot v. Smith*, 1828, 3 C. & P. 453). But the "extra" clause does not extend to work wholly outside the original contract. Thus, where plasterers, who were employed to do the inside of a house under a written contract, were verbally requested to do the entablature outside, it was held that they might sue for the price of this without producing the written agreement (*Reid v. Batte*, 1829, M. & M. 413).

The following passage, which is taken from a judgment in an American case, embodies what appears to the author to be an accurate statement of the law: "Where the parties under a special contract deviate from the original plan agreed upon, and the terms of the original contract do not appear to be applicable to the new work—it being beyond what was originally contemplated by the parties—it is undoubtedly to be regarded and treated as work wholly extra, out of the scope of the contract, and may be recovered for as such. But it is otherwise if the original terms are applicable, and there is evidence from which it may be inferred that it was the intention of the parties that the new work (wood instead of iron) should be subject to those terms as to the time and mode of payment" (*Boody, etc. v. Rutland and Burlington*, R. R., 1853, 24 Vt. 660).

§ 4. **Extras where contract is under seal.**—Where the contract is under seal—as where, for instance, a contractor agrees to do work for a corporation or other local authority—the original contract cannot be varied or altered except by a new contract under seal. Consequently if the contractor, at the verbal request of the local authority or one of their officers, does some extra work, he cannot recover anything in respect of it. But where such a contract contains the usual clause allowing extras to be ordered by the engineer, his order need not be under seal. In *Williams v. Barmouth Urban Council*, 1897, 77 L. T. 383, where the plaintiff contracted to do certain sewerage works for the defendant council, there was the usual power for the engineer, who had control and supervision of the works, to vary, alter, enlarge, or diminish any of them. It was held that all variations coming within the terms of the power conferred on the engineer could be validly made without being under the common seal of the urban authority.

§ 5. **Authority of engineer as to extras.**—It is a general rule that the engineer cannot order extras without authority. In other words, the cost of extras done pursuant to an order which the engineer has no authority to give, cannot be recovered from the employer. For instance, in *Cooper v. Langdon*, 1841, 9 M. & W. 60, a builder was sued for not building a house in accordance with his contract. He pleaded that he deviated from the drawings, etc., by the direction of the architect. It was held that this was no answer to the claim, as it was not proved that the architect had power, under the terms of the contract, to bind the employer by allowing deviations from the drawings.

§ 6. **How extras may be authorised.**—Further, the engineer must authorise extras in the proper manner. If an express order or direction in writing is necessary (as, for instance, in a contract framed according to Form IIA., Cl. 20 (a), *post*), nothing less than an express order or direction will suffice (*Russell v. Sa da Bandeira*, 1862, 13 C. B. N. S. 149). So, a mere sketch made by an architect was held not to be a sufficient written direction for extras (*Myers v. Sarl*, 1860, 30 L. J. Q. B. 9). These cases will show that the engineer who is called upon to allow for extras should exercise the

greatest care in complying with the requirements of the contract.

In *Sharpe v. San Paulo Ry. Co.*, 1873, L. R. 8 Ch. 597, during the excavations for a railway, the engineer promised that he would make alterations so as to effect a diminution in cost, in order to make up for work which turned out to be more expensive than had been supposed, though the work was actually included in the entire contract. It was held that the contractor could not recover anything on the promise. The engineer, however, may become personally liable for extras if he orders them on a representation that he has authority to do so (*Randell v. Trimen*, 1856, 18 C. B. 786).

§ 7. **Extras wholly outside the contract.**—The authority of the engineer to order extras does not extend to things wholly outside the contract. This point was illustrated in *Russell v. Sa da Bandeira*, 1862, 13 C. B. N. S. 149. In that case there was a contract for the building of a ship. It was provided that no charges should be demanded for extras, but that any additions which might be made by the order in writing of the employer's agent should be paid for at a price previously agreed upon in writing. During the progress of the building of the ship several additions and alterations were made by the direction of the employer's agents, but no written order was given for them. Goods were also ordered for the use of the ship. It was held that the shipbuilder could not recover for extras, alterations, or additions made during the course of the performance of the contract, unless where he had received previous written orders agreeably to the contract. The goods ordered for the use of the ship were, however, held not to be extras.

§ 8. **Limitation to the extra clause.**—The extra clause must not be construed as authorising the engineer to allow the contractor to depart materially from the general design of the work under execution. Dealing with the "extras" and "omissions" clauses in the old case of *Rex v. Peto*, 1826, 1 Y. & J. 53, Alexander, C. B., said: "Every one who is at all conversant with building, knows that, in the course of building, it occurs sometimes to add, and sometimes to desire that certain things may be omitted; this appears to have been in

the contemplation of those who prepared this instrument; and accordingly they have introduced that clause, which was clearly inserted to prevent in the first place any such direction affecting the rest of the contract, and in the next place to provide for the manner in which the contractor was to be paid in case that event should happen." After reading the clause, he said: "Is it possible that this clause was intended to give to the surveyor, a person who ought to be in general but an overlooker of the owner, to see that the work is accurately performed, a power to vary the whole scheme of the building; or if it were so intended, that it could have been expressed in such language? In sound construction it should be limited to that to which the condition has confined it—namely, to such extra works as may be done, or something which is to be omitted; but it cannot refer to the substitution of one thing for another, more especially anything so important as the making the foundation on which the whole validity and security of the building depends."

§ 9. **Extras ordered by employer.**—If it can be distinctly proved that the employer ordered extras, he will be liable to pay for them, as in that case a new contract will have come into existence. But an allegation that he assented to alterations will not be sufficient. In *Lovelock v. King*, 1831, 1 Moo. & Rob. 60, a carpenter had agreed to alter certain premises for a fixed sum. Considerable deviations were made from the original plan, which it was alleged the employer had seen and had not objected to. The carpenter sued for the "measure and value" price of all the work done. It was laid down that the employer was not liable for any larger sum than that fixed by the contract, by reason of his assenting to deviations unless he was expressly or impliedly informed that such deviations would increase the cost.

§ 10. **Effect of final certificate on extras.**—The engineer's final certificate may have an important bearing upon the question of extras. The result of many cases appears to be that even where extras must be ordered in writing, the final certificate of the engineer is conclusive both in the case of the employer and the contractor, whether the order in writing was actually given or not. As an illustration reference may be

made to the Irish case of *Connor v. Belfast Water Commissioners*, 1871, 5 Ir. L. R., C. L. 55. There the plaintiff contracted to do certain works for the defendant commissioners. The contract provided that no extras should be made without an order in writing, and that such extra works should be valued by the engineer, and that the valuation should be final. It also provided that if extra works were ordered, the contractor should send in accounts within a month, and that in default of his doing so, the defendants should not be bound to pay for them. It was also provided that the defendants should not be bound to pay for any works, except upon the production of a certificate signed by some principal or resident engineer; and that the principal engineers or engineer for the time being should be the exclusive judges of the execution of the works and of everything connected with the contract; and that the certificates under their or his hands or hand should be binding and conclusive on both parties. It was held that, the engineers having given a certificate for the extra works, the defendants were precluded from setting up as defences to the action for the price of the extra works, that the extra works had not been ordered in writing, and that no accounts had been sent in for them, as required by the deed. The final certificate will not, however, be conclusive as to extras if orders for them have to be signed by some one else besides the engineers. (See, *e.g.*, *Lorden v. Pryce*, cited Chap. XIV., § 5, *post.*)

The final certificate may also amount to a determination by the engineer as to whether certain things are extras or not. This was held to be so in a case arising on a contract which provided that all extras or additions should be paid for at the price fixed by the surveyor appointed by the contractor's employer. It was held that his certificate awarding a certain amount to be due for extras was conclusive (*Richards v. May*, 1883, 10 Q. B. D. 400).

§ 11. Whether arbitration clause applies to.—It is probable that in most contracts, the finality of the engineer's decision in relation to extras is not affected by the arbitration clause. In one case (*Pashby v. Birmingham Corporation*, 1856, 18 C. B. 2) a contract for the erection of a jail provided, in the usual way, that no alterations should be made without the architect's authority. By the arbitration clause any disputes with the

builder arising out of the contract were to be settled by the architect, whose decision was to be final. An action brought by the contractor for a balance due on the contract and for extras was referred to arbitration, when it was held that the arbitration clause did not apply to extras, but only to the mode of carrying on the work contracted for.



CHAPTER XIII

TIME

	PAGE		PAGE
§ 1. Generally	137	§ 5. Effect of extras on time-conditions... ..	139
§ 2. Meaning of the terms "directly," "as soon as possible"	137	§ 6. Extension of time by engineer	140
§ 3. Simple form of time-clause	138	§ 7. Result of failure to observe time-conditions	141
§ 4. Where the contract does not prescribe a particular time	138		

§ 1. **Generally.**—Every contract for large works must needs be performed within a certain time. It is therefore necessary to insert a time-clause in the written agreement, and to specify the penalties attaching to delay. It is almost impossible, however, for the owner, contractor, or engineer to foresee the exact time which a particular job will take for its due fulfilment. It is therefore necessary, in the interests of all parties, to vest in the engineer a certain discretion as to extension of time. The drafting of clauses which will secure the completion of structures absolutely, and at the same time be fair and reasonable as between the owner and the contractor, is one of the most difficult duties of any that the engineers are called upon to perform.

§ 2. **Meaning of the terms "directly," "as soon as possible."**—The discussion of cases arising upon contracts which specify no time for completion is more or less academic, in view of the fact that a well-drawn contract provides for work being completed by a particular day. It may be useful, however, to consider the meaning of some of the terms used in relation to time. Where a contract is to be performed "directly," this means speedily or as soon as practicable (*Duncan v. Topham*, 1849, 8 C. B. 225).

In *Hydraulic Engineering Company v. McHaffie*, 1878, 4 Q. B. D. 670, the plaintiffs employed the defendant to make a gunpowder pile-driver, which they agreed to provide "as

soon as possible." It was held that by these words the defendants must be taken to have meant that they would make the "gun" as quickly as it could be made in the largest establishment with the best appliances. "I do not think," said Cotton, L. J., "that these words can be taken to mean that the defendants merely promised to make the machine as quickly as the means at their disposal might allow, however rashly they might have entered into the contract; such a stipulation would be unusual." (As to the meaning of "immediately," see Chap. VI., § 34.)

If work is to be completed within so many days "from" a particular date, there is no general rule that the day is to be included or excluded (*Lester v. Garland*, 1808, 15 Ves. 248, and see *South Stafford Tram Co. v. Sickness and Accident Assurance Co.*, 1891, 1 Q. B. 402); and in view of the uncertainty which may arise on this head it is always wise to specify the exact day on which the work is to be completed. Where the term "month" is used, it means lunar month, unless the context shows or it is otherwise proved that calendar month was intended (*Simpson v. Margitson*, 1847, 11 Q. B. 23).

§ 3. **Simple form of time-clause.**—The following is a simple form of time-clause: "The contractor shall commence the works immediately and shall proceed with the works to the satisfaction of the engineer, and shall complete and deliver the same over to the employer as entire works by or before the [naming a day certain], unless the engineer shall fix or substitute in writing another date for the completion of the contract, in which case the substituted date shall be the date for completion as though the same had originally been inserted in the contract." This simple form makes no provision for delay caused by the ordering of extras, strikes, inevitable accident, "the act of God," etc. Many contractors will insist upon the insertion of clauses relieving them from responsibility in such cases.

§ 4. **Where the contract does not prescribe a particular time.**—Whenever a party to a contract undertakes to do a particular act the performance of which depends entirely on himself, so that he may choose his own mode of fulfilling his undertaking, and the contract is silent as to time, the law implies a contract to do it within a reasonable time (*Ford v. Cotesworth*, 1868,

9 B. & S. 559). If the contract provides that the work is to be done within a reasonable time, and the contractor fails to commence operations, it is no defence for him to say that the employer knew it had not been begun up to a certain date, and that a reasonable time had not since elapsed (*Fisher v. Ford*, 1840, 4 Jur. 1034).

§ 5. Effect of extras on time-conditions.—Where the contract provides that the work shall be completed by a certain time, whether extras are ordered or not, the contractor will be bound by his undertaking, however rash it may appear to be. This was laid down in the well-known case of *Jones v. St. John's College*, 1871, L. R. 6 Q. B. 115. In that case the plaintiff contractor agreed to do the work by a certain day. The contract provided that extra work should be ordered in a particular manner, and that, notwithstanding such extra work, the time-limit was not to be extended, unless by an order signed by the clerk of the works, and countersigned by the college bursar. Extra work was done, but there was no express extension of the time-limit. It was held that inasmuch as they had expressly agreed to do all the work, and extra work if ordered, within the original time-limit, the contractors were bound to complete within the specified time "although it might involve an impossibility." (See further as to this case sub-tit. "Severity of the penalty clause," Chap. XV., § 7, *post.*)

It may be assumed, however, that the Court will not be very willing to bind a contractor down to the completion of all the work, including extras, within the specified time, and it may be regarded as settled law that if the employer, or the engineer acting for him, orders extras, an extension of time will be allowed to the contractor. This is well illustrated by the comparatively recent case of *Dodd v. Churton*, 1897, 1 Q. B. 562. There the contract provided that the work was to be done within a specified time, but it also contained a clause to the effect that other work might be ordered by way of addition to that specified in the contract. It was also provided that any authority given by the architect for alterations or additions was not to vitiate the contract. Extra work having been ordered, the builder was unable to complete in contract-time. It was held that he was excused. The provision that the contract was not to be vitiated was held not to exclude the

common-sense principle that where performance of a condition is rendered impossible by one party to a contract, the other party is exonerated from the performance of it. At the same time the contractor who undertakes to do the work within a specified time must needs perform his contract, or else he may lose the whole benefit accruing from the contract (*Munro v. Butt*, 1858, 8 E. & B. 738). Interference by the employer may also cause delay and render it equitable for the Court to allow an extension of time. As to this see Chap. XV., § 8, *post*.

§ 6. Extension of time by engineer. — By far the most satisfactory way of dealing with the question of time, is to allow the engineer to grant such extension as he may consider reasonable. It is easy to do this by apt words in the contract. Numerous causes for unavoidable delay occur after the work has commenced. If the contractor applies to the engineer for his decision as to an extension of time, he is bound by that decision. In *Sattin v. Poole*, 1901, 2 H. B. C. 337, the plaintiff agreed to build a house for the defendant. The work was to be completed by a certain day, but the contract provided that if in the opinion of the architect, the work was delayed by reason of authorised extras or additions, or in consequence of the contractor not having received in due time necessary instructions from the architect, for which he should have applied in writing, the architect should make a fair and reasonable extension of time. The work having been delayed, the builder applied for an extension, but the architect did not reply at once. The builder then sued for £681 which had been allowed on a certificate, subject to the question of penalties for delay. After this the architect wrote granting an extension, but not to the actual date of completion. The builder then sought to call evidence to show that the delay was caused by the architect in ordering extras. In effect, he wished the Court to go behind the decision of the architect. This the Court declined to do, holding that the architect's ruling was final. "The construction of the clause," said the judge, "is that the parties did not intend to let it be held that there was any delay, unless the builder applied to the architect."

The fact that the engineer has issued his final certificate may, as will be seen hereafter, amount to an implied extension of time (see Chap. XV., § 13, *post*, and case there cited).

As to the result of failure on the part of the engineer to grant an extension of time, see Chap. XV., § 7.

§ 7. **Result of failure to observe the time-conditions.**—Failure to erect machinery within the specified time may lead to grave consequences for a contractor. In one case (*Waters v. Towers*, 1853, 8 Ex. 401), the defendant contracted to fit up and complete machinery for the plaintiff within a reasonable time, but failed to do so. It was held that the jury, though not bound to assess the damages at the amount of profits under a contract with a third party which the plaintiff was prevented from earning, might do so if they were satisfied by reasonable evidence, that the plaintiff would have earned these profits if not prevented by the breach of contract.

Delay on the part of the contractor may be excused if it can be shown to have been caused by failure on the part of the employer to give access to the site or to deliver plans (see Chap. VI., § 16, *ante*, and Chap. XV., §§ 8, 9, *post*). As to delay on the part of a sub-contractor, see Chap. XVII., § 9.

CHAPTER XIV

CERTIFICATES AND PAYMENT

		PAGE			PAGE
§ 1.	Generally	142	§ 11.	Finality of certificate ..	151
§ 2.	Necessity for writing ...	143	§ 12.	Effect of arbitration clause on certificate	152
§ 3.	"Progress" certificates ...	143	§ 13.	Effect of certificate accord- ing to electrical engi- neer's conditions ...	154
§ 4.	Form of progress certificate	144	§ 14.	Fraud and collusion ...	154
§ 5.	"Final" certificate ...	145	§ 15.	Bias of engineer	155
§ 6.	Must the engineer give reasons?	146	§ 16.	Certificate condition pre- cedent to payment ...	157
§ 7.	What amounts to a certifi- cate	147	§ 17.	Payment contingent on quality of work... ..	157
§ 8.	Whether a certificate is an award	147	§ 18.	Certificates and extras ...	158
§ 9.	Powers of the engineer limited by the contract	148			
§ 10.	No action for negligence in granting a certificate ...	149			

§ 1. **Generally.**—One of the chief duties to be performed by an engineer in relation to a contract for large works, is to supervise the contractor. The employer may have little technical knowledge: while he may have a clear notion of what he wants, he may be a poor judge of machinery and workmanship. Again, he may be unfamiliar with the methods of contractors, and be wholly inexperienced in dealing with them. For his greater protection he employs an engineer—generally the engineer who has drawn up the specifications, and who knows exactly what is wanted. It is obvious that the engineer is the best person to examine and criticise the work and materials. If necessary he can reject that which is unsuitable. He can be on hand when the work is going forward in order to see that hidden parts are not scamped. He can best decide whether any extras or deviations should be allowed for. Last, but not least, he is the best person to decide, subject to the terms of the contract, how the contractor shall be paid, and whether he is keeping up to time, having regard to all the unforeseen difficulties which arise in the execution of works of any magnitude. It is proposed in the present chapter to consider the legal effect of the certificate by means of which

the engineer usually expresses his decisions on all these different questions.

The task of granting the certificate is one of the most important duties which fall to the lot of the engineer.

§ 2. **Necessity for writing.**—As a rule the engineer authorises the contractor to be paid and otherwise expresses his approval by means of a certificate. To save trouble and to avoid disputes, the contract between the employer and the contractor should provide for a written certificate. Otherwise a mere verbal statement may be sufficient. In *Elmes v. Burgh Market Co.*, 1891, 2 H. B. C. 183, a contract provided that “the contractor shall receive payment for his contract at the rate of £80 per cent. for the works completed on the surveyor’s certificate of completion, and the balance at the end of the term of maintenance, less deductions that may be made in accordance with the terms of the contract, and on the surveyor certifying that the whole of the works are in a complete and satisfactory state.” It was held that a certificate within the meaning of this clause might be given orally by the surveyor. (See also *Roberts v. Watkins*, 1863, 14 C. B. N. S. 592.)

Where a written certificate is expressly required, the contractor is helpless unless it is forthcoming. He cannot sue the employer for the price of any portion of the work which he has done, unless, as will shortly be explained, he can show that the certificate has been withheld by the engineer, acting in collusion with the employer. (As to fraud, see § 14, *infra*.)

§ 3. **“Progress” certificates.**—Certificates are either “progress” or “final.” Progress certificates are given from time to time by the engineer while the work is proceeding, in order to enable the contractor to obtain some part of the payment which is due to him. These certificates “are simply statements of a matter of fact—namely, what is the weight, and what is the contract price of the materials actually delivered from time to time upon the ground; and the payments made under these certificates are altogether provisional and subject to adjustment or to readjustment at the end of the contract” (*Tharsis Sulphur and Copper Co. v. McElroy*, 1878, 3 A. C. 1045, *per* Lord Cairns).

The mere fact, therefore, that the engineer, by granting a progress certificate during the course of the work, appears to

express approval of that which is already done, will not enable the contractor to sue for payment (see *Richardson v. Mahon*, 1879, 4 L. R. Ir. 486). The "progress certificate" is sometimes termed a "certificate on account." In the model conditions sanctioned by the Institute of Electrical Engineers it is specially provided (see Form IIA., Cl. 34, *post*) that no such certificate is to prejudice the rights of the purchasers against the contractor, or relieve the contractor of his obligations for the due performance of the contract.

It is usual to make provision for progress certificates by saying that the contractor shall be entitled, upon the certificates of the engineer, to payments by the employers, in accordance with provisions to the following effect:

(i.) As the works progress, 80 per cent. upon the contract value of the work from time to time delivered or executed on the site to the satisfaction of the engineer;

(ii.) The remaining 20 per cent. (usually termed the retention money) in respect of each distinct section or part of the works as follows:

(a) 10 per cent. at the expiration of one month after the employer takes over the works, and

(b) 10 per cent. at the expiration of nine months after the first 10 per cent. becomes due under (a).

Payments made under parag. (i.), *supra*, are made on "progress certificates" (see Form IIA., Cl. 34, *post*). To avoid any chance of misunderstanding as to the effect of these documents, it is often wise to insert a clause providing that the certificates given during the work shall not in any way prejudice the employer in the final settlement of accounts, in case it should appear that the contractor has been paid too much. (See *ibid.*, Cl. 36.)

§ 4. Form of progress certificate.—The following is a simple form of progress certificate:

I hereby certify that _____ of _____ may be
 paid the sum of £ _____ as a _____ instalment on account of the
 contract for the above:

Contract	£
Estimated value of	
Extra work	£

	£

(Signed) [*Engineer*] Date _____
 the above-named sum.

Received from _____

(Signed) [*Contractor.*]

In connection with a contract for large works it is not unusual to set out a schedule of the various kinds of work to be done. Opposite this are three columns showing (a) the value of work agreed and estimated; (b) the value of the work executed to date; and (c) the value of the estimated balance of work to be executed. The value of the estimated amount of work done, less the retention money will then be the amount payable under the certificate. (A form of this kind of certificate will be found in *Hudson's Building Contracts*, Vol. II., p. 673.)

§ 5. "Final" certificate.—The contract usually provides that the balance of all sums due shall be paid to the contractor when the engineer certifies that the works are finally completed to his satisfaction. The document which embodies this opinion is what is known as the final certificate. It is usually provided, in the clause relating to certificates, that the certificate is not to affect the contractor's liability to make good defects appearing within a certain time after completion. Unless some such clause appears it is manifest that the engineer should exercise the greatest care, for the final certificate implies satisfaction; otherwise the employer may have to bear a heavy burden at some future time.

In *Wallace v. Brandon and Byshttles U. D. C.*, 1903, 2 H. B. C. 392, a contract provided that: "(1) The works shall be *completed* in all respects . . . on or before the 16th day of December, 1901, to the *satisfaction of the surveyor* . . . to be testified by a certificate under his hand, and in default of such completion the contractor shall forfeit and pay to the District Council the sum of one pound for each day during which the works shall be incomplete after the said time . . . as and for liquidated damages; (4) . . . the contractor shall be paid by the Council at the rate of 80 per cent. of the value of the work done in each month, and the balance one month after completion of the contract. Provided that the District Council shall not be required to pay to the contractor any sum exceeding the value as valued by the said surveyor or other officer, of so much of the works as shall have been executed by the contractor during the preceding month."

The contractor commenced the work, and from time to time sent n accounts which were initialed by the surveyor.

In accordance with these accounts, payments to the extent of 80 per cent. were made under clause 4 of the contract, but no final certificate was issued. In spite of this the contractor sued for the retention money. It was held that the final certificate was a condition precedent which could not be dispensed with.

Not only must a certificate be obtained, if the contract makes it a condition precedent to payment, but all the formalities in relation thereto must be strictly observed. In *Lorden and Son v. Pryce* (*Emden's Building Contracts*, 4th Ed., p. 664) a building contract contained the usual clause referring questions which might arise to the architect; another clause (18) requiring that orders for extras were to be signed by the secretary and treasurer and countersigned by the architect. The builder having completed the work, the architect issued a final certificate which apparently included certain extras which had not been signed for by the secretary and treasurer. It was held that the architect having no power either by direction or by consent or waiver to get rid of Clause 18, the plaintiffs were not entitled to recover the cost of extras, although included in the final certificate. (See further as to the effect of the final certificate on extras, Chap. XII., § 10, *ante*.)

§ 6. Must the engineer give reasons?—Must an engineer, whose duty it is to grant or withhold a certificate, give reasons for his action? Must he specify the method by which he determines the fact that so much is due? It is submitted that he is under no obligation to give reasons, or disclose his calculations. It has, at any rate, been decided that no action lies against an architect on the head of negligence for refusing to state the grounds upon which he formed his opinion. In *Stevenson v. Watson*, 1879, L. R. 4 C. P. D. 148, the facts of which are stated elsewhere (see *post*, § 10), it was alleged that an architect who was by the contract to form an opinion, and who had formed and expressed it, declined to say on what he grounded it, or to hear argument offered to show that the opinion was wrongly formed. This was said to be sufficient to ground an action for negligence. Commenting on this allegation, Lord Coleridge, C. J., said (at p. 159): "I think if his position be such as I have described (*i.e.*, that of a professional man called upon to exercise his judgment) he is not bound to give the grounds of his opinion, or to reconsider it, and that

the person who has taken him for better and for worse (not as architect, for that is the wrong ground to put the case on) but as one whose opinion is a condition precedent to the obtaining of a sum of money, cannot bring an action against him for refusing to give the ground of his opinion, or to hear evidence tendered to show that the opinion was wrong." (As to the duty of an engineer in granting a certificate, see the remarks of Lord Esher in the case of *McDonald v. Mayor of Workington*, *post*, § 16.)

As it may be to the advantage of the parties that the engineer shall give his reasons, the contract sometimes provides that in respect of all matters left to his decision, the engineer shall, if required so to do by the contractor, give in writing his decision thereon, and his reasons for such decision, or if he shall withhold any certificate his reasons for so doing. (See, *e.g.*, Cl. 29 of Form IIA., *post*.)

§ 7. What amounts to a certificate.—The engineer should be careful to draw up his certificates in a formal manner, as informality may lead to confusion. In one case (*Morgan v. Birnie*, 1833, 3 M. & Scott, 76) an architect checked the builder's accounts and sent them to the building-owner, but did not certify that the works were completed to his satisfaction. It was held that the checking of accounts did not amount to a final certificate.

§ 8. Whether a certificate is an "award."—The question has frequently arisen whether the engineer acts as an arbitrator in the sense that his certificate, when given, really amounts to an award. (For the meaning and effect of an award see Chap. XX., § 28 *et seq.*) It seems, however, that the ordinary clause in an engineering contract, providing that a certificate shall be conclusive as to the work done, is not an agreement or submission to arbitration (*Wadsworth v. Smith*, 1871, L. R. 6 Q. B. 332), so that the certificate of the engineer or architect is not an award, nor may it be examined as such (*Northampton Gas Light Co. v. Parnell*, 1855, 15 C. B. 630). Nevertheless, although an engineer's certificate may not be an award in the true sense, the engineer, in exercising his powers, acts as an arbitrator in the sense that he cannot be made liable for negligence in granting a certificate. The law on the subject

was thus stated in *Wadsworth v. Smith (ubi supra)*: "Where by an agreement the right of one of the parties to have or to do a particular thing is made to depend on the determination of a third person, that is not a submission to arbitration, nor is the determination an award; but where there is an agreement that any dispute about a particular thing shall be inquired of and determined by a person named, that may amount to a submission to arbitration, and the determination, though in the form of a certificate, may be an award."

§ 9. Powers of the engineer limited by the contract.—The powers of the engineer are strictly limited by the terms of the contract. In *Northampton Gas Light Co. v. Parnell (supra)*, a contract for the erection of a gasholder tank provided that the contractor should commence and finish the work within three months, subject to the forfeiture of a certain sum if he failed. Two sureties were made parties to the contract, the condition of their obligation being that if the contractor did not perform his covenants which should be subsisting and not annulled, they would pay to the employers such sum, not exceeding £300 as liquidated damages, as the employers' engineer should adjudge to be reasonable. The contractor having failed to carry out the work in accordance with the contract, the employers expelled him, and employed others to do the work. Subsequently, and in spite of protests made by the defendant and the sureties, the engineer adjudged that the sum sued for was due in respect of the breach of contract. The employers sought to recover this sum from the contractor, and, in the alternative, from the sureties. By way of answer to the claim it was contended that inasmuch as the employers had expelled the contractor they had revoked what was really a submission to arbitration. The defendant, therefore, sought to dispute the facts upon which the engineer had acted. In giving judgment, Maule, J., said: "The duty of the engineer in this case is only to decide the proper sum to be paid by the defendant in case he makes default in the execution of the contract; he is not to determine whether the covenants are subsisting or broken, or to what extent they have been broken, but only to ascertain an amount of an uncertain and not necessarily a disputed matter. Assuming the contractor to have made default, the engineer is to say, within certain limits, what he ought to pay."

§ 10. No action for negligence in granting certificate.—The engineer is not liable for negligence in granting certificates. The facts of the case of *Stevenson v. Watson*, 1879, 4 C. P. D. 148, are most instructive in relation to the legal position of an architect or engineer. That was a simple building contract, under which the plaintiff, a builder, agreed that he, and the directors of the company who employed him, would “be bound to leave all questions or matters of dispute which may arise during the progress of the works, or in the settlement of the account, to the architect, whose decisions shall be final and binding on all parties.” The defendant Watson, who was the architect, granted certificates from time to time during the course of the work, and after completion, the plaintiff sent in an account showing a balance due to him of £1,615. The architect, without calling on the builder for any explanation of the means whereby he arrived at the figure, made out a certificate certifying that the final balance due was only £251 14s. 4d. The builder then brought this action against the architect claiming the difference between £251 and £1,615, alleging that the defendant had been negligent in not properly pricing out additions and deductions, and that consequently the plaintiff had been unable to recover the sum claimed from the building-owners. It was held that he could not succeed.

“This claim,” said the Court, “is for that which has been over and over again attempted without success. . . . It is an action against a man for the negligent performance of a duty, in the doing of which the exercise of judgment or opinion is necessary. . . . I think this case is within the authority of the cases cited (*Pappa v. Rose*, 1871, 7 C. P. 32; *Tharsis Sulphur Co. v. Loftus*, 8 C. P. 1), which decide that where the exercise of judgment or opinion on the part of a third person is necessary between two persons, such as a buyer and seller, and in the opinion of the seller, that judgment has been exercised wrongly, or improperly, or ignorantly, or negligently, an action will not lie against the person put in the position when such judgment has been wrongly, or improperly, or ignorantly, or negligently, exercised.” The case of *Kellett v. New Mills Urban District Council*, 1900, 2 H. B. C. 329, noted *ante*, Chap. V., § 8, shows that employers must not take improper advantage of the refusal of the engineer to certify.

As an engineer or architect may not be sued by the contractor for negligence in granting a certificate, so he is not exposed to an action at the hands of an employer who is dissatisfied with his ruling. If he is in the position of an arbitrator as regards one party, he must occupy the same position as regards the other. In *Chambers v. Goldthorpe*, 1901, 1 K. B. 624, an architect was employed in the usual way to supervise the erection of a building. The contract provided that if any of the works should, in the opinion of the architect, be executed with improper materials or defective workmanship, the architect might call on the builder forthwith to re-execute the same.

It was also provided, by Clause 20, that "a certificate of the architect . . . showing the final balance due and payable to the contractor, is to be conclusive evidence of the works having been duly completed, and that the contractor is entitled to receive payment of the final balance." This was without prejudice to the liability of the contractor to make good defects appearing within a certain time of completion. The work having been completed and certificates given, the architect sued for his fees. The employer counter-claimed for negligence on the ground that the architect had incorrectly measured up the work done, and improperly allowed certain items, and had consequently certified for a larger sum than he ought to have done. Fraud was not alleged.

Lord Justice A. L. Smith said: "Under Clause 20, I cannot come to the conclusion that the architect's sole duty was to protect the interests of the building-owner against the builder. I think that under that clause he owed a duty to the builder as well as to the building-owner. I think that the effect of his agreeing to act under Clause 20 of the contract was that he undertook the duty towards both parties of holding the scales even and deciding between them impartially as to the amount payable by the one to the other. I cannot think that the plaintiff's duty was only to protect the interests of the building-owner—in other words, to cause the building-owner to pay to the builder as little as possible for his work." He also referred to the arbitration clause in the contract and said that unless there was a reference before the architect certified, the certificate was final. Alluding to *Rogers v. James*, 1891, 8 T. L. R. 67, he pointed out that the distinction to be observed between that case and the present was that there

the architect was charged not with negligence in granting certificates but with negligence in supervision—a very different matter. This case (*Chambers v. Goldthorpe*), which must now be regarded as a leading authority, is by no means easy to reconcile with the other authorities, as will be seen by reference to the dissenting judgment of Romer, L. J. The writer would not be surprised to find it over-ruled some day by the House of Lords.

§ 11. **Finality of certificate.**—The fact that no action lies against an engineer for granting or withholding a certificate, goes far to establish the finality of the decision so expressed. It has been decided that the contractor can maintain no action where the contract shows that the parties intended the final expression of the architect's satisfaction with the entire contract to be conclusive (*Dunaberg v. Hopkins, Gilkes & Co.*, 1877, 36 L. T. 733). Again, suppose the engineer has power to determine a contract upon the default of the contractor, his certificate to that effect is conclusive and puts an end to the contract (*Roberts v. Bury Harbour Commissioners*, L. R. 5 C. P. 310). To make the certificate final on any point, there must, however, be very clear language. Suppose, for instance, the decision of the engineer, as given by certificate, is to be final upon the question whether the work has been completed within the proper time. Assume that there is delay, and a question arises whether such delay was not really caused by the employer himself. This question could not be determined by the engineer. In *Lawson v. Wallasey Local Board*, 1883, 11 Q. B. D. 239, there was a contract which contained the usual clause referring disputes to the engineer. He was to decide every difference “concerning the work hereby contracted for, or concerning anything in connection with this contract.” Delay having been occasioned owing to the employers not removing certain obstructions which prevented the contractor commencing dredging operations, it was contended that this question must be settled by the engineer. The Court held that the certificate of the engineer was not final on such a point. “Looking at the terms of this contract, which provided for a definite amount of dredging to be done by a certain time, with power to the engineer to extend the time as long as he should think reasonable in case of the non-removal of staging, there is an

implied contract on the part of the defendants that the removal of the staging shall not be unreasonably delayed. That is the inference to be drawn from *Roberts v. Bury Harbour Commissioners*, 1870, 5 C. P. 310. It was contended that, if this be so, an action for damage caused by such unreasonable delay would be a difference as to which the decision of the engineer was conclusive. . . . We think that such a dispute is not a difference concerning a thing connected with the contract. When the parties contracted, they never contemplated that the engineer would have to decide any such dispute. The dispute is one arising from a breach of an implied contract which is not part of or necessarily connected with the contract under seal. In order to bind a contractor to the certificate or decision of an architect or engineer appointed by the party for whom the work is done, there must be very conclusive language in the contract." As to certificates and defects after completion, see Chap. XVI., § 7, *post*.

§ 12. **Effect of arbitration clause on certificate.**—The finality of a certificate may, however, be affected by the arbitration clause in the contract. This point has been decided in relation to the form of contract sanctioned by the Royal Institute of British Architects.

In *Robins v. Goddard*, 1905, 1 K. B. 294, certain building works were to be carried out in accordance with the directions of an architect, pursuant to a contract drawn in accordance with the form sanctioned by the Royal Institute of British Architects. The architect was empowered, by Clause 16, to order the removal of materials not in his opinion in accordance with the specification or his instructions, and the re-execution of the work with proper materials. By Clause 17 the contractor was to make good certain defects appearing after completion. By Clause 19, which provides for payment by instalments, it was provided: "The architect shall issue his certificate in accordance with this clause. No certificate shall be considered conclusive evidence as to the sufficiency of any work or materials to which it relates, nor shall it relieve the contractor from his liability to make good all defects as provided by this contract." By the arbitration clause in the contract it was provided that: "In case any dispute shall arise between the employer or the architect on his behalf and

the contractor, either during the progress of the works or after the determination, abandonment, or breach of the contract . . . (except certain specified matters left to the discretion of the architect—*e.g.*, defects after completion), . . . or as to the withholding by the architect of any certificate to which the contractor may claim to be entitled, . . . the dispute shall be referred to arbitration." The builder having sued for sums alleged to be due on the architect's certificate, the building-owner preferred a counter-claim for damages, alleging that the certificate had been granted in respect of work done and materials supplied which were defective. The Court of Appeal held that the clause which provided that no certificate should be considered conclusive evidence as to the sufficiency of work or materials was quite general, and that the arbitration clause had effect to destroy the finality of the certificates. In the result, although the work done by him had virtually been passed by the architect, the builder was compelled to submit it to the consideration of an arbitrator in accordance with the terms of the arbitration clause.

In another case (*Hohenzollern Gesellschaft v. London Contract Corporation*, 1886, 2 H. B. C. 96), a contract between the plaintiffs and the defendants provided for the sale of six locomotive tramway engines and two boilers, with necessary fittings. It was a term of the contract that "the purchasers shall pay the vendors one half of the contract price on the certificate of Mr. Floyd (the purchasers' engineer) that the locomotives and boilers are in perfect working order at Croydon, one quarter thereof two months after the date of such certificate, and the remainder thereof four months after the date of such certificate." It was also provided that the locomotives and boilers were to be built under the inspection of, and to the satisfaction and approval of, the purchasers' engineer. A further clause provided that all disputes were to be settled in arbitration by the engineer of the purchasers, and the engineer to be appointed by the vendors, or their umpire in case of difference.

The engines were made, and some, or all of them, were sent to Croydon, but the purchasers' engineer declined to give a certificate. The manufacturers claimed that a dispute had arisen which should be determined by arbitration. It was held that the two engineers and the umpire, sitting as arbitrators, had power to determine whether the price was payable or

not. In giving judgment, after referring to the arbitration clause, Mr. Justice Denman said: "That shows an intention on the part of the contracting parties that the engineer of the purchasers is not to be the final judge in favour of the persons employing him, but that there is to be an arbitration in case of dispute. Now what dispute is more likely to arise under an agreement such as this than whether the engineer has acted reasonably, has performed his duty of inspection properly, has sufficiently shown his satisfaction and approval of the locomotives to make the payment due? It appears to me that nothing is more likely to have been in the contemplation of the parties, and that—unless the words are so limited as to prevent a dispute of this kind being before the umpire—then it was a dispute before the umpire; and the dispute which has arisen in this case is the very sort of dispute which, under this agreement, probably was—and at all events ought to be—construed to have been within the decision of the umpire."

Where, however, there is no arbitration clause the engineer's certificate is, in the absence of fraud, conclusive (*Arnold v. Walker*, 1859, 1 F. & F. 671).

§ 13. **Effect of certificate according to Electrical Engineer's Conditions.**—It is undoubtedly fairer to the contractor to allow the decision of the engineer, as expressed by his certificate, to be reviewed by an independent tribunal. As if they had the decision in *Robins v. Goddard* (*supra*) in mind, the Institute of Electrical Engineers recommend the insertion of a clause to the effect that "all decisions of the engineer shall be subject to the right of arbitration reserved by these conditions." (See Form IIA., Cl. 29, *post.*)

§ 14. **Fraud and collusion.**—The finality of a certificate is always subject to this—that if the engineer and employer have fraudulently agreed together that no certificate shall be granted, the contractor may sue without it. In such circumstances he may sue the engineer who is directly guilty of the fraud (see *Ludbrook v. Barrett*, 1877, 46 L. J. C. P. D. 798), or the employer who has taken advantage of it (*Batterbury v. Vyse*, 1863, 2 H. & C. 42). But it is important to notice that to make an employer liable when a certificate has not been given, he must either have induced the fraud or taken advantage of it. This point must be emphasised, owing to the fact

that the case of *Kellett v. New Mills U. D. C.*, 1900, 2 H. B. C. 330, might lead the unwary to think that a builder or contractor can bring suit against the employer, merely because the engineer or architect has never certified. In that case the plaintiff agreed to do work to the satisfaction of the defendants' engineers, upon whose certificate the defendants agreed to pay. The jury found that the works were completed in December, 1897, but that no certificate of completion was ever given. They also found that the engineers never addressed themselves to determine and certify that the works had been completed, or what was the sum due to the plaintiff, but that they wrongfully refused or wrongfully and unreasonably delayed so to determine and certify; *and that the defendants were aware of such refusal or delay and took advantage of it to refuse or unreasonably delay payment.* Upon these findings Mr. Justice Phillimore decided that the absence of the certificate was no bar to the action. The words underlined are the all-important findings of the jury which decided this case.

(A passage from the judgment of Mr. Justice Phillimore in this case will be found set out in Chap. V., § 8, *ante.*)

Fraud and collusion between the engineer or architect and the contractor will also entitle the employer to relief. Thus if the engineer were to accept a secret commission from the contractor, the employer would be entitled to relief.

§ 15. *Bias of engineer.*—The position of an engineer in relation to a contract is somewhat peculiar. In a sense he acts as the servant of the employer whose interests he is specially retained to guard. The contractor, who knows this, must not therefore be quick to accuse him of *bias*. In *Jackson v. Barry Ry. Co.*, 1893, 1 Ch. 238, a contract by which the plaintiff undertook to construct a dock for the defendant company, provided that any dispute between the company and the contractor as to the meaning of any part of the contract, or as to the quality or description of the materials to be used in the works, should be referred to the company's engineer as arbitrator. A dispute arose whether the contract required the interior of a certain embankment to be made of stone, or whether rocky marl was allowable, so that, if the contractor by the direction of the engineer used stone, he would be entitled to be paid for it as an extra. A correspondence took place between the contractor and the engineer, in

which the engineer stated his view to be that the contract bound the contractor to use stone, and that it was not an extra. The company then referred the dispute to the arbitration of the engineer. After this reference, and on the day for which the first appointment had been made, the engineer wrote to the contractor a letter, in which he repeated his former view. The plaintiff brought his action to restrain the company from proceeding further with the arbitration. It was held that, considering the position of the engineer, who, as engineer of the company, must necessarily have expressed an opinion on the point in dispute, his writing, after the commencement of the arbitration, a letter repeating the same opinion would not disqualify him from acting as arbitrator, unless on the fair construction of the letter it appeared that he had made up his mind so as not to be open to change it on argument.

In *Cross v. Leeds Corporation*, 1902, 2 H. B. C. 369, an arbitrator, who was an official of the Leeds Corporation, wrote a letter in which he said that the claim of the contractors against the corporation was outrageous. The contractors brought an action against the corporation, which the corporation applied to have stayed pending the arbitration; the contractors opposed this. It was held that the arbitrator was not disqualified.

The following passage from the judgment of Lord Collins (then Master of the Rolls) is not unimportant. Dealing generally with the position of an engineer or architect, he said: "The parties have not agreed—that is the plain English of it—for an impartial arbitrator, because the person they have agreed upon as arbitrator is one who, it may be presupposed, may have formed, to the best of his ability, and with all the information that was at hand, an adverse opinion to one of the parties upon the points in dispute."

The mere fact that an engineer holds shares in the company which is employing a contractor does not affect his position or expose him to a charge of partiality (*Ranger v. Great Western Railway*, 1854, 5 H. L. C. 72).

Where, however, there is some agreement between the engineer and the employer which is likely to prejudice the contractor, the contractor is entitled to know of it. (As to bias on the part of an arbitrator, see Chap. XX., §§ 14, 35, *post*.)

§ 16. **Certificate condition precedent to payment.**—If an engineer's certificate is a condition precedent to the contractor's right to payment, the contractor, on abandoning the contract, is not entitled to payment for work done without producing a certificate of the engineer, unless he can show that the certificate is collusively withheld (*McDonald v. Workington Corporation*, 1893, 2 H. B. C. 240). Dealing in that case with the position of a surveyor, Lord Esher said: "Where a surveyor is put into the position to give a certificate, I do not say that he is an arbitrator, but he is an independent person. His duty is to give the certificate according to his own conscience and according to what he conceives to be the right and truth as to the work done, and for that purpose he has no right to obey any order or any suggestion by these people who are called his masters. For that purpose they are not his masters. He is to do that on his own conscience wholly independent of them, and to act fairly and honestly as between them and the contractor."

§ 17. **Payment contingent on quality of work.**—Care should be taken to make payment contingent not only on the character of the work, but on the character of the machinery supplied for the purpose of fulfilling the contract. In *Parsons v. Sexton*, 1847, 4 C. B. 899, a manufacturer agreed "to provide a fourteen-horse engine and sixteen-horse boiler, with fittings and everything complete, for £260, and to deliver and erect the same at the mill at Croydon, and to set the same to work." It was a further term of the agreement that payment of the last instalment should be made when the purchaser was "satisfied with the work." It was held that these words related to the work of erecting the engine, and not to the price of the engine itself.

The same point was illustrated in *Ripley v. Lordan*, 1860, 2 L. T. N. S. 154. There the plaintiff agreed to make for the defendant a machine for cutting glue, according to a drawing supplied, for £20. The following was inserted in the agreement: "Strong and sound workmanship to the approval of Mr. Jefferies," Mr. Jefferies being the defendant's engineer. The machine was duly made according to the drawing, but the defendant refused to pay the price, on the ground that the machine was not adapted to cut the

glue in the manner required, and was useless for the purpose of the business. It was argued that, upon the terms of the contract, the plaintiff was bound to make a machine which was efficient for the purposes of the defendant's business. The Court, however, held that the approval was as to the strength and workmanship, and not as to the efficiency of the machine.

§ 18. *Certificates and extras.*—As a general rule, the contract provides that the employer shall only be liable to pay for extras ordered by the engineer and included in his certificate. For instance, a clause is generally inserted to the effect that the contractor shall have no claim for extra payment beyond the contract price in respect of any work done by him for *the corporation*, unless previous to the execution of the alterations he shall have received a written order from the engineer expressly stating that the work is to be the subject of an extra charge, and then only for the amount which the engineer in his final certificate shall certify to be due to the contractor in respect of such alterations and additions (see, *e.g.*, Form I., Cl. 10, and Form IIA., Cl. 13, *post*). The advisability of having an express provision on this question will be manifest. It may be mentioned that where an architect or engineer gives his final certificate in respect of a contract which includes extra work, the final certificate is conclusive, and neither party can raise the question whether or not there was a sufficient order in writing (*Goodyear v. Weymouth Corporation*, 1866, 1 H. & R. 67).

Where the contract contains no special provision for ordering extras, but states that the contractor shall be paid for all extras at the price fixed by the engineer, it seems that the grant of a final certificate in respect of work that includes extras, is conclusive. In such a case the engineer has power impliedly to determine what are extras under the contract, and his decision on the point cannot be called in question (*Richards v. May*, 1883, 10 Q. B. D. 400). With this case, however, should be compared the earlier decision in *Tharsis Sulphur Co. v. McElroy & Sons*, 1878, 3 A. C. 1040, which brings out the difference in this respect between a final and a progress certificate. There the contract provided that there should be no extras without the engineer's written order. It

also provided that no allegation by the contractors of knowledge of or acquiescence in deviations or additions on the part of the employers should be accepted or available as equivalent to the engineer's certificate, or in any way supersede the necessity of such certificate as the sole warrant for deviations or additions. While the work was proceeding, the contractors were allowed to erect girders of a heavier weight, inasmuch as they stated that it was impossible to cast girders of the specified weight. The actual weights were entered from time to time in the progress certificates granted by the engineer. When the work was completed, the contractors claimed a sum in excess of the contract price for the extra weight of metal supplied. It was held that the progress certificates were not written orders, and that the claim was therefore excluded by the contracts.

CHAPTER XV

PENALTIES AND BONUSES

	PAGE		PAGE
§ 1. Generally	160	§ 9. Delay in commencing work	167
§ 2. Legal effect of the penalty clause	161	§ 10. Effect of a strike and advantage of strike clause	167
§ 3. Penalty or liquidated damages	162	§ 11. Employer not to decide as to penalties	168
§ 4. Danger of imposing too large a penalty	162	§ 12. Powers and duties of engineer	168
§ 5. Principles deduced from the cases... ..	163	§ 13. Terms of the contract as to extension of time to be observed	170
§ 6. The framing of the penalty clause	163	§ 14. Penalties in contracts with local authorities	171
§ 7. Severity of the penalty clause	164	§ 15. Bonus clauses	171
§ 8. Interference by employer	166		

§ 1. **Generally.**—Every contract which is entered into for the construction of machinery, the building of a ship, or other similar works, contains a clause specifying the time within which the work is to be completed. As the damages which may result from the non-observance of this clause are difficult to estimate, the written document usually provides a penalty which is to be paid by the contractor or manufacturer if he fails to carry out his obligation; but inasmuch as hardship may result from a very strict enforcement of the time-limit, the time lost owing to any cause which is or may reasonably be in the contemplation of the parties when the contract is signed, is usually excluded, and no penalty is exacted in respect of time so lost.

It is obvious, however, that there are many causes of delay in the execution of a contract which cannot possibly be foreseen or allowed for by the employer or the contractor at the date of the agreement. Extra work may have to be undertaken either at the request of the employer, or because of some delay or difficulty which could not possibly have been taken into account by the contractor when the tender was made. In these circumstances it is obvious that some system has to be

adopted by which the question whether the contractor is to be held liable for delay can be decided. All questions could, of course, be settled by proceedings at law or by arbitration, but the vicissitudes of business require that minor questions which continually arise shall be decided with the minimum of delay and expense.

It thus comes about that the enforcement of what is known as the penalty clause is left to the engineer. His position, which will be further dealt with later on, is practically that of an arbitrator between the person who employs him, whom it will be convenient to refer to as "the employer," and the manufacturer or contractor who has undertaken the work in question. It frequently rests with him to say whether and under what conditions an extension of time for the completion of the work is to be allowed. In the exercise of his discretion he has only one duty—which is to act fairly and honestly; and so long as he does this, he is under no liability to anyone in so far as he is acting in a *quasi-judicial* position or as arbitrator.

In treating of the penalty clause and the interpretation which has been put upon it by the Courts, it is necessary to refer to several cases which relate, not to engineers and contractors, but to architects and builders. For our present purpose, however, it is sufficient to say that the law which applies to architects applies with equal force to engineers, and the principles upon which the penalty clause in a building contract has been interpreted can be adopted in the case of a contract for the erection of machinery, for the building of a ship, or for the construction of a harbour or other works.

With a view to protecting himself from the consequences of delay on the part of a sub-contractor, whose failure to do his part of the work may impede progress altogether, the contractor should be careful to see that the sub-contract contains a penalty clause equal in severity to that entered in the head contract. As to the liability of a sub-contractor for delay, see Chap. XVII., § 10, *post*.

§ 2. **Legal effect of the penalty clause.**—In relation to the penalty clause, a legal question of considerable nicety sometimes arises. It has long been decided that the Courts will relieve against a penalty if it is considered to be too severe a punishment for the party breaking a contract. It is not proposed to consider all the cases relating to this matter, for the question

is of more interest to the lawyer than the engineer. Nevertheless the engineer may be asked by his employer to fix the amounts which are to be inserted in the penalty clause, and it is therefore important that he should know the way in which the Court will construe the clause in case of a dispute.

§ 3. **Penalty or liquidated damages.**—In the ordinary case, a contract for large works stipulates for a fixed sum to be paid daily or weekly for delay in completion. This sum may be described as a “penalty” or as “liquidated damages”; but the use of the term “liquidated damages” is not conclusive, for if the Court is of opinion that the sum stipulated for is unreasonable it will grant relief (*Wallis v. Smith*, 1882, 21 Ch. D. 243). Nevertheless, it is always prudent in drawing the clause to insert the words: “The same to be regarded as liquidated damages and not as a penalty”; for the term used by the parties is not altogether disregarded (*Willson v. Love*, 1896, 1 Q. B. 626. See also the cases cited, § 5, *post*). (For the definition of “liquidated damages,” see Chap. VI., § 34, *ante*.)

Where a contract for an electric lighting installation provided that the work should be “completed in all respects on or before the 26th November, 1898, subject to a penalty of £15 per day, and the plant by the 10th December subject to a penalty of £3 per day for every day the work remains unfinished to the satisfaction of the authorities or engineers,” it was held that, although the word “penalties” was used, the amounts accrued owing to the default of the contractor were in fact liquidated damages. (*White v. Arthur*, 1901, 84 L. T. 594.)

§ 4. **Danger of imposing too large a penalty.**—It is dangerous to provide for the forfeiture of too large a sum; for if it is so large as to make it absurd for the Court to hold that it was to be liquidated damages for quite a small breach of contract, the clause will be altogether disregarded, and the contractor will only be made to pay what is fair and equitable. (See *Law v. Local Board of Redditch*, 1892, 1 Q. B. 127, at p. 130.)

The danger of imposing the same penalty for each of a number of distinct breaches is well illustrated by the case of *In re Newman, Ex p. Capper* (1876, 4 Ch. D. 724). There the contractors were under contract to complete certain works by a day certain. In default they were to forfeit £10 to the

employer for every week during which the buildings should remain unfinished. The contract also made other stipulations, and provided that, in case it should not be in all things duly performed by the contractors, they should pay £1,000 for liquidated damages. There was delay in completion, for which the employer sought to recover the full penalty. The Court held that the sum of £1,000 was a penalty, and that the employer could only recover the actual damage occasioned by delay.

§ 5. Principles deduced from the cases.—The following principles may be deduced from the decided cases :—

(a) Where the damage is altogether uncertain, and a definite sum is specified in case of breach, it will be regarded as liquidated damages.

(b) Where a single sum is declared to be payable in case of any of a number of distinct breaches of greater or less importance, the Court will regard this as a penalty and therefore subject to modification.

(c) But where different sums are mentioned for different breaches, the Court will regard the sums payable as liquidated damages.

(d) “The criterion whether a sum—whether it is called penalty or liquidated damages—is truly liquidated damages, and as such not to be interfered with by the Court, or is truly a penalty which covers the damage if proved, but does not assess it, is to be found in whether the sum stipulated for can or cannot be regarded as a genuine pre-estimate of the creditor’s probable or possible interest in the due performance of the principal obligation.” (*Cape of Good Hope Government v. Hills*, 1906, 22 T. L. R. 589.)

§ 6. The framing of the penalty clause.—The foregoing considerations will have made it apparent that the engineer should exercise some care in scrutinising the penalty clause. On the one hand he should not penalise the contractor for every little breach ; on the other, he should take care “to make the punishment fit the crime.” An excellent plan is embodied in the penalty clause recommended by the Institute of Electrical Engineers (Form IIA., Cl. 39). It provides that, in case of delay in completion, the contractor shall pay, as and for liquidated damages, certain definite amounts reckoned on the

contract value of such portion of the works as cannot, in consequence of delay, be used beneficially. The amount there recommended is five shillings per £100 per week for the first four weeks, ten shillings per £100 during the second four weeks, and so on.

It is also desirable to provide that penalties may be retained or deducted out of the amounts payable under the contract. In some cases a special clause may be inserted providing that if the works shall be damaged, burnt down, or destroyed by fire, storm or tempest, before completion the contractor shall be relieved from penalties. In a contract for large works, where there are a number of contractors and sub-contractors employed, it may well be that delay on the part of a particular contractor is due to causes over which he has no control, or for which he is only partly responsible. To meet such a case it may be provided that the engineer shall have power at any time, at the request of the contractor or the employer, in the event of any delay taking place for which the contractor alleges he is not responsible, to apportion the delays due to the contractor. Such a proviso may be introduced to modify the rigour of the usual penalty clause.

Penalty clauses are sometimes inserted to prevent a contractor paying commissions to any persons acting on behalf of the employer.

§ 7. **Severity of the penalty clause.**—Before dealing with the question of extending the time in such a way as to relieve the contractor from penalties, it may be well to consider one or two cases in which penalties have been held to be recoverable. Thus, in some circumstances, penalties may be exacted although the delay is caused by alterations required by the employer. In the case of *Jones v. St. John's College, Oxford* (1871, L. R. 6 Q. B. 115), it was agreed by a building contract that the plaintiff should before a certain date completely finish, according to certain specifications, a farmhouse and buildings, but subject to extras, alterations, or additions which might be made as mentioned in the agreement. It was also stipulated that the time mentioned in the agreements should be of the essence of the contract, so that, if the work was not done by the day named, penalties might be deducted by the defendants from the amount owing from them to the plaintiff. Alterations were ordered, and the plaintiff failed to carry out the works

within the time specified. The defendants having accordingly deducted penalties, the plaintiff brought an action to recover on his contract. It was decided that he had undertaken to execute not only the works specified, but also all alterations, within the time prescribed in the contract, and that it was no implied condition of the contract that the alterations should be such as could reasonably be completed within this time.

Where, however, in the case of alterations being ordered, the engineer has power to extend the time, but has not exercised it, and there is delay, the builder or manufacturer must not be mulcted in penalties. In the case of *Westwood v. The Secretary of State for India* (1863, 7 L. T. 736) the plaintiff contracted to build a ship. The time of completion was fixed. The contract provided that alterations might be ordered, and that the engineer was to have power to allow an extension of time for them. Failure to complete within the fixed or extended time was to subject the plaintiff to certain penalties. The engineer ordered various alterations, but the time for completion was not extended, with the result that the shipbuilder exceeded the time specified in the contract. In an action brought by the shipbuilder for the cost of the alterations, the Secretary of State entered a counter-claim for penalties. By way of answer to the counter-claim it was pleaded that the alterations ordered had made it impossible to complete the work within the specified time. The Court held that this afforded a good answer to the claim for penalties.

The severity of the penalty clause may be further illustrated by reference to two incidents which were recorded some years ago (see the *Engineer*, Aug. 3, 1900). An order was given in this country by Germany for certain boats. The specification was strict. The fittings of the boats throughout were to be of galvanised iron. The contractor, determined to give satisfaction in order to secure more orders, made all the fittings of gun-metal. The inspector rejected all the boats, and left them on the contractor's hands. They did not comply with the specification. Nor would he take them if the fittings were changed. The contractor thought himself happy in being permitted to build a new set of boats. The second case also occurred several years ago, and is well known. Gunboats were ordered by the Admiralty. Their machinery must not weigh more, under a heavy penalty, than a stated number of tons. A Cheshire firm exceeded the weight by several tons.

The Admiralty levied a penalty of £1,000. In the course of a few months it was found that this particular vessel was the only one of the lot that did not break down, and always gave satisfaction. Under the circumstances, the enforcement of the penalty clause was such sharp practice that the money was repaid to the builders. These illustrations serve to show that, even where a contractor departs from his specification from sheer honesty of purpose, he is still liable to be mulcted in penalties.

§ 8. **Interference by employer.**—It is a general principle which is consonant with justice, that where delay is caused by the intervention of the employer a waiver of the penalty clauses will be implied. Thus when the employer (as must often happen) during the progress of the work directs alterations to be carried out within a reasonable time, and these alterations are so mixed up with the work contracted for that it is impossible to separate them, a waiver of the penalty clause may take place. In *Thornhill v. Neats* (1860, 8 C. B. N. S. 831), the plaintiff agreed to build six houses by a certain day, and was placed under penalty if they were not completed. Before the date fixed for completion, it was agreed that the plaintiff should perform other work in and upon the houses—this additional work to be done within a reasonable time. In an action brought by the builder for work and labour done, the building-owner set up, in answer, a claim for penalties for non-completion within the time specified. It was held, however, that there was a good legal answer to the claim for penalties on the ground that the defendant had in effect waived the penalty clause by agreeing that the entire work should be done within a reasonable time.

Again, in *Russell v. Sa da Bandeira* (1862, 13 C. B. N. S. 149), a clause respecting penalties, in a contract for the building of a ship, imposed a penalty of £5 a day on the ship-builder for every day after a certain day if the ship should not be then delivered. The ship was not delivered until long after the day appointed, but a large portion of the delay arose from the interference of the building-owner or his agent. It was decided that no sum in the nature of a penalty was recoverable by the employer.

Again, in *Dodd v. Churton* (1897, 1 Q. B. 562, noted, Chap. XIII., § 5, *ante*), where the delay was caused by extras

ordered by the employer, the builder was held not liable for penalties.

§ 9. **Delay in commencing work.**—Similarly if the time of commencing the work is delayed, through no fault of the contractor, he will not be liable to pay penalties. Thus in the case of *Holme v. Guppy* (1838, 3 M. & W. 387) the plaintiffs contracted to do for £1,700 the carpenters' work in a brewery which was being built for the defendants. The work was to be completed within four and a half months from the date of the contract, and in default of completing within the said four and a half months the plaintiffs were to forfeit £40 per week for each week during which the carpenters' work was delayed beyond the 31st day of August, 1863—the expiration of the four and a half months. The defendants did not give the plaintiffs possession till four weeks after the contract was made. The plaintiffs did not complete till five weeks after 31st August. The defendants claimed to set off five penalties of £40 against the last instalment of the contract price. It was decided by the Court that they could not do so; that the undertaking to complete was put an end to by the defendants' default in not giving the plaintiffs possession at the proper time; and that there was no evidence of a new contract to complete at any other time than the 31st August.

In an American case (*Mansfield v. New York Central, etc., Ry. Co.* (1886), 102 N. Y. 205), certain contractors agreed to erect an elevated railway on a foundation to be prepared by the employers. It was held that the proper preparation of the foundations was an indispensable condition precedent to performance, and if the employers made default, the contractor was not only excused from exact performance, but had the right either to rescind, or, if he elected to continue the work, to recover damages for the expense to which he had been put by the delay and default of the employer.

Again, where there was delay in setting out the ground for building, and in providing the necessary plans, the builder was excused. (*Roberts v. Bury Improvement Commissioners*, 1870, L. R. 5 C. P. 310. See also *Wells v. Army and Navy Co-operative Society, infra*, § 11.)

§ 10. **Effect of a strike and advantage of strike clause.**—Subject to what has been stated above, the contractor or manufacturer is liable to pay penalties for delay, even when

that delay is occasioned by matters over which he has no control. Thus it was decided in the case of *Budgett v. Binnington & Co.* (1890, 25 Q. B. D. 320) that prevention due to causes other than the employer's intervention—such as a strike of workmen—is not an excuse for failure to complete within the proper time. This principle, and the frequency with which strikes have in the past prevented the due fulfilment of important engineering contracts, has given rise to the insertion of a strike clause in every contract of importance. It should be observed, however, that where there is such a clause the strike may, nevertheless, be of so prolonged continuance so as to alter the conditions of the contract and the arrangements of the parties to it as to amount to a determination of the contract. (For the definition of a strike, see Chap. VI., § 34, *ante.*)

§ 11. **Employer not to decide as to penalties.**—While it is possible for the manufacturer or contractor to become bound by the decision of the engineer, it is not so easy for the employers to arrogate to themselves the right of practically deciding whether penalties shall be paid or no. This proposition may be well illustrated by reference to another building case—namely, that of *Wells v. Army and Navy Co-operative Society* (1902, 86 L. T. 764). There it appeared that by a clause in a building contract the contractors were to complete the whole of the works within a certain time unless they were delayed by specified matters “or other causes beyond the contractor's control, satisfactory proof of all which must at the time of occurrence be at once afforded to the board of directors of the employers, who shall adjudicate thereon and make due allowance therefor if necessary, and their decision shall be final.” It was decided that the exclusive jurisdiction of the directors under Clause 16 did not extend to delay caused by undue interference by the building-owners or their architect with the conduct of the works, and by default in not giving possession of premises on which work was to be done, and in not providing plans and drawings in due time. The plaintiffs were, therefore, relieved from their liability for penalties under the contract for delay.

§ 12. **Powers and duties of the engineer.**—As has been already stated, the points which arise from time to time

during the progress of the work are frequently left to the decision of the engineer, and his opinion is binding upon either party. This principle is illustrated by several cases. Thus in an action on a builder's contract, which provided that all the works should be left complete and clear, to the satisfaction of the architect, and did not contain any provision for payment by instalments, it was decided: (1) that the completion of the works to the satisfaction of the architect was a condition precedent to the builder's right to recover on the footing of the contract; (2) that he was not entitled to recover for the value of work done as to which, while incomplete, the architect had expressed approval so far as then partially executed, but which was not subsequently completed to the architect's satisfaction. (*Richardson v. Mahon*, 1879, 4 L. R. Ir., 486.)

The necessary power and authority must, however, be conferred upon the engineer by the clearest possible language; for in agreeing to be bound by the decision of some one who is retained and paid by the employer, a contractor in one sense hands himself over to the enemy.

In *Lawson v. Wallasey Local Board* (1883, 11 Q. B. D. 229), the plaintiff entered into a contract with the defendants to remove 10,000 cubic yards of the Mersey contiguous to Leacombe Ferry for £5,000, and to finish the work completely under the direction and to the satisfaction of the defendants' engineer by the 1st October, 1878, subject to an extension of time as the engineer might think reasonable, in case a temporary staging then erected on the site of the work should not be removed within such a time as would enable the plaintiff to complete the work by the 1st of October, 1878. The defendants were to make monthly payments on the certificate of the engineer to the amount of 80 per cent. of the value of the work done during each month, and the balance of the sum of £5,000 on the completion of the work. There was also a clause in the contract providing that if any difference should arise between the local board and the contractor concerning the work contracted for, or concerning anything in connection with the contract, such difference should be referred to the engineer, and his decision should be final and binding on the local board and the contractor. The work was completed on the 11th November, 1879, and then a correspondence took place between the plaintiff and the

engineer with reference to the plaintiff's claim against the defendant board. The engineer admitted that the plaintiff was entitled to compensation for the expense caused by delay in consequence of the non-removal of the staging, and agreed to allow £15 10s. per day for thirty-eight days, but they could not agree upon the amount due to the plaintiff for extra work and other expenses. In June, 1880, the engineer sent a certificate to the works committee of the defendant board, stating that the work was finished to his satisfaction, and that £1,065 19s. was due to the plaintiff, and the defendants sent a cheque to the value of £962 6s. 2d., that being the balance of the sum certified after making certain deductions. The plaintiff, after giving credit for this sum, brought an action against the defendants for £2,489 13s. 11d. It was decided that it was not a difference concerning a matter in connection with the contract, and as to which the decision of the engineer was conclusive. In order to bind a contractor by the certificate or decision of an architect or engineer appointed by the party for whom the work is done there must be very conclusive language in the contract. It was decided, also, that the documents set out in the case did not amount to a contract by the engineer, or a reference to or award by him as to the plaintiff's claims.

§ 13. Terms of the contract as to extension of time to be observed.—The power of granting an extension of time, which, as we have seen, is frequently conferred upon the engineer, must be exercised by him in strict accordance with the terms of the contract between the parties. This was emphasised in *British Thomson Houston Co., Ltd. v. West Brothers* (1903, 19 T. L. R. 493). There an action was brought by building-owners to recover penalties for non-completion on the date agreed under the contract between the parties. This document provided that the architect might, in certain circumstances, extend the time for the completion of the work, but did not expressly confer upon him the power to deal with penalties. There was admittedly a delay in the execution of the works, but the defendants contended that the delay was impliedly permitted by the architects, who had given their final certificate in the following form: "We hereby certify the sum of £536 15s. 5d. is due to Messrs. West Bros. in settlement of contract for the erection of the power stations." The

question of law for the opinion of the Court was whether, in view of the certificate, and of the powers of the architect under the contract, this certificate afforded a complete answer to the plaintiffs' claim. Mr. Justice Phillimore, in giving judgment, said that the following, which is taken from *Hudson on Building Contracts*, was an accurate statement of the law: "If the architect gives a final certificate without allowing any deduction for penalties, it will be presumed that he has extended the time for completion, unless, as in the foregoing illustration, it is proved or admitted that the matter has not been determined by him, or was not expressly or impliedly within his jurisdiction." It was also pointed out that the architect's certificate at most raised a very strong presumption that in giving his certificate he had taken all the circumstances of the case into consideration. That presumption, however, might be rebutted.

§ 14. **Penalties in contracts with local authorities.**—A penalty clause is essential to every contract with a local authority, for it is provided by the Public Health Act, 1875, s. 174 (2), that: "Every such contract shall specify the work, materials, matters, and things to be had or done, the price to be paid and the time or times within which the contract is to be performed, and must specify the pecuniary penalty to be paid in case the terms of the contract are not duly performed." It has been decided that this provision is mandatory (*Young v. Leamington*, 1883, 8 A. C. 517).

§ 15. **Bonus clauses.**—Hitherto we have dealt only with the penalty clause; there is another clause often inserted in engineering contracts, the administration of which depends very largely upon the engineer. We refer to the "bonus" clause. A contract sometimes contains a clause providing that a bonus shall be paid to the contractor for expedition. If there is such a clause, and the engineer has power to extend the time, this power, according to a New Zealand case, is not to be exercised by the engineer for the purpose of enabling the contractor to earn the bonus, but, on the contrary, to save him from penalties. In the case in point (*Ware v. Lyttelton Harbour Board*, 1882, 1 *New Zealand Reports*, S. C. 191), it was agreed by a contract that: "The Board will grant the contractors a bonus of £100 per week for every week or part

of a week in which the contract shall be finished within the specified time." The contract was to complete certain specified works and additional or extra works if properly ordered. The date for completion was April 7th, 1882. The plaintiffs completed six weeks before the appointed day, and received £600 bonus. They claimed further bonus for time taken, as they alleged, by extra works. The engineer had power to extend the time. It was held that the clause only applied in case the engineer should consider that the contractors could not complete within the time, to save the contractors from penalties, and not to give them additional bonuses.

If the employer agrees to give a bonus for expedition, and the contractor to pay a penalty for delay, and the covenants are independent, and the covenant to pay a penalty for delay is absolute, if the contractor has been prevented by the employer from completing by the date fixed, he must pay or allow further penalty; but he has an action for damages against the employer, including the deductions caused by the employer's neglect.

"Any other construction," said Baron Alderson, in *Macintosh v. Midland Counties Ry. Co.*, 1845, 14 M. & W. 548, "would lead to this conclusion, which we think an unreasonable one, that the non-supply of a single rail or chair (by the company) at the time specified for its delivery, although in the result wholly immaterial to the facilities for completion, would entitle the plaintiff to receive the £15,000 given as expedition money, without his giving expedition for it."

Where it was agreed that a builder should have a bonus of £360 if part of the work was completed within nine weeks, and the work having been in hand for a week was stopped owing to a dispute between the building-owner and his neighbour, and was not recommenced for more than a month, it was held that the builder was entitled to recover the bonus (*Bywaters v. Carnick*, 1905, *Emden's Building Contracts*, 660).

CHAPTER XVI

MAINTENANCE AND DEFECT CLAUSES

	PAGE		PAGE
§ 1. Preliminary	173	§ 10. Distinction between main- tenance and defects	
§ 2. Forms of maintenance clause	174	clause	180
§ 3. Example of the effect of a maintenance clause ...	175	§ 11. Liability under a repair- ing clause	180
§ 4. Maintenance of work not properly supervised ...	176	§ 12. Contractor entitled to notice of want of repair	181
§ 5. Time for bringing action for failing to maintain...	177	§ 13. Form of repairing clause...	182
§ 6. Liability under a clause to rectify defects	177	§ 14. When there is no defects or maintenance clause ...	182
§ 7. Defects after completion where there is no defects clause	178	§ 15. Claim for defects not barred by payment of or judgment for the con- tract price	183
§ 8. Form of defects clause ...	179	§ 16. Effect of payments with knowledge of defects ...	184
§ 9. Effect of clause on defects appearing after the stated period	179	§ 17. Where employer has ap- proved the work ...	184

§ 1. Preliminary.—Of all clauses in contracts for the construction of works and the supply of machinery, there is none more important than that which has to do with the condition of the subject-matter after completion.

Defects often become apparent after the engineer has issued his final certificate. A slight error in calculations may have left some important part of the structure too weak; and in the case of machinery, it is notorious that many latent defects only become patent under the strain of actual working.

From the point of view of the employer and his engineer on the one hand, and the contractor on the other, it is necessary to provide as far as possible for these contingencies. This can best be done by the insertion of apt clauses either in the general conditions of the contract or in the specification. Experience has shown that the employer is not sufficiently protected by the insertion of a clause which provides that all work must be approved by the engineer. The most careful inspection, or, in the case of machinery, the most searching

tests, may fail to reveal something which will involve the employer in the immediate cost of repairs or increased cost of upkeep. From the point of view of the contractor the maintenance clause is of equal importance. He knows it is in the contract when he enters on the work. It may impose a heavy liability, but it tends to make him more careful to avoid scamping. It may involve the employment of his men long after the work has been handed over to the employer; but it puts a period—be the same somewhat indefinite—to his liability.

Clauses inserted with these objects are of various kinds. By a "maintenance" clause is meant a clause under which the contractor is bound to keep the work in working order for a certain period. A "repairing" clause makes the contractor liable to repair the machinery as it shall become injured in the course of working; while a "defects" clause only compels the contractor to make good defects occurring owing to faulty design and construction. (For a definition of "defects," see Chap. VI., § 34, *ante*.)

It will be for the engineer, having regard to all the circumstances of the case, to decide which form of clause is best suited to his purpose.

§ 2. Forms of maintenance clause.—The clause in the conditions of the Institution of Electrical Engineers is in the following terms:—"Until the final certificate shall have been issued, the contractor shall be responsible for any defects that may develop under normal and proper use arising from *bad materials, design, or workmanship* in the works. When called upon in writing by the engineer to remedy such defects, the contractor shall do so with due diligence, and unless such defects be remedied by the contractor within a reasonable time, the contractor shall be responsible for all losses and damages sustained by the purchasers through such defects. If the defects be not remedied within a reasonable time, the purchasers may proceed to do the work at the contractor's risk and expense" (see Form II.A., § 45). A proviso is then added, giving the contractor the right to enter to remedy defects, until the final certificate shall have been issued.

Two points are noticeable with regard to this clause. In the first place it only involves maintenance until the final certificate. In the second place it makes the contractor

responsible for defective *design*. What, then, is meant by design? It is quite easy to imagine a machine constructed of the best materials and of the best workmanship but yet faulty in design. It appears that under this form of clause the contractor is bound to see that the design is good and suitable for the purpose in hand; and in order to protect himself against liability he should take expert opinion before he enters on the job at all—as to whether the design of the machinery is suitable and proper. That, however, is a counsel of perfection to which the contractor is not often willing to listen.

Contracts relating to the erection of machinery nearly always contain some clause of this kind.

The following form of maintenance clause is inserted in the general conditions made use of by the Sheffield Corporation Electricity Department:—"The contractor binds himself to uphold the whole of the plant, machinery, apparatus, mains, or works supplied or carried out by him, fair wear and tear excepted, and to be responsible for and to make good all defects in the same due to defective material, design, or workmanship, for and during the period of maintenance; but he shall have the right of entry by himself or his representatives, at all reasonable working hours, into the electricity works of the corporation for the purpose of inspecting the working of the plant and the records of it, he or they taking notes therefrom, and, if necessary, making any tests at reasonable times at his own risk and expense." Here, again, the contractor is made liable for faulty design; yet another clause in the same series of general conditions provides that the corporation engineer may, subject to certain restrictions, make any alteration upon the design of the works during their progress. It may be assumed, of course, that an engineer would not willingly place upon the contractor the *onus* of remedying a faulty design for which he was himself responsible. At the same time the contractor who assents to the insertion of such a clause may find himself in an awkward position. (For another maintenance clause, see Form I., Cl. 21.)

§ 3. Example of the effect of a maintenance clause.—In *London Shipping Co. v. John Duffus* (1841, 3 Rettie (2nd Ser.)), a contractor had agreed to furnish a steam-vessel and uphold the machinery for six months after the vessel commenced plying.

He was to deliver it up to the owners in good order at the end of that period. The larboard cylinder and condenser having proved defective within the time named, the contractor was held bound to make good the loss arising from this cause.

§ 4. **Maintenance of work not properly supervised.**—It is often provided that the certificate of the architect or engineer shall be conclusive evidence of the work having been completed. In this connection it is material to point out that a certain responsibility rests with the employer, or rather with his agent—the engineer or architect. It is the duty of the engineer to exercise supervision; and if he fails in this the employer cannot be afterwards heard to say that the contractor has committed a breach of contract in not complying with the terms of a maintenance clause. In one case (*School Board for London v. Johnson, Emden's Building Contracts*, p. 665) a contractor was bound to execute certain works to the satisfaction of the architect of the London School Board. The contract also provided that, if within four months of the completion of the works any defect arising from improper material or workmanship should be found, the contractor should make it good at his own cost. The certificate of the architect was to be conclusive evidence that the work had been completed and that the balance was payable. A further clause provided that no final certificate should relieve the contractor from any fraud, default, or wilful deviation from his contract, but that he should remain for four years liable for such acts. An arbitrator found as a fact that there were certain minor deviations from the contract which could not have become manifest without the contributory negligence of the School Board or its agents. It was held that in these circumstances the contractors were not liable. In a Scotch case (*Ayr Road Trustees v. Adams*, 1883, Rettie (4th Ser.), 11), the plaintiffs had employed the defendants to build a bridge. It was provided in the contract that the work should be done to the satisfaction of one of a firm of engineers employed by the plaintiffs; that the actual execution should be supervised by a resident inspector appointed by the engineer (it afterwards turned out that he was in point of fact appointed by the Road Trustees, and was subject to their orders); and that the contract price should be payable by instalments on certificates granted by the engineer. The contractors were further bound to maintain the bridge

for a year after its completion, part of the last instalment being retained as security therefor. The bridge was completed, a final settlement of the accounts arrived at, and the last instalment paid on a certificate granted by the engineer, the whole settlement proceeding on reports furnished to the engineer by the resident inspector. When a year had elapsed, during which the contractor maintained the bridge, it was finally taken over by the trustees. About a year thereafter it was discovered that the bridge was in an unsafe state, and, on inspection, that the work on one of the piers was not in some respects executed according to contract. The trustees thereafter raised an action against the contractors, claiming (1) repayment of the sums paid for work not done; (2) payment of sums expended by them on remedial works made necessary by the contractors' fault; (3) damages for breach of contract. It was held that, the trustees having taken the appointment of the resident inspector into their own hands, his knowledge must be held to be their knowledge, and that, the final settlement having proceeded on reports furnished by him to the engineer, and not on any false and fraudulent representations on the part of the contractors, the trustees were not entitled, after the lapse of so long a time, to open up the final settlement.

§ 5. **Time for bringing action for failing to maintain.**—Where a contractor is under obligation to maintain the subject-matter for a given period after completion, an action may be brought for failure to maintain before the prescribed period has expired. (*Luxmore v. Robson*, 1818, 1 B. & A. 584.)

§ 6. **Liability under a clause to rectify defects.**—A clause which provides that the contractor shall remedy defects is somewhat less onerous for the contractor than a maintenance clause, inasmuch as, if the contractor has done his work properly and in compliance with his contract, the mere cost of maintenance falls on the employer. To take a simple illustration. If a man contracted to build and maintain an engine, the wear and tear of the valves would have to be made good by him. But if he had only to make good defects, his liability would not extend to anything caused by the mere wear and tear of the engine in actual working.

§ 7. Defects after completion where there is no defects clause.— The importance to an employer of having an engineer who will exercise proper supervision and take due care in scrutinising the materials used by the contractor is emphasised in cases where the contract prevents the employer pursuing a remedy against the contractor for defects appearing after completion. It was decided in the case of *Lord Bateman v. Thompson*, 1875, 2 H. B. C. 23, that where a certificate of completion and satisfaction by the employer's architect is made conclusive and is given, the employer has no right of action against the builder for defects subsequently discovered, except within the time and upon the terms specially stipulated by the contract. The facts of that case were somewhat peculiar. The work done by the contractor was disgraceful, but a period of six years elapsed between the completion of the work and the commencement of the action. The architect, however, had approved the work and materials and had duly certified the amounts due under the contract from time to time. Lord Coleridge, C. J., clearly enunciated the principle which led the Court to say that an action would not lie against the contractors. He said: "This is the ordinary case, not of an arbitration, but of the employer having made the certificate of the architect binding in certain cases against himself, and still more of his having made his own expression of satisfaction binding against himself. And having received the one and having expressed the other he cannot now say that he did not receive the one and did not express the other. It may seem a hard thing to say, but the answer is the answer which Mr. Justice Willes gave in the case of *Goodyear v. Mayor of Weymouth*, 1865, 35 L. J. C. P. 12, that if you employ an architect who does not know his business, and who certifies that he is satisfied when he ought not to express satisfaction, you must be bound by his mistake. It is not in the least an answer to say that you have employed an architect who does not know his work, and if people employ architects who do not know their work, and who lead them into mistakes, and place contractors bound hand and foot into the hands of such persons, and such persons either pass bad work, or as it appears in this case actually direct bad work, they cannot afterwards in equity or fairness turn round on the contractor, and say 'Now I will bring an action for damage that I have sustained, because you have fulfilled the direct instructions of

a man whose authority I made binding upon you, but as he did not know what he was about, and because I suffered damage from an authority which I myself made despotic over you, I now turn round upon you to make you liable for the damage I have sustained.”

§ 8. **Form of defects clause.**—The form of contract sanctioned by the Royal Institute of British Architects contains a useful example of a defects clause. It makes the contractor liable for “any defects, shrinkage, or other faults which may appear within — months from the completion of the works, arising in the opinion of the architect from materials or workmanship not in accordance with the drawings and specification or the instructions of the architect.” The liability is here confined to defects in material or workmanship, and apparently the architect is to decide whether the contractor shall be held liable or not. But the architect’s decision on this point is subject to the arbitration clause which appears elsewhere in this particular form of contract. (For a definition of “defect,” see Chap. VI., § 34, *ante*.)

§ 9. **Effect of defects clause on defects appearing after the stated period.**—Where the parties to a contract have made it plain that the contractor is to be liable to remedy defects appearing within a certain time, it would seem that this impliedly releases the contractor from responsibility for defects subsequently appearing. In one case (*Sharp v. Great Western Railway*, 1841, 11 L. J. Ex. 17) the plaintiffs had manufactured certain locomotive engines under the following contract: “Each engine and tender to be subject to a performance of a distance of 1,000 miles, with proper loads, during which trial Messrs. S. & Co. (the plaintiffs) are to be liable for any breakage which may occur, if arising from defective materials or workmanship; but they are not to be responsible for, nor liable to the repair of any breakage or damage, whether resulting from collision, neglect, or mismanagement of any of the company’s servants, or any other circumstances, save and except defective materials or workmanship. The performance to which each engine is to be subjected to take place within one month from the day on which the engine is reported ready to start; in default of which, Messrs. S. & Co. shall forthwith be released from any responsibility in respect

of the said engine; the balance to be paid on the satisfactory completion of the trial, and release of Messrs. S. & Co. from further responsibility in respect of such engine." It was also agreed that the fireboxes should be made of copper, of the thickness of $\frac{7}{16}$ ths of an inch (and they were accordingly so made); and that the best materials and workmanship were to be used. The engines performed the distance of 1,000 miles within the month of trial, but nine months afterwards the firebox of one of them burst, when it was discovered that the copper had been considerably reduced in thickness. In an action against the defendants for the balance due from them it was held that they could not give evidence of an inherent defect in the copper, no fraud being alleged, since, by the terms of the contract, the month's trial, if satisfactory, was to release the defendants from all responsibility in respect of bad materials and bad workmanship.

§ 10. **Distinction between maintenance and defects clause.**—In a case heard in the Supreme Court of the Cape of Good Hope (*Roux v. Colonial Government*, 1901, 18 S. C. Rep. 143; *Emden's Building Contracts*, p. 110) a building contract contained a clause to the effect that "the contractor must make good at his own cost all omissions and defects that may appear or arise subsequent to the issuing of the final certificate of completion." It was held that this clause referred only to omissions and defects due to the default of the contractor and was not equivalent to a maintaining and repairing clause. In giving judgment, the judge said: "Defects would be found to be confined to such defects as arose from the contractor's own default; for instance, such as would arise from improper or defective construction, or from the use of improper material contrary to the terms of the contract. He would not under such a clause be bound to restore if the premises were destroyed by some outside cause, nor would he be answerable for a defect inherent in the project itself, or for the insufficiency of the material if it complied with the specifications."

§ 11. **Liability under a repairing clause.**—A repairing clause imposes the heaviest liability on the contractor, because it makes him responsible for defects occasioned by ordinary wear and tear. His position, indeed, is very similar to that of a

tenant in occupation under a repairing lease. So a lessee of a house, who covenants generally to repair it, must rebuild it "though it be consumed by fire, burned by lightning, or thrown down by enemies." (*Bullock v. Dommitt*, 1796, 6 T. R. 650.) Having regard to this state of the law, it is often provided that the contractor shall insure against fire; and even where he is under no obligation to insure the prudent contractor will do so. In this connection it may be useful to notice that a covenant to insure does not limit the liability of the contractor to the amount for which he is insured. (See *Digby v. Atkinson*, 1815, 4 Camp. 275.) He must complete his contract at whatever cost to himself.

The application of this principle of the law of landlord and tenant to a contractor may be illustrated by an old case of *Brecknock and Abergavenny Canal Co. v. Pritchard*, 1796, 6 T. R. 750. There a contractor had agreed to build a bridge in a substantial manner and keep it in repair for a certain time. It was held that he was bound to rebuild it although it was broken down by an extraordinary flood. Lord Kenyon said: "This sort of loss must have been in the contemplation of all the parties in this case; the bridge was to be built in such a manner as to resist any body of water. If the defendants had chosen to except any loss of any kind, it should have been introduced into the contract by way of exception."

§ 12. Contractor entitled to notice of want of repair.—It has long been a recognised principle that where a landlord is bound to repair and keep in repair he cannot be sued for breach of covenant unless notice of want of repair has been served upon him. (See *Makin v. Watkinson*, 1870, L. R. 6 Ex. 25.) It is conceived that the same principle applies to the case of a contractor who is bound to keep machinery, etc., in repair after it has been completed.

Where, however, the contractor definitely announces that he will not be in a position to repair at all, no notice need be given. In *Johnstone v. Milling*, 1885, 2 T. L. R. 105, the defendant leased certain premises to the plaintiff for a term and covenanted to rebuild them on receiving notice from the plaintiff requiring him to do so. Six months before the end of the term the defendant announced that he would be unable to rebuild, the announcement being made before any notice. In consequence of this the plaintiff did not give any notice.

It was held that in spite of the lack of notice the plaintiff was entitled to damages for the breach of covenant.

§ 13. **Form of repairing clause.**—The following is a particularly stringent form of repairing clause :

The contractor shall also in addition to the covenant on his part hereinafter contained, and notwithstanding the use or occupation of the works and premises by the employer, and the execution by the employer or his agents and workmen of the works in clause . . . mentioned, and notwithstanding any act, matter, or thing done, permitted, happening, or suffered in pursuance of, or during the continuance of, such use or occupation, or at any period during the execution of the contract, to the satisfaction of the engineer maintain in good, sound, perfect, and water-tight condition and in working order, replace and make good and repair the work during the period of . . . months from the date of the engineer's certificate of satisfaction (which period is hereinafter referred to as the period of maintenance) and shall rectify any defects or imperfections, or improper or insufficient workmanship, or materials which shall or may appear, arise, take place or become manifest to the employer or the engineer and which the engineer shall certify in writing not to have been discovered by him prior to his certificate of satisfaction before the commencement of the period of maintenance.

§ 14. **When there is no defects or maintenance clause.**—Where a contract for works makes no special provision to the effect that the contractor shall remedy defects, questions may arise as to whether and how far he is liable to make good defects. The time at which the defects become apparent has a material bearing upon the question of liability. Thus a breakdown ten years after completion may be due to ordinary wear and tear ; while if the same mishap were to occur within a month of the contractor handing over the work as complete it would require strong evidence to show that he was not at fault. It is impossible to lay down a general rule by which the liability of the contractor can be ascertained. The time ; the nature of the defect ; the kind of use to which the work has been put—all these are matters which the Court would have to consider in arriving at a decision.

The following points have been clearly decided : (1) That mere acceptance of the works by the employer is no answer to a claim by the employer in respect of defective work ; and (2) if there is a settlement between employer and contractor, it is a question of fact whether that settlement is intended to cover future as well as past claims for damages. In *Jones v.*

Bright, 1829, 5 Bing. 533, the plaintiff bought copper sheathing from the defendant and used the same upon a ship. The plaintiff sent the ship on a voyage; but the copper, instead of lasting four or five years as usual, became corroded and useless after four or five months. It was held that the plaintiff was entitled to recover damages, although he had accepted the ship.

§ 15. **Claim for defects not barred by payment of or judgment for the contract price.**—Although the employer may have paid the contractor the full amount due under the contract, he is not thereby debarred from suing for damages for defective work. And this rule is in accord with good sense, for it is obvious that defects may not become manifest until long after payment. In *Davis v. Hedges*, 1871, L. R. 6 Q. B. 687, the defendant was employed to do work on the plaintiff's house. Having done the work, the defendant sued the plaintiff for the contract price. The plaintiff, having paid the price, brought a separate action against the defendant for defective work. It was held that, although the plaintiff might have set up the claim for defective work as a partial answer to the claim for the contract price, he was not bound to do so, but was entitled to bring a separate action. The Court refused to lay down a rule that in such a case the employer, by making payment in full, waives his claim for damages. Mr. Justice Hannen said: "The work contracted for has been done, and the right to bring an action for the price, unless there is some stipulation to the contrary, arises. On the other hand the extent to which the breach of warranty or breach of contract may afford a defence is usually uncertain; it may take some time to ascertain to what amount the value of the work is diminished by the contractor's default. It is unreasonable, therefore, that he should be able to fix the time at which the money value of his default shall be ascertained. In many cases the extent to which the value of works may be diminished by defect in their execution may be altogether incapable of discovery until some time after the day of payment has arrived."

In a recent case, within the author's own experience, a builder was held liable for damage caused by dry rot which broke out under a floor three years after a house was built, it having been proved that the defect arose owing to the damp course having been improperly laid.

§ 16. **Effect of payments with knowledge of defects.**—It would seem that payment of the contract price is no bar to a subsequent claim for damages, even when the employer is aware of the defects. This is for the reason that as the contract work is his he cannot reject it.

§ 17. **Where employer has approved the work.**—If the work is to be done to the approval of the employer, and he expresses his approval, he cannot be afterwards heard to make a claim for defects. In *Bateman v. Thompson*, 1875, 2 H. B. C. 23, the defendant contracted to build for the plaintiff, the work to be done to the satisfaction of the plaintiff and his architect. The contract expressly provided that, notwithstanding any certificate of the architect, the plaintiff should be entitled to bring an action in respect of defective work within twelve months after the completion of the work. The works were completed to the satisfaction of the architect and to the implied satisfaction of the plaintiff. More than twelve months afterwards a claim was made by the plaintiff in respect of bad workmanship. It was held that the action would not lie.

CHAPTER XVII

SUB-CONTRACTORS AND SUB-CONTRACTING

	PAGE		PAGE
§ 1. Preliminary	185	§ 7. Remuneration of sub-contractor	188
§ 2. Right of contractor to employ sub-contractors	186	§ 8. Rights of sub-contractor where head contractor becomes insolvent ...	189
§ 3. Whether engineer has power to employ sub-contractors	186	§ 9. Liability of employer for delay of sub-contractor	190
§ 4. Clauses to prevent or regulate sub-contracting	187	§ 10. Sub-contractor's liability for delay... ..	191
§ 5. Liability of employer to sub-contractor	187	§ 11. Negligence of sub-contractor	192
§ 6. Rights of sub-contractor against head contractor	188	§ 12. Accidents to sub-contractor's workmen ...	193

§ 1. Preliminary.—The employment of sub-contractors is almost inevitable when the work in hand is of any magnitude. The building contractor must look to electric lighting specialists to wire the buildings; the contractor who undertakes the laying of a line of railway or the construction of waterworks must employ sub-contractors or specialists to deal with certain portions of the work. The sub-contractor being therefore a necessity, it will be the duty of the engineer, in the interests of the employer, to exercise some control over the choice of sub-contractors. His first task will be to take care that there is a sub-contracting clause in the contract; and that clause should be so framed as to provide that no sub-contractor shall be employed without his knowledge and consent.

He should also take care (a) that the terms of the agreement between the contractor and the sub-contractor shall be made known to him; (b) that the contractor shall not be allowed to shelter himself behind any act or default of the sub-contractor; and (c) that materials of the sub-contractor brought on to the site shall immediately vest in the employer.



In considering the propriety of allowing portions of the work to be placed in the hands of a sub-contractor, the engineer must needs prosecute some inquiry into the reliability of the person whom the contractor desires to employ. Such inquiry will be the more important if the work in question relates to an integral part of the undertaking in which delay might involve a stoppage of the entire work.

§ 2. **Right of contractor to employ sub-contractors.**—Generally speaking, where there is no stipulation against sub-contracting, a contractor may employ sub-contractors. The rule, however, is subject to the qualification that it does not apply when the employer reasonably and naturally looks for the personal service and attention of the contractor. Thus if the work in hand were of a highly special character it would not be competent for a contractor who was skilled in that class of work to hand over its performance to some one else. It is otherwise, however, when the work involves the exercise of no special degree of skill. Cockburn, C. J., in *British Waggon Co. v. Lea*, 1880, 5 Q. B. D. 149 (at p. 153), thus stated his view of the law on the subject: "Much work is contracted for which it is known can only be executed by means of sub-contracts; much is contracted for as to which it is indifferent to the party for whom it is to be done whether it is done by the immediate party to the contract, or by some one on his behalf. In all these cases the maxim '*qui facit per alium facit per se*' applies."

§ 3. **Whether engineer has power to employ sub-contractors.**—Although there does not appear to be any English case on the point, it appears that an engineer has no implied authority to employ sub-contractors to do any part of the contract work, or any work which is extra to that work. The law has been so laid down in Canada. (See *Cowan v. Goderich Northern Gravel Road Co.*, 1859, 10 Up. Can. C. P. 87, cited H. B. C. Vol. I., p. 16.) In that case the plaintiff was a sub-contractor employed by head contractors who were constructing a road for the defendants. The defendants' engineer instructed the plaintiff to do certain work, for the price of which this action was brought. It was held that the action did not lie, as the engineer had no authority to give the order in question.

§ 4. **Clauses to prevent or regulate sub-contracting.**—The following clause may be inserted if it is desired to ensure that the contractor shall carry out all the work himself: “This contract is and shall be considered as a personal contract by the contractor himself, who shall personally, with the assistance of skilled foremen, agents, mechanics, and workmen, direct and execute the works.” The more approved practice, however, is to leave it to the engineer to say whether and how far sub-contractors may be employed. The following clause, which is to be found in the model conditions approved by the Institute of Electrical Engineers, may be safely used: “The contractor shall not, without the consent in writing of the engineer, assign his contract, or any substantial part thereof, nor underlet the same or any substantial part thereof, nor make any sub-contract with any person or persons for the execution of any portion of the works, other than for raw materials, for minor details, or for any part of the work of which the makers are named in the contract.” (See Form IIa., Cl. 15, *post.*) Another form of clause prevents the contractor from making a sub-contract with any workman or workmen for the execution of any portion of the work, except with the consent of the engineer. It also provides that if the contractor shall sub-let or let at task work any portion of the work he shall in such case forfeit to the employer the sum of £100 as liquidated damages.

§ 5. **Liability of employer to sub-contractor.**—The employer is not liable to a sub-contractor, unless an agreement between them can be proved. Such an agreement will not be implied from the mere acceptance of the sub-contractor's work. For instance, where an employer contracted with a builder to do certain work on his house, and a tradesman supplied goods to the builder for use on the house, it was held that the employer was not liable for their price. (See the case of *Brahmah v. Abingdon*, cited in *Paterson v. Gandasequi*, 1812, 15 East, 62.) The employer does, however, become liable if it can be shown that there is a contract between him and the sub-contractor. For instance, in another case a contractor employed a mason to do certain work as extra to the contract. In an action for work and materials by the mason against the contractor's employer, the plaintiff stated that the work in question was extra to the contractor's contract and that he

had agreed with the contractor to do the work. On production of the contractor's contract, the jury found that there was a distinct contract between the mason and the employer for the work sued on, and judgment was entered for the plaintiff. (*Eccles v. Southern*, 1861, 3 F. & F. 142.)

An employer may also become liable to a sub-contractor by going surety for him. In that case, however, there must be something in writing, as a contract of guaranty cannot be sued on unless it is written. But there is a difference between a promise to pay the debt of another and a direct promise to be liable oneself in any event. In the latter case a written contract need not be proved. Thus, if the employer promises to pay the sub-contractor out of moneys which he has to pay to the head contractor, this would be treated as a direct promise to pay. (*Dixon v. Hatfield*, 1825, 2 Bing. 439.)

There is another way in which the employer may become directly liable to a sub-contractor. It may be proved that the head contractor in employing the sub-contractor really acted as the agent for the employer. The onus of proving this will be on the sub-contractor. (See *Woodward v. Buchanan*, 1870, L. R. 5 Q. B. 285.)

§ 6. Rights of sub-contractor against head contractor.—It is obvious that when a sub-contractor is employed the question whether he will continue to be employed depends upon the conduct of the head contractor. Thus, if the head contractor does some act which entitles the employer to put an end to the contract, the sub-contractor may in his turn be ousted. In that case the sub-contractor may bring an action for damages against the head contractor, as the law implies that the head contractor will do nothing to prevent the sub-contractor completing his work and earning his profit.

§ 7. Remuneration of sub-contractor.—The question who is the sub-contractor to look to for his remuneration naturally turns upon the conditions of his employment. In the ordinary form of agreement a clause is inserted providing that the contractor will pay to the sub-contractor "the sum of £ when the engineer for the time being of the said corporation (*i.e.*, the employer) shall have certified in writing that the said work has been finished and completed to his satisfaction."

Other terms are sometimes inserted providing for payment by instalments.

The question of liability largely depends upon whether the contractor was constituted the agent of the employer to employ the sub-contractor or to purchase goods from him, and to establish privity of contract between the employer and such sub-contractor. Where the defendant (a building owner) entered into a contract with a builder, by which the latter agreed to build a house for him under the supervision of an architect, the contract provided that the provisional sums for goods to be ordered from special artists or tradesmen should, as the architect should certify, be payable by the builder or the building owner.

The exact terms of the clause were that "the provisional sums mentioned in the specification for materials to be supplied or for work to be performed by special artists or tradesmen, or for other works or fittings to the building, shall be paid and expended at such time and in such amounts and to and in favour of such persons as the architect shall direct, and sums so expended shall be payable by the contractor without discount or deduction, or by the employer to the said artists or tradesmen."

Special goods according to a particular design were ordered by the builder from the plaintiff, who was a metal worker, and the architect certified the sum for these goods as due from the defendant to the plaintiff, deducting the amount from the certificate given to the builder. It was held that the plaintiff was entitled to recover this sum direct from the building owner. (*Hobbs v. Turner*, 1901, 18 T. L. R. 235.) In the absence of such a clause a specialist or sub-contractor would be compelled to look for his remuneration to the person who directly employed him, namely, the head contractor.

§ 8. Rights of sub-contractor where head contractor becomes insolvent.—Trouble frequently arises in cases where, owing to the insolvency of the builder, the sub-contractor is compelled to look to the building owner. He often makes such a claim without avail; but by means of a special clause this difficulty may be obviated. So in *In re Wilkinson, ex parte Fowler*, 1905, 2 K. B. 713, a district council entered into a contract with a contractor for the construction of certain sewage works. The contract provided that certain machinery for the works

was to be supplied to the contractor by certain specified firms, and that "if the engineer shall have reasonable cause to believe that the contractor is unduly delaying proper payment to the firms supplying the machinery, he shall have power, if he thinks fit, to order direct payment to them." The contractor having become bankrupt, it was held that the engineer had power to direct the payments to be made to the machinery firms direct. Mr. Justice Bigham said: "I think the clause means that if the persons supplying machinery to the contractor for the purpose of the contract are not promptly and properly paid by him, they can apply to the engineer, and then it shall be competent for the engineer to intervene, and by a proper certificate given in that behalf to require the council to pay to the machinery firms the amount of their accounts directly—that is to say, not through the hands of the contractor at all, but the money is to be paid directly by the council to the machinery firms."

§ 9. Liability of employer for delay of sub-contractor.—If an employer reserves to himself the right of employing specialists to do any portion of the work on a large contract, he does not thereby give any implied undertaking to the head contractor that he will be responsible for any damage caused to the builder by any delay or default on the part of the specialists. In the case of *Mitchell v. Guildford Union*, 1903, 68 J. P. 54, a builder undertook to do the whole of a certain piece of work for a certain sum, but part of it was to be done by specialists. The builder undertook to finish the work by a certain date unless he was hindered by (*inter alia*) delay on the part of the engineers or other specialists. The builder was not to be liable for any defects in works provided by the specialists, unless by reason of contributory negligence on his part, or his having paid any final balance to the specialists without first having the architect's written authority to do so. In the course of the work there was delay on the part of the specialists whereby the builder suffered damage. The builder brought an action for breach of contract against the building owners, alleging that under the contract and specification there was an implied promise on the part of the building owners that the delivering and pricing should be done at such reasonable times as to enable the builder to complete his work within a reasonable time thereafter, and that the building owners had broken

one or both of these implied promises. It was held that on the proper construction of the contract and specification there was no such implied promise, and that there was no breach of contract on the part of the building owners affording the builder a right to damages. (See also *Leslie v. Metropolitan Asylums District*, 1901, 68 J. P. 86.) As a general rule, however, the sub-contract contains a clause to the effect that "the sub-contractor shall pay to the contractor the sum of £ as liquidated damages, and not by way of penalty, per day for each day after the day of that the work shall not be finished or complete, and it shall be lawful for the said contractor to retain the said sums out of any money payable to the sub-contractor."

§ 10. Sub-contractor's liability for delay.—The liability of a sub-contractor for delay in completing the work he has undertaken to carry out depends on the terms of his contract with the head contractor. If he does not know that the head contractor has undertaken to do the work within a specified time, he will not be liable for the damages claimed and recovered by the employer for delay; but it is otherwise if it is shown that he knew what would be the consequences of delay. These principles may be illustrated by two cases. In the first of these (*Portman v. Middleton*, 1858, 27 L. J. C. P. 231) the plaintiff contracted with a person, who may be termed the employer, to repair a machine. Part of the machine consisted of a firebox which the defendant was employed to make within a certain time. Owing to the firebox not being supplied within the proper time, the plaintiff was unable to complete his contract with the employer, who sued for and recovered damages. It was shown, however, that the plaintiff would have had time to get another firebox elsewhere. The present action was brought to recover from the sub-contractor the damages paid to the employer. It was held that the damages paid could not be recovered, inasmuch as the terms of the contract with the employer were unknown to the sub-contractor, but that the plaintiff could recover from the defendant the sum of £82 which he had originally paid to the manufacturers, and the extra cost required in getting another firebox elsewhere. In the other case (*Hydraulic Engineering Co. v. McHaffie*, 1878, 4 Q. B. D. 670) the plaintiff company contracted with an employer to make a pile-driving machine.

The defendant was employed to make a part of the machine and to deliver the same by the end of August, when, as he knew, the plaintiff company had to make delivery to the employer. The defendant was a month late in making delivery of his part, with the result that the employer refused to accept the whole machine. As it was of peculiar construction, no market could be found for it, and it was therefore sold as old iron. It was held that the plaintiffs were entitled to recover the profits which they would have made on the sale to the employer and the expenditure thrown away on the other parts of the machine. From this it may be inferred that any sub-contractor for the execution of a portion of a contract for large works may find himself cast in very considerable damages if he is guilty of delay.

§ 11. **Negligence of sub-contractor.**—The liability of a sub-contractor for negligence in carrying out his work, or for damages which are caused as a result of that negligence, is very similar to the liability of a head contractor. Indeed this part of the subject might be considered wholly apart from the question of sub-contracts. As a general rule the contractor insists upon the insertion of an indemnity clause. The effect of such a clause will be presently considered.

When a contractor is employed to do a specified piece of work, and, even after the lapse of some time, damage is occasioned through his negligent omission, he may be held liable. So a wiring contractor might be held responsible for a short circuit which was caused by his faulty workmanship. In a Scotch case, the stock in a shop having been injured by an overflow of water from a house above, the proprietor of the house, who had been found liable for the damage caused, sued a plumber, who had been employed by him to alter and repair the pipes in the house four years before the overflow, for repayment of the sum of damages and expenses paid by him, in respect that the overflow had been occasioned through his insufficient and defective plumber work. It having been proved that the flow was due to an imperfectly secured pipe, the plumber was liable for the expense to which his employer had been put. (*M'Intyre v. Gallacher*, 1883, 4 Rettie, 64.)

If the sub-contractor is guilty of negligence or does defective work which renders the head contractor liable to the employer, he may have to pay damages to the head contractor; and if his

denial that his work was defective causes the head contractor to incur costs in defending himself against a claim by the employer, the sub-contractor may have to pay those costs as part of the damages. (See *Prince of Wales Dry Dock Co. v. Fownes Forge and Engineering Co.*, 1904, 90 L. T. 527.)

Before deciding whether a sub-contractor is liable, strict regard must be had to the terms of his employment. In a recent case (*Fulham Borough Council v. National Electric Co.*, 1906, 70 J. P. 55) a contract for the installation of electric light in a building to be used for the purposes of public baths and wash-houses provided (*inter alia*) "that the whole of the work is to be carried out in accordance with the existing rules as framed by the Phoenix Fire Office" Rule 5 of these rules provided that "Where a system of metal tubes is employed, the metal tubes should be earthed, except in those cases where earthing would not be desirable." A system of metal tubes was employed in the work, and, in consequence of such tubes not being earthed, a bather received an electric shock which caused his death. The local authority, which owned the baths, paid damages in respect of his death. In arbitration proceedings, in which the local authority sought to recover the sum so paid from the contractors, the arbitrator found that earthing the tubes would not have been desirable so far as risk of fire was concerned, but would in fact have been desirable so far as risk of accident to bathers was concerned. It was held, upon the hearing of a special case stated by the arbitrator, that inasmuch as the insurance company's rules were framed for the prevention of fire, and earthing was not desirable for that purpose, there had been no breach of contract, and that therefore the wiring contractors were not liable.

§ 12. **Accidents to sub-contractor's workmen.**—Questions of importance arise in relation to the liabilities of contractors and sub-contractors under the Workmen's Compensation Act, 1906. It is manifest that in a case where a sub-contractor employs men upon a big job he is exposed to a very serious risk. His men must often climb to dizzy heights in carrying out their work, and it is important to reflect that the sub-contractor has in general no power or authority to take any step which will minimise the risk of accidents.

The necessity for his entering into some definite arrangement with the head contractor was illustrated in a very recent case (*Greenwood v. Hawkins*, 1907, 23 T. L. R. 72). There a builder agreed to employ a sub-contractor to do the carving. The written order which constituted the contract concluded: "You agree in accepting this order to sign and send per return of post the enclosed accident indemnity." The document in question was to hold the builder harmless against all claims under the Workmen's Compensation Act, 1897, by any person in the defendant's employment upon such work in respect of any accident. The defendant did not return any answer to the order, nor did he sign the indemnity form, but he went on with the work. An accident happened to a workman employed by him upon the work, for which the contractor had to pay compensation under the Act of 1897. The contractor claimed indemnity from the defendant. It was held that the defendant executed the work upon the footing of the order given to him by the contractor and of the indemnity enclosed with it, and that he was liable to indemnify the contractor.

It may be mentioned, in this connection, that by Sect. 4 (1) of the Workmen's Compensation Act, 1906, while liability is expressly placed upon the head contractor where there is a sub-contract, nothing in the section is to be construed so as to prevent a workman recovering compensation under the Act from his immediate, instead of his more remote, employer. Further, the principle of indemnity is recognised in Subsect. (2).

Whatever may be the general law as to the responsibility of an employer for the negligence of a workman employed by a sub-contractor, it is clear that, if the works under construction are such as to involve risk to persons using the highway, the employer may be made directly responsible. Thus in *Halliday v. National Telephone Co.*, 1899, 2 Q. B. 392, the defendants had employed a plumber to connect tubes through which certain wires passed. The works were in a street. The plumber, who employed his own men, had to work to the satisfaction of the defendants' foreman. The plaintiff, who was passing by in the street, was injured by a spurt of molten metal, caused by the negligence of one of the plumber's men who was working with a man employed by the defendants. The plaintiff sued the National Telephone Company who sought to escape liability on the ground that the plumber was an

independent contractor. The Court of Appeal held that there was sufficient evidence that the defendants and the plumber were jointly engaged on the work, and that, even assuming the plumber was an independent contractor, the defendants were liable for having authorised dangerous work on a public highway.

CHAPTER XVIII

THE ENGINEER'S ASSISTANT

	PAGE		PAGE
§ 1. Generally	196	§ 4. Entire work of supervision not to be delegated ...	197
§ 2. Whether the contract gives any powers to an assistant	196	§ 5. Checking of materials on the site	198
§ 3. Responsibility of engineer for acts of assistant ...	197	§ 6. Duties of the engineer's assistant	198

§ 1. **Generally.**—The question how far an engineer may delegate his duties under a contract to a subordinate is one which often arises in practice. Where the work in hand is of any magnitude it is impossible for a principal to attend to every point himself. He must either employ an assistant, or else place an undue amount of confidence in the contractor and his workmen. As the engineer owes a duty to the employer to see that the contract is properly performed by the contractor, he must in general take the risk attaching to the employment of an assistant. As we have already seen (Chap. V., § 9, *supra*), an engineer may be held responsible for the negligence of his assistant. There are, however, certain other questions relating to the employment of an assistant which merit attention.

§ 2. **Whether the contract gives any powers to an assistant.**—As a general rule, an engineering contract makes no reference to the engineer's assistant, nor does it expressly confer upon the engineer any power to delegate his duties to a subordinate. (For an exception see Form IIA., Cl. 1A.) It is not uncommon, however, to find a clause in the conditions attached to an engineering contract to the effect that "the engineer shall mean Mr. A. B. or other the engineer for the time being, or from time to time duly authorised and appointed in writing by the employers to superintend the construction and erection of the works" (see, *e.g.*, Form IA., Cl. 1, *post*). Where such a clause is in force, it is obvious that the contractor need not

pay any attention to the orders of any engineer except the engineer named in the contract, or some other gentleman acting under the written authority of the employers. The most approved plan is to insert a clause in the contract conferring power upon the engineer to appoint an assistant and expressly limiting the duties of the assistant (see, *e.g.*, Form IIA., Cl. 1A, *post*). Sometimes, however, the contract provides for payment on certificate by "the engineer for the time being of the employer" or "the engineer in charge of the work." In such cases it is submitted that the granting of certificates will be the duty of the engineer in charge at the time when the work in question was done. Where, however, the chief engineer is referred to by name, the duty of certifying must be discharged by him and by him alone. (See *Ranger v. Great Western Railway*, 1854, 5 H. L. C. 72, 91.)

§ 3. **Responsibility of engineer for acts of assistant.**—We have seen that, generally speaking, the maxim *respondeat superior* applies to make the engineer liable for the acts and defaults of an assistant employed by him (see Chap. V., § 9, *supra*). It would be impossible for any responsible person to be allowed to shield himself behind a subordinate. In the case of an architect it has been decided that he is not entitled to rely implicitly on the efficiency of the clerk of the works. He must himself exercise reasonable supervision. In *Saunders v. Broadstairs Local Board*, 1890, 2 H. B. C. 159, engineers who were charged with negligence in the laying out and superintending the erection of certain sewers relied (*inter alia*) on the fact that the defendants had appointed an incompetent clerk of the works. This, however, was held to be no excuse for their negligence. (See this case further considered, Chap. V., § 9, *ante*.)

§ 4. **Entire work of supervision not to be delegated.**—It is not competent for an engineer to entrust the entire work of supervision to his assistant. A Scotch case may be usefully cited in this connection. An architect was charged with negligence in not having properly supervised the erection of a building. Owing to certain boards having been laid on damp mortar, dry rot set in some time after the building was completed. It was held that he was liable. The judges pointed out that an architect does not fulfil his duty of supervision merely by making occasional visits to the building and getting any parts

of the work set right which he happens to notice are not in accordance with the contract. His duty is to give such supervision as will reasonably enable him to certify that the work of the contractors is according to contract. (*Jameson v. Simon*, 1899, 1 F. 1211.)

The following passage from the judgment of the Lord Justice Clerk (at p. 1219) seems to accurately define the duty of an architect or engineer in carrying out the work of superintendence: "There may, of course, be many things which the architect cannot be expected to observe while they are being done—minute matters that nothing but daily or even hourly watching could keep a check upon. . . . But he, or some one representing him, should undoubtedly see to the principal parts of the work before they are hid from view, and if need be, I think he should require a contractor to give notice before an operation is to be done which will prevent his so inspecting an important part of the work as to be able to give his certificate upon knowledge, and not on assumption as to how work hidden from view had been done."

§ 5. **Checking of materials on the site.**—But the mere detailed checking of materials delivered on the site may be safely entrusted to a subordinate. For instance, in *Graham v. The Commissioners of Works* (1902, *Emden's Building Contracts*, p. 670) it appeared that an architect, having first ascertained that portions of the timber used were not of the stipulated quality, delegated the duty of particularising what timbers were to be removed to the clerk of the works. It was held that he was entitled to do so.

§ 6. **Duties of the engineer's assistant.**—If the engineer is unable to exercise sufficient personal supervision over the works while in progress, he may have to delegate this duty to an assistant. The duty of the assistant in such circumstances will be to secure, by constant watchfulness, the proper fulfilment of the contract. He will act under the engineer and report to him. The authority of the engineer's assistant would include, amongst his other duties, the exercise of authority to stop the progress of work condemned under the contract, to decide in construction emergencies, and to order necessary changes.

CHAPTER XIX

CONTRACTS RELATING TO THE SUPPLY OF ELECTRICITY AND MACHINERY.

	PAGE		PAGE
§ 1. Preliminary... ..	199	§ 4. What is "actual cost of generating light" ...	201
§ 2. Contracts to supply power	199	§ 5. Liability for fire and acci- dents	202
§ 3. What is a "complete instal- lation"	200	§ 6. Latent defects in machinery	203

§ 1. Preliminary.—Questions sometimes arise with regard to contracts for electricity and machinery. Many cases of this nature are discussed in the Courts, and brief notes of them are sometimes published in the weekly journals. But as they are of technical rather than legal interest, they do not often find their way into the Law Reports. It is proposed to consider the effect of some of the more important of these cases in the course of this chapter.

§ 2. Contracts to supply power.—Suppose there is a contract to supply power, what are the obligations of the party supplying it? In one case (*Bentley v. Metcalfe*, 1906, 2 K. B. 548) the plaintiffs agreed to become tenants of a room in a factory in which there was an engine, which was used to actuate the machinery in the building, including a machine in the room let to the plaintiffs, and the defendants agreed to supply power for the working of that machine. The question was whether the defendants were liable for an accident to one of the plaintiff's workmen. The accident arose from the power which worked the plaintiff's machine, doing so in such a violent manner and at such a velocity that the drum of the machine was burst, and a workman was killed by being struck by one of the pieces. As employers, the plaintiffs were liable to pay compensation to the widow of the workman, and they brought an action to recover as damages the sum which they had to pay.

It was decided by the Court of Appeal that the obligation of the defendants to supply power did not arise upon a demise, but upon a specific contract which involved, in the absence of special conditions, that the power supplied should be reasonably fit for the purpose for which it was supplied, and that the defendants were liable for the consequences of a breach of that contract. The following passage from the judgment of Cozens-Hardy, L.J., serves to explain the reason of the decision: "There was, in fact, a purchase of something, whatever it may be called, and it seems to me that the principle which governs the relation of the parties upon a purchase and sale, namely, that the article bought should be fit and proper for the purpose for which it is to be used, is equally applicable to the supply of power." Where, as frequently happens in the case of a tenement factory, the owners of the factory supply power from a central plant to a large number of independent manufacturers, they would do well to consider the advisability of so limiting their liability that they cannot be sued for the damages caused by the main engine racing or other accident. The illustration above given relates to the supply of power by shafting. Where electricity is supplied from a central source in one factory, it may be well for the party supplying it to make special provision for a breakdown or sudden overload.

§ 3. What is a "complete installation."—The use of technical terms in contracts for electrical work is very common, but is not unlikely to lead to confusion. In an unreported case (*Cort v. Holford*) heard by the judge at the Mayor's Court on February 12, 1907, a question arose as to what is meant by a "complete installation" in relation to the supply of electricity. The plaintiffs quoted for the electrical part of an installation which was to be used for lighting a house. The dynamo, which was to charge accumulators, was to be worked by a 3 h.p. engine which the defendant had in his possession. The plaintiffs agreed to provide a complete installation for a certain sum, that sum being made up of a number of items, including accumulators, switchboard, and other fittings, but apparently not including a cut-out or shunt resistance. The main point in the case was whether a cut-out and a shunt resistance were necessary parts of a complete installation. If so, they could not be charged for as extras. It was

contended on the part of the defendant that, even given a good 3 h.p. engine, a cut-out and resistance were necessary. The plaintiffs, however, replied that when making their estimate they assumed that the engine was new; that if it had been new, a cut-out would not have been necessary, and that they were therefore justified in charging for cut-out and resistance as extras. They also alleged that since the specification was made out the defendant had demanded an increase in the size of the battery. Had they known that the battery was to be larger, this would have influenced their judgment in deciding whether to provide a cut-out. In an action for the price of the work done, the judge decided this point in favour of the defendant, laying it down that for a complete installation a cut-out and shunt resistance should always be supplied. He was not, apparently, impressed with the argument that the increase in the size of the battery would have affected the plaintiffs' judgment. (For other cases as to the meaning and significance of the word "complete," see Chap. VI., § 27 *ante*.)

§ 4. What is "actual cost of generating" light.—Where a contract for the supply of electricity provides that the person supplying shall be paid the "actual cost of generating," questions may arise as to whether this includes the cost of transmission and depreciation of plant. In a case recently discussed in the Privy Council (*Municipality of Bulawayo v. Bulawayo Waterworks Co.*, 1908, *The Times*, March 20) the defendants agreed to supply electricity for street lighting and everything necessary for supplying electricity to the street lamps.

The remuneration clause was in the following form: "In consideration whereof the municipality undertakes and agrees to pay to the said contractors or to their assigns at such rate as will yield to the contractors a return equal to 10 per cent. over the actual cost of generating the light, payments to be made quarterly." The discussion centred round the meaning of the term "actual cost of generating the light." The Privy Council held that the term "generating the light" was intended to include not only the generation of the current, but also the transmission of the current to the points where the light is finally evolved. As to the "actual cost of generating the light," they expressed the view that this

covered and included all that the production of the light cost the contractors, and nothing more. With regard to depreciation, they adopted the words of the Chief Justice of the Cape of Good Hope, who said: "The cost of the plant forms part of the actual cost of generating the light, but, as the use of that plant would extend over several years, it could obviously not have been intended that the whole of that cost shall be charged during the first quarter of the contract. But the same objection does not exist to a distribution of the actual cost of the plant over the whole period of the life of such plant. The effect of allowing a certain sum for depreciation in the quarterly accounts of the plaintiffs would simply be to distribute the actual cost of the plant over the whole period during which it would, in the ordinary course, be of any service in the generation of electricity and light." They also came to the conclusion that the cost of insurance, which came within the same category as rent, rates, and taxes, ought to be allowed.

§ 5. **Liability for fire and accidents.**—In cases where the works, on completion, are a source of danger to third persons, the employer may sometimes seek to recover damages from the contractor for injuries so sustained. To determine the question whether the contractor is so liable it is necessary to consider the terms of the contract with some care. To take a clear case: if the contract provided that dangerous machinery was to be guarded, the contractor would be held liable for any accident arising owing to his omission to provide a guard. Questions of this kind sometimes arise in relation to wiring contracts. In one case (*Fulham Borough Council v. National Electric Co.*, 1906, 70 J. P. 55) a contract for the installation of electric light in a building to be used for the purposes of public baths and wash-houses provided (*inter alia*) "that the whole of the work is to be carried on in accordance with the existing rules as framed by the Phoenix Fire Office." Rule 5 of these rules provided that "Where a system of metal tubes is employed, the metal tubes should be earthed, except in those cases where earthing would not be desirable." A system of metal tubes was employed for the work, and in consequence of such tubes not being earthed a bather received an electric shock which caused his death. The local authority, which owned the baths, paid damages in respect of his death. In

arbitration proceedings, in which the local authority sought to recover the sum so paid from the contractors, the arbitrator found that earthing the tubes would not have been desirable so far as risk of fire was concerned, but would in fact have been desirable so far as risk of accident to bathers was concerned. It was held, upon the hearing of a special case stated by the arbitrator, that inasmuch as the insurance company's rules were framed for the prevention of fire, and earthing was not desirable for that purpose, there had been no breach of contract, and that therefore the wiring contractors were not liable. (See this case also considered, Chap. XVII., § 11, *ante*.)

§ 6. **Latent defects in machinery.**—The law as to the rights of the parties on the sale and purchase of machinery is now to be found in the Sale of Goods Act, 1893. By s. 14 of that Act it is provided that: "Subject to the provisions of this Act. . . there is no implied warranty or condition as to the quality or fitness for any particular purpose of goods supplied under a contract of sale, except as follows :

"(1) Where the buyer, expressly or by implication, makes known to the seller the particular purpose for which the goods are required, so as to show that the buyer relies on the seller's skill or judgment and the goods are of a description which it is in the course of the seller's business to supply (whether he be the manufacturer or not) there is an implied condition that the goods shall be reasonably fit for such purpose; provided that in the case of the sale of a specified article under its patent or other trade name, there is no implied condition as to its fitness for any particular purpose.

"(2) Where goods are bought by description from a seller who deals in goods of that description (whether he be the manufacturer or not) there is an implied condition that the goods shall be of merchantable quality; provided that if the buyer has examined the goods there shall be no implied condition as regards defects which such examination ought to have revealed.

"(3) An implied warranty or condition as to quality or fitness for a particular purpose may be annexed by the usage of trade.

"(4) An express warranty or condition does not negative a warranty or condition implied by this Act unless inconsistent therewith."

The effect of Sub-sect. (1), *supra*, is to make the vendor liable for latent defects, *e.g.*, defects which would not be discovered on an examination of the article. (See definition, Chap. VI., § 34, *ante*.) In *Randell v. Newson*, 1877, 2 Q. B. D. 102, the facts were that the plaintiff ordered and bought of the defendant, a coachbuilder, a pole for the plaintiff's carriage. The pole broke in use, and the horses became frightened and were injured. In an action for the damage the jury found that the pole was not reasonably fit for the carriage, but that the defendant had been guilty of no negligence. It was held that the plaintiff was entitled to recover the value of the pole, and also for the damage to the horses, if the jury, on a second trial, should be of opinion that the injury to the horses was the natural consequence of the defect in the pole. The important point in the case was that the vendor of the carriage was held liable for a defect of which he did not necessarily have any knowledge.

CHAPTER XX

ARBITRATIONS AND AWARDS

	PAGE		PAGE
I. PRELIMINARY.		V. THE FEES OF AN ARBITRATOR.	
§ 1. The definition of an arbitration	206	§ 18. Preliminary observations as to fees ...	216
II. ARBITRATION BY ORDER OF COURT.		§ 19. How an arbitrator may enforce his claim for fees	216
§ 2. How there can be arbitration by order of Court	207	§ 20. Power and duty of taxing officer as to fees	217
§ 3. Two kinds of reference by order of Court ...	207	§ 21. Duty to specify items ...	217
§ 4. Appeal on a compulsory reference	208	§ 22. Fees should not be exorbitant	218
III. ARBITRATIONS BY CONSENT OUT OF COURT.		§ 23. What fees an engineer arbitrator may charge	219
§ 5. Ordinary arbitrations generally	208	VI. PROCEEDINGS BEFORE THE ARBITRATOR.	
§ 6. Submission defined ...	208	§ 24. Conduct of proceedings	220
§ 7. Enforcing submission ...	209	§ 25. Conduct of arbitrator ...	221
§ 8. What may be referred to arbitration... ..	209	§ 26. Evidence in an arbitration	221
§ 9. Writing not necessary if Arbitration Act not to apply	210	§ 27. Arbitrator may consult skilled persons ...	222
§ 10. Jurisdiction of Courts not ousted	210	VII. THE ESSENTIAL FEATURES OF AN AWARD.	
§ 11. Arbitration clause strictly construed ...	212	§ 28. Generally	223
§ 12. Effect of arbitration clause on sub-contractors	212	§ 29. Form of an award ...	223
§ 13. When Court will revoke a submission	212	§ 30. Requisites of a valid award	224
IV. THE APPOINTMENT OF AN ARBITRATOR.		(a) An award must not exceed the submission	224
§ 14. Appointment of prejudiced person	214	(b) An award must extend to all matters mentioned in the submission	225
§ 15. Submission to single arbitrator	215	(c) An award must be certain	226
§ 16. Submission to two arbitrators... ..	215	(d) An award must be final	226
§ 17. Death, etc., of arbitrator	215	(e) An award must not be impossible, unreasonable, inconsistent, or illegal	227

	PAGE		PAGE
§ 31. Time for making an award	227	IX. SETTING ASIDE AN AWARD.	
§ 31A. Costs of an arbitration	228		§ 34. Grounds for setting award aside
VIII. THE EFFECT OF AN AWARD.		§ 35. Corruption, misconduct, or bias... ..	231
§ 32. How far binding	229	§ 36. Statement of special case	231
§ 33. Enforcing an award	230	§ 37. Requisites of a special case	232

I. PRELIMINARY.

§ 1. The definition of an arbitration.—By arbitration is meant the submitting of disputes to some person or persons other than the ordinary tribunals. The first element of a submission to arbitration is that it should show an intention of the parties to be bound by the decision of the arbitrator. But a mere agreement between two persons to be concluded by the decision of a third would not, in itself, constitute that person an arbitrator. To give him that character there must be a “difference” between the parties, or his duties must involve the performance of judicial functions.

In *Scott v. Liverpool Corporation*, 1858, 28 L. J. Ch. 230, the terms of a contract for erecting waterworks for the city of Liverpool were under consideration. The document contained a forfeiture for default clause which provided that, on the termination of the contract by forfeiture or default, the engineer “shall fix and determine what amount, if any, is then reasonably earned by the contractor in respect of work actually done, and in respect to the value of any materials, implements or tools provided by the contractor and taken by the corporation . . . and the said engineer shall be at liberty to authorise by his certificate the said corporation to deduct the damages, losses, costs, charges and expenses in his opinion incurred by them in consequence of the premises, or to which they may be put or liable, together with the forfeiture, if any, incurred by the said contractor, from any sum which would become due to the said contractor.” It was held that this was not an arbitration. Lord Chelmsford said: “No dispute can arise in such a case, everything being dependent on the decision of the individual named; until he has spoken, no right can arise which can be enforced either at law or in equity. . . . Where the contract provides for the determination of the claim and liabilities of the contractors by the

judgment of some particular person, this would be incorrectly called a provision for submission to arbitration."

II. ARBITRATION BY ORDER OF COURT.

§ 2. **How there can be arbitration by order of Court.**—Although a large number of cases are commenced in the King's Bench Division, and are intended by the parties to be heard by a judge alone, or by a judge with a jury, it does not follow that they are all so tried.

Sect. 13 of the Arbitration Act, 1889, provides that subject to any rules of Court, and to any right to have particular cases tried by a jury, the Court or a judge may refer any question arising in any cause or matter (other than a criminal proceeding by the Crown) for inquiry or report to any official or special referee. It is also provided (by Sect. 14 of the same Act) that in any such cause or matter, (1) if all the parties interested who are not under disability consent, or (2) if the cause or matter requires any prolonged examination of documents, or any scientific or local investigation which cannot, in the opinion of the Court or a judge, conveniently be made before a jury, or conducted by the Court through its other ordinary officers, or (3) if the question in dispute consists wholly or in part of matters of account, the Court or a judge may at any time order the whole cause or matter, or any question or issue of fact therein, to be tried before a special referee or arbitrator, agreed on by the parties, or before an official referee or officer of the Court.

§ 3. **Two kinds of reference by order of Court.**—It will be observed that the Court is thus given two distinct powers. A matter may be referred merely for inquiry and report, or else the referee or arbitrator may be asked to adjudicate upon it. The order made by the judge should indicate the way in which the matter is referred. If it is only for report, the referee makes his report to the judge by whom he was requested to make it, and the judge may adopt, or partially adopt, or wholly reject it, according as he thinks fit. If the judge adopts it, it may then be enforced as if it were the judgment of the Court. In executing an order of reference addressed to him by the Court the referee has power to order judgment to be entered for any or either party. The order

for the reference may be made on such terms as to costs as the authority making it thinks just; and in the absence of any provision thereon in the order of reference, the referee, or arbitrator, has full power to deal with costs. The power which the High Court judge has in cases which come before him may be exercised by a county court judge in matters which are within his jurisdiction.

§ 4. **Appeal on a compulsory reference.**—A party who is aggrieved by the decision of an official or special referee may appeal from that decision in the same manner and for the same reasons as he might apply to have the verdict of a jury set aside. (Arbitration Act, 1889, Sect. 15 (2).)

III. ARBITRATIONS BY CONSENT OUT OF COURT.

§ 5. **Ordinary arbitrations generally.**—Hitherto we have been dealing with arbitrations which are held by order of the Court. It will be convenient to consider the law relating to voluntary references to arbitration.

The law with regard to references or arbitrations by consent out of Court will be found stated in the Arbitration Act, 1889, Sects. 1—12, and in the First Schedule to that Act. The engineer who wishes to be thoroughly familiar with the law of arbitration should make a careful study of this measure. But it is conceived that the bald statement of the law which is to be found in the Act itself will hardly be sufficient for the engineer who is called upon to act as arbitrator. It is therefore proposed to simplify the language of the Act as far as possible and illustrate its meaning by reference to decided cases.

Parties may agree to submit their differences to arbitration, and Sect. 1 of the Arbitration Act, 1889, provides that a submission unless a contrary intention is expressed therein, is irrevocable except by leave of the Court or a judge.

§ 6. **Submission defined.**—By Sect. 27 a “submission” means a written agreement to submit present or future differences to arbitration whether an arbitrator is named therein or not.

The “arbitration clause” in an engineering contract or any other agreement is a submission to arbitration. (For form of

arbitration clause, see Form IIA., Cl. 47, *post.*) The object of the above provision is to sanction such a clause which appears, at first sight, to oust the jurisdiction of the Courts or, at any rate, to stay proceedings at law until the matter in dispute has been dealt with by the arbitrator. We shall see hereafter (p. 210, § 9, *infra*) what may be the effect of so ousting the jurisdiction. It should be pointed out, in this connection, that the ordinary clause in a contract providing that the engineer's certificate shall be conclusive as to the work done, is not a submission to arbitration. (See Chap. XIV., § 8.)

§ 7. **Enforcing submission.**—The Court has full power to enforce the arbitration clause in an agreement; and the way in which the Court will exercise that power may be thus illustrated. Suppose an employer and a contractor enter into a contract, which provides that all disputes which may thereafter arise shall be referred to an arbitrator. A dispute having arisen, the employer, wholly ignoring the arbitration clause—his self-chosen tribunal—issues a writ against the contractor in the High Court of Justice. In such a case it would be competent for the contractor, before delivering any pleading or taking any other step in the action, to apply to the Court to stay the action, and the Court or Judge, if satisfied there was no sufficient reason why the matter should not be referred in accordance with the submission and that the contractor was and still remained willing to do all things necessary to the proper conduct of the arbitration, might make an order staying the proceedings. It should be noted that the jurisdiction is not ousted; the proceedings are only stayed pending the reference. (As to what amounts to sufficient reason, see *post*, § 13.)

It should be mentioned that a reference by agreement will also be enforced although no arbitrator is actually named therein, as the Court has power in such a case to appoint an arbitrator if one cannot be agreed upon.

§ 8. **What may be referred to arbitration.**—It is important to notice that the Court has a discretion, and it may be stated generally that a reference to arbitration will be refused in a case where fraud is charged and the person alleged to be guilty of fraud is anxious to have a public inquiry. But the fact

that the question in dispute is really a matter of law, is not of itself a sufficient ground for refusing to stay an arbitration (but see § 13, *infra*). Nor will the Court refuse to allow the matter to go to arbitration, on the mere ground that the arbitrator agreed upon might be suspected of a bias in favour of one of the parties.

Without going into lengthy particulars, it may be stated that all matters in dispute concerning any personal chattel, personal wrong, or breach of contract, may be referred to the decision of an arbitrator. Thus it appears from the case of *Sadler v. Smith*, 1870, 39 L. J. Q. B. 17, that a referee appointed by the parties in a boat race would seem to be in the position of an arbitrator. As a general rule, however, the services of an arbitrator are usually required in cases which involve a lengthy inquiry and the examination of a large number of witnesses.

§ 9. Writing not necessary if Arbitration Act not to apply.—Writing is not essential to a submission, and it is competent to the parties to agree by word of mouth that some third person shall decide a question in dispute between them. Such a reference, however, is open to grave objection, as the provisions of the Arbitration Act do not apply to it, and the award of the arbitrator cannot therefore be made a rule of Court. Should the engineer ever have to consider whether or not a dispute shall be referred to arbitration he would always do well to advise that the agreement to refer be reduced into writing and that it be stamped with a 6*d.* stamp. No stamp is necessary, however, on an agreement to refer, the subject-matter whereof is not of the value of £5.

§ 10. Jurisdiction of the Courts not ousted.—The fact that the jurisdiction of the Courts is not really ousted, demands some further explanation. Mr. Redman in his *Arbitrations and Awards* points out that: "It is a common practice to insert in contracts for works, covenants or agreements providing that any differences or disputes thereafter arising between the parties shall be referred to arbitration. Agreements of this kind do not deprive the Courts of jurisdiction over the matters to be referred; nor will the addition of a covenant not to sue in respect of such matters prevent either party from bringing them into Court" (*loc. cit.*, p. 52).

It is established that on grounds of public policy, any agreement to oust the jurisdiction of the Courts is void. These views were expressed by Sir George Jessel in the case of *Ripley v. Great Northern Railway*, 1875, 31 L. T. 869.

“But,” it may be asked, “how is this statement of the law compatible with what now appears in the Arbitration Act, namely, the power which the Courts have to compel parties to go to arbitration?” A little reflection will show that the jurisdiction of the Court is not really ousted. It is merely provided that before seeking a remedy at law the parties have an opportunity of referring to their own tribunal, and an absolute discretion is reserved to the Court to say whether the case is one for arbitration or not.

The way in which an arbitration clause may be a condition precedent is well illustrated by the case of *Westwood v. Secretary of State for India*, 1863, 1 N. R. 262. There a contract contained a clause that the engineer for the time being should have power to make such additions to or deductions from the work as he might think proper, and to make such alterations and deviations as he might judge expedient during the progress of the work; and if by reason thereof he should consider it necessary to extend the time for the completion of the work, or otherwise, the time for completion should be deemed to be so extended; and that the value of all such additions, deductions and deviations should be ascertained and added to or deducted from the amount of the contract price; that in the event of the contractors failing to complete their work within the specified time they should pay £5 as liquidated damages for each day between the day specified for completion and the day when the work should be completed and ready for delivery. It further provided that if any doubt, dispute, or difference should arise concerning the work or relating to the quantity or quality of the materials employed, or as to any additions, alterations, deductions or deviations made to, in or from the work, the same should from time to time be referred to and decided by the engineer, whose decision should be final and binding on both parties. The defendant, by directing extra work, rendered the performance of the contract by the contractors within the stipulated time impossible. In an action to recover the amount of extra work, it was held that the ascertainment of the value of the extra works, that is to say, an inquiry in the nature of an arbitration,

was a condition precedent to the right of the contractors to maintain their action.

§ 11. **Arbitration clause strictly construed.**—An arbitration clause will be strictly construed. It will not extend to matters not included in it. So in *Mansfield v. Doolin*, 1868, 4 Ir. R. C. L. 17, a building contract contained the usual clause providing that in case of differences between the contractor and his employer, the award in writing of the architect in all matters connected with the works, or their execution, or the meaning of the plans or specifications, should be final and conclusive, so far as the law permitted, and such award should be a condition precedent to any proceeding whatever at law or in equity in respect of any matter or thing which could or might be the subject of such award. It was held that the architect's award was not a condition precedent to an action by the employer against the contractor for not completing the buildings and for leaving them unfinished. Such matters did not come within the reference clause. As to whether the arbitration clause in a contract for works applies to extras or not, see Chap. XII., § 11, *ante*.

§ 12. **Effect of arbitration clause on sub-contractors.**—Questions arising between contractor and sub-contractor may sometimes be determined by the arbitration clause. In *Goodwins v. Brand*, 1906, 7 F. 995, a contractor for certain work employed a sub-contractor for part of it. The sub-contract provided that the work was to be executed according to "plans and specifications," which included a "general specification" forming part of the original contract. This "general specification" contained an arbitration clause. Questions having arisen between the contractor and the sub-contractor, it was held that the arbitration clause did not apply to disputes which only concerned them and not the building owners; but that it applied so as to make decisions in an arbitration between such owners and the contractor binding on the sub-contractor.

§ 13. **When the Court will revoke a submission.**—A submission to arbitration may, in effect, be revoked by the Court in refusing to stay proceedings commenced by one of the parties to the reference. The exercise of the jurisdiction to stay an action is a matter of discretion with the Court. The

Court has to be satisfied according to the varying terms of each particular case; "that there is no sufficient reason why the matter should not be referred in accordance with the submission" (*Vawdrey v. Simpson*, 1896, 1 Ch. 166). The mere fact, however, that the point at issue is one of law which can be more conveniently settled by the Court is not (as we have seen, § 8, *supra*) of itself sufficient to make the Court stay an action (*Barnes v. Youngs*, 1898, 1 Ch. 414). Nevertheless, actions have been stayed on this ground (see, *e.g.*, *Re Carlisle*, *Clegg v. Clegg*, 44 Ch. D. 200). The law was thus summarised in *Workman v. Belfast Harbour Commissioners*, 1899, 2 Ir. R. 234: "The Court will not stay the action when it is of opinion (1) that the plaintiff is suing upon substantial and *bonâ fide* causes of action which do not come within the clause; or (2) that there are serious and difficult questions of law involved in the action not proper to be submitted to the determination of an arbitrator; or (3) that a cause of action based upon fraud actual or constructive, is *bonâ fide* sued upon; or (4) that, in the exercise of its judicial discretion, it ought not to refer the matters in dispute to arbitration. Where the matters in dispute had been agreed to be referred to the engineer of one party, the other objected to proceed to arbitration, and sought to enforce his remedy by action on the ground that the engineer was in substance a judge in his own cause. The Court, however, stayed the action, and allowed the arbitration to proceed (*Ives v. Willans*, 1894, 2 Ch. 478). Referring to the arbitration clause, by which the contractors had bound themselves to abide by the decision of the engineer, Lindley, L.J., said: "How does it happen that a man will agree to be bound by such a very stringent provision? The explanation of it is to be found in two circumstances. First of all, competition for this kind of work is very keen, and contractors compete with each other; and in the second place, it has been ascertained by long experience that engineers of the highest character may be trusted, and, when a contractor enters into such a very stringent provision as this, he knows the man he has to deal with. I take it that a contractor such as Mr. Willans would not submit to be bound by a clause of that kind unless he had confidence in the engineers, and unless the engineers were persons of the highest character. If he had not confidence he would not submit to it; but knowing the engineers, he does submit to it, because he has confidence in them and

knows that they can be trusted, even although it is their duty to look after the work of the contractor, to deal fairly with him in case of a dispute which is in substance, although not in form, a dispute between the contractor and themselves." (See further as to bias of engineer, § 35, *infra*.)

IV. THE APPOINTMENT OF AN ARBITRATOR.

Having shortly considered the various ways in which an arbitrator may be called upon to act, it next becomes essential to consider who may act as an arbitrator and how he is to be appointed.

§ 14. **Appointment of prejudiced person.**—While unprejudiced persons should always be chosen, the parties are at liberty to choose whom they will, or to name some indefinite person, *e.g.*, the President of the Institution of Civil Engineers. Further, the fact that the arbitrator had some bias at the time of his election would not, if the fact were known to both parties, be sufficient to avoid his appointment. Where, however, it turns out that, unknown to one or both of the parties who submit to be bound by his decision, there are some circumstances in the situation of the arbitrator which tend to produce a bias in his mind, he is an improper person to act as an arbitrator (*Ranger v. Great Western Railway*, 1854, 5 H. L. C. 89). Even in the common case where either party appoints an arbitrator, who are empowered to appoint an umpire in case they cannot agree, the arbitrators so appointed should be without *bias*. In a case decided in 1845, the appointment of the surveyor of a railway company to act as their arbitrator in a dispute was held to be objectionable, and in a much later case the Court threatened to revoke a submission where an insurance company appointed their own manager to act as their arbitrator.

In a Scotch case, a firm of contractors who had undertaken to build a public building agreed with the town council that a particular gentleman should act as arbitrator in case of dispute. This gentleman subsequently became elected "dean of guild," and thereby *ex-officio* a town councillor. It was held that this disqualified him from acting as arbitrator (*Edinburgh Magistrates v. Lownie*, 1903, 5 F. 711).

The case of *Belcher v. Roedean School*, 1901, 85 L. T. 469,

shows that the Court will be reluctant to revoke a submission to arbitration on the ground of interest. In that case a contract provided that all disputes and differences arising on a building contract were referred to the decision of the architect appointed by the building owners. The builders issued a writ against the architect for damages for fraud and misrepresentation, and took out a summons to revoke the submission to arbitration. The architect declined to admit the charges made against him. It was held that an application to revoke a submission was one to be granted with great caution, and that the submission ought not to be revoked. (See further, § 35, *infra*.)

§ 15. **Submission to single arbitrator.**—If on a submission no other mode or reference is provided, it is to a single arbitrator; but the parties can agree that there shall be two arbitrators, and if so the two arbitrators may appoint an umpire within the period during which they have power to make an award. In the case (a) where the submission provides for a reference to a single arbitrator, and all the parties do not, after differences have arisen, concur in the appointment of an arbitrator; or (b) if an appointed arbitrator refuses to act, or is incapable of acting, or dies, and the submission does not show that it was intended that the vacancy should not be supplied and the parties do not supply the vacancy, any party may serve the other parties with a written notice to appoint an arbitrator. If the appointment is not made within the proper time the Court may make it (Arb. Act, 1889, s. 5).

§ 16. **Submission to two arbitrators.**—As we have seen, however, a reference is frequently made to two arbitrators, one to be appointed by each party. Provision is made by the Arbitration Act for the failure of one party to make the appointment. If one party to the arbitration were to refuse to make any appointment, the arbitrator selected by the other might sit as sole arbitrator and decide the matters in dispute, subject, however, to a power reserved to the Court to set aside any appointment by the other.

§ 17. **Death, etc., of arbitrator.**—If the person chosen to decide matters in dispute refuses to act, or die, it is competent

for one party to call upon the other to appoint a new arbitrator. If he refuse to do this, the Court may then make the appointment.

V. THE FEES OF AN ARBITRATOR.

§ 18. Preliminary observations as to fees.—An arbitrator is at liberty to fix his own fees if nothing is said about them at the time of his appointment. But it is much better for all parties to have the amount of the fees clearly settled beforehand, either in a lump sum or, as is more usual, at so much a day for each day during which the arbitrator has to sit.

In selecting an arbitrator who is to adjudicate in a technical case, the parties naturally seek to employ one whose professional eminence and familiarity with the subject-matter of the dispute will tend to render his decision satisfactory to both parties; but they forget that for an engineer to undertake the burden of a reference involves a very considerable demand upon his time. Not only does the actual hearing involve his attention during business hours for many days, but his duties often involve a visit to the *locus in quo*, which may be in a remote country district. These facts do not seem to be considered when those who employ an arbitrator complain that his charges are excessive.

§ 19. How an arbitrator can enforce his claim for fees.—In the absence of an express promise by the parties to the reference to pay, a *legal* arbitrator cannot recover his charges by action. It was held, however, in the reference of a mercantile dispute to *lay arbitrators and their umpire* that there is an implied contract, upon which an action will lie, to pay reasonable remuneration. But in addition to the right to sue, an engineer arbitrator has another effective way of enforcing his just claim for fees. He may exercise a lien upon the award and submission, and may retain them until his charges have been paid (see *Ponsford v. Swain*, J. & H. 433). The usual practice, therefore, is for the arbitrator to notify to the parties the amount of his charges, and to refuse to deliver the award or communicate its contents until they are paid. This obviates all disputes, and the practice has received repeated judicial sanction.

§ 20. **Power and duty of taxing officer as to fees.**—Sometimes a taxing officer is called upon to decide, under s. 15 (3) of the Arbitration Act, 1889, as to the fees of an arbitrator. It has been decided that upon such a taxation the taxing officer is not entitled, if the evidence all goes to show that in the opinion of persons in the same profession the charges made by the arbitrator are for a person in his position fair, to disregard that evidence and to reduce the remuneration to such an amount as is in his opinion fair (*Mason, Ltd. v. Lovatt*, 1907, 23 T. L. R. 486).

In that case a quantity surveyor had acted as arbitrator in a dispute between a firm of plumbers and a builder. The reference lasted for twenty-two days, and the arbitrator was subsequently employed for thirteen days in considering the case. He also took the advice of solicitor and counsel on certain points of law. He charged £527 10s., which included ten guineas a day for thirty-five days, and £110 6s. for fees paid for legal advice. The district registrar, disregarding the evidence of surveyors in good position, held that five guineas a day was sufficient, and reduced the above amount by £283 0s. 6d. The Court of Appeal set this judgment aside. Dealing with the surveyor's remuneration, Lord Justice Moulton said: "The evidence is all one way that the price charged by him was fair for a person belonging to his profession and occupying the position which he occupied in that profession. The district registrar was not entitled to set that evidence aside. The true standard, in my opinion, of what should be paid in such a case is what a fair-minded man in the position of the referee would have required if a bargain had been freely made beforehand. In this case there is no ground for supposing the referee has charged more than would have been required by a fair-minded man in a free bargain." (See also § 23, *infra*.)

§ 21. **Duty to specify items.**—The duty of an arbitrator to specify the items in his bill was clearly laid down in *Gilbert v. Wright*, 20 T. L. R. 164. In that case there was a motion to set aside an award on the ground that it was bad, inasmuch as the costs of the umpire and arbitrators were unreasonable and excessive, and ought to be referred by the Court for taxation. The portion of the award complained of on this ground was: "I further award, adjudge, and settle the

amount of the costs of and incident to the award, including with my own costs as umpire the costs of the said . . . as arbitrators, at the sum of £333 11s. 9d., which costs I further award, adjudge, and direct, shall be paid to me at . . . upon taking up this my award." In giving judgment, Mr. Justice Wills said: "I feel very strongly that although it is quite possible that the sum awarded for costs may be explained as being quite reasonable, it cannot be right conduct on the part of an umpire, however *bonâ fide* he may be, to render it impossible to say how much he was awarding to himself for costs, and how much to the arbitrators. It is known, or, at any rate, I, with my experience, know, that it is the practice of certain arbitrators, especially arbitrators of a profession which shall be nameless, to value their services very highly, and to charge for their services fees considerably higher than the fees charged by members of the legal profession. I am not suggesting that my remarks apply to the case before me, but I am quite satisfied that it cannot be proper conduct for an umpire to mix up the costs in such a manner as to prevent the amount of his charges being known. The award must be sent back to the umpire." The profession to which the learned judge was alluding was probably the engineering profession, the members of which will be well advised to state the amount of their fees, making quite clear the amount which is to be allotted to the arbitrators and the umpire.

§ 22. Fees should not be exorbitant.—Though an arbitrator may fix his own charges, he is not at liberty to fix an exorbitant sum. If he does so, and a party in order to take up the award is obliged to pay, or pays involuntarily, such unreasonable amount, the party may recover the overcharge by action for money had and received; for, the money being extorted under a species of duress contrary to the law, an action lies to recover the excess (*Fernley v. Branson*, 1851, 20 L. J. Q. B. 178). The Court, however, has no summary jurisdiction over an arbitrator to compel him to submit his costs to taxation, or to compel him by attachment to refund the amount received by him beyond what is allowed on taxation (*Dossett v. Gingell*, 1841, 2 M. & G. 870).

As between the parties to the arbitration, however, the Court will consider the question whether the arbitrator's fees are excessive. So, if one of the parties has paid an excessive

claim for the arbitrator's charges on taking up the award, and he is entitled to the costs of the award, he is not entitled to recover from the opposite party more than a reasonable sum for the arbitrator's fee, and the master on taxation between party and party may tax off the excess. In such a case the party must resort to his remedy by action against the arbitrator to recover the difference between the amount paid and the amount allowed on taxation.

§ 23. What fees an engineer arbitrator may charge.—As to the amount which an engineer is entitled to charge for his services as arbitrator, this appears to be a question of degree, and one which must be settled in reference to the particular facts of the case, and the question whether the engineer is called upon to travel far. In the case of *Re Westwood*, 1886, 2 T. L. R. 667, a fee of ten guineas a day was considered reasonable; but matters have advanced since that date, and the Court will now refuse to interfere—and quite rightly—when arbitrators allow themselves very much higher fees.

In one case the fees of two arbitrators and an umpire amounted to £476 12s. The actual hearing of the arbitration lasted two days, for which the contractors charged 25 guineas a day, and the umpire, besides being present at the arbitration, went down to Wales and spent a day in viewing the waterworks which were the subject-matter of the arbitration. The taxing master disallowed £119 5s. It was held by the Court of Appeal that all the fees should be allowed (*Llandrindod Wells Water Co. v. Hawksley*, 1904, 20 T. L. R. 241).

In giving judgment the Master of the Rolls said: "The parties must be taken to have known the position of the persons they chose, and as they refrained from making any special bargain with them, they must be taken to have intended the natural result of employing gentlemen of such eminence—viz., that they would not be paid at the ordinary rate for persons of less experience. *Primâ facie* a court of law is not the proper tribunal for determining the amount of remuneration to be paid in such a case. The question could only be brought before the Court by making a charge in the nature of extortion. The plaintiffs relied on the bill of costs—drawn up as between them and the district council—and the certificate of the taxing master. Those matters, however, were *res inter*

alios acta, and the question which the taxing master had to decide was different from the question to be dealt with in this case. The only evidence is that of the defendants themselves and other witnesses called by them. That evidence is that the fees are fair and reasonable, and are not higher than anyone would have had to pay who made a bargain with the defendants. The learned judge has applied a wrong standard. I see no reason why the defendants should be bound to take less than they would have been willing to accept had they been asked to make a bargain."

Although this case was decided in favour of the engineers, it points the moral that an agreement should be entered into for the amount of the fees to be paid before the reference is undertaken. In the face of a written document, the parties could not be heard to say that the charges were excessive.

VI. PROCEEDINGS BEFORE THE ARBITRATOR.

Broadly speaking, it may be stated that the proceedings before an arbitrator are similar to those in a court of justice. The arbitrator appoints the times and places of meeting and adjournment, but they must be reasonable, and notice must be given to both parties, or the award will be void. It is usual, of course, to consult the convenience of both parties in fixing the time and place.

§ 24. **Conduct of proceedings.**—In the conduct of the proceedings, an arbitrator should be guided by the principles of fair play, which will lead him to decide the case impartially. Thus, he should not hear one party in the absence of the other, nor should he exclude the witnesses of one party from the room where he is sitting, unless those on the other side are also excluded. His failure to observe these principles may have serious results, for an award may be set aside:

(1) If the arbitrator hears one party and refuses to hear the other;

(2) If the arbitrator holds private communications with one of the parties on the subject-matter of the reference;

(3) Where the arbitrator, unless justifiably proceeding *ex parte*, examines one of the parties or the witnesses on one side in the absence of the other party; or receives information from the one party in the absence of the other;

(4) Where the arbitrator examines witnesses in the absence of both parties.

In any of the above cases the award runs grave risk of being set aside, notwithstanding the arbitrator may swear that the evidence thus received had no effect upon his award.

The engineer acting as arbitrator will have little difficulty in carrying these rules in his mind if he examines them from the standpoint of fair play. The arbitrator, in his capacity as judge, is bound to hear and determine, and must not determine until he has given a fair and patient hearing to both sides. The necessity for exact compliance with these rules will appear to everyone who takes the trouble to spend a day in a court of justice.

To the rule that the arbitrator must not hear one party in the absence of the other there is one obvious exception, namely, that if one of the parties is deliberately keeping out of the way, or keeping back his evidence to delay the reference, the arbitrator may proceed *ex parte*.

The arbitrator should endeavour to suit the convenience of the parties in arranging the time for the hearing. It often happens that counsel will be employed on either side in arbitration. If so, their convenience is usually consulted in fixing the time and place of the hearing, which may, of course, last for several days. It will often be desirable, with a view to accommodating the legal gentleman employed, to fix the hearing at four o'clock, and to sit on Saturday afternoon, or at other times when the Courts are not in session.

§ 25. Conduct of the arbitrator.—An arbitrator should refrain from accepting the hospitality of one party lest the invitation may be given with the intent, or have the effect, of inducing him to act unfairly. It has, however, been decided that for an arbitrator to lunch or dine with one party in the absence of the other is not of itself sufficient to invalidate an award. The practice, however, is undesirable, and should be avoided (see *Moseley v. Simpson*, L. R. 16 Eq. 226).

§ 26. Evidence in an arbitration.—The evidence which may be adduced before an arbitrator is to all intents and purposes the same as the evidence which will be received in a court of justice. The arbitrator is the judge of the admissibility of evidence so far as the competency of the witnesses is concerned,

§ 27. Arbitrator may consult skilled persons.—An arbitrator may consult men of science in every department where it becomes necessary (*Caledonian Rly. Co. v. Lockhart*, 3 Macq. 808); and although he may not agree beforehand to be bound by whatever opinion another may give, as that would be a delegation of his authority, he may submit a question to another person of skill or science, and adopt the opinion

given thereon as his own (*Emery v. Wase*, 5 Ves. 846). This power to consult may often prove serviceable to an arbitrator who may have to decide upon questions with which he is not familiar. It is also important for the lay (as distinct from the legal) arbitrator to know that he may consult solicitor or counsel as to the admissibility of evidence, or as to the framing of his award (*Re Hare*, 6 Bing. N. C. 158), or he may take counsel's opinion on a point of law (*Rolland v. Cassidy*, 57 L. J. P. C. 99). He should not, however, employ the solicitor of either party as his legal adviser (*Re Underwood, etc., Rly. Co.*, 11 C. B. N. S. 442).

VII. THE ESSENTIAL FEATURES OF AN AWARD.

§ 28. **Generally.**—Inasmuch as a reference to arbitration is really a contract, some of the terms of which are left to be decided by an independent person, it is of the utmost importance that the award shall be carefully drawn up. Any omission or carelessness in the performance of this duty may render the proceedings futile, and leave the parties with differences still outstanding. An engineer's certificate is not an award. (See Chap. XIV., § 8, *ante*.)

It is not absolutely necessary that an award should be in any precise form of words, but it is desirable that every arbitrator should consult the common form before he makes his award, for it will probably remind him of the matters with which he has to deal. Moreover, in any case involving large interests, an engineer would be well advised to consult a solicitor and obtain his assistance in drawing up the award.

§ 29. **Form of an award.**—The following is a simple form of award:—

“Award by a Single Arbitrator determining Cross Claims and Ordering Payment of a Sum by One Party to the Other.

“To all to whom these presents shall come, I, G. L., of Civil Engineer, send greeting.

“Whereas by an agreement in writing, dated the day of and made between A. B., of etc., of the one part, and C. D., of etc., of the other part, the said parties agreed to refer all matters in difference between them (*if necessary, add ‘relative to,’ &c., stating the specific matters*) to me, the said G. L., so that I should make my award thereon ready to be delivered to the said parties on or before the day of then next. Now know ye that I, the said G. L., having

taken upon myself the burthen of the said reference, do make and publish this my award, of and concerning the matters so referred to me as aforesaid, in manner following, that is to say, I award and determine that the said C. D. has a just and valid claim against the said A. B. to the extent of £ , and that the said A. B. has a just and valid claim against the said C. D. to the extent of £ (a less sum) so that, after deducting the latter sum from the former, there remains justly due to the said C. D. from the said A. B. the sum of £ . And I direct the said A. B. on the day of next, to pay the said sum of £ to the said C. D. (And I direct that the said sum of £ shall be paid and accepted, as and for full satisfaction and discharge, and as a final end and determination of the said differences in the matters so referred as aforesaid, and all demands upon or in respect of the same by either of the said parties against the other of them.) And I further award that the said A. B. shall bear and pay his own costs of and attending the said arbitration, and shall pay to the said C. D. his costs of attending the said arbitration, and shall pay the costs of this my award. (And I determine the costs of the said C. D. to amount to £ .)

“In witness whereof I have hereunto set my hand this day of 19 .”

“G. L.”

“Signed in the presence of .”

The testimonium clause to the duplicate copy of the award will be :—

“In witness whereof I have set my hand to this duplicate of my award this day of 19 .”

The award consists of recitals and operative words. Recitals are not necessary, but they are often useful, as they enable any person who has occasion to refer to the document to immediately understand what the object of the reference really was. Further, they may serve to explain what might otherwise be an ambiguous or doubtful award.

§ 30. **Requisites of a valid award.**—The requisites of an award may now be briefly considered.

- (a) It must not exceed the submission ;
- (b) It must extend to all matters referred ;
- (c) It must be certain ;
- (d) It must be final ;
- (e) It must not be impossible, unreasonable, inconsistent or illegal.

(a) *An award must not exceed the submission.* It is obvious that an arbitrator is not called upon to decide questions which are not referred to in the submission which gives him power.

If an award extends to matters which are not within the scope of the submission it will be void, at least as to so much as is in excess of the submission.

Where there was a contract to sell goods by sample, it was provided that "any dispute to be settled by arbitration." The arbitrators awarded that buyers should accept the goods, and that the sellers should make allowance of 1s. 6d. per case. It was held that the submission extended to nothing except the question whether the goods were up to guarantee, and that if not, buyers were entitled to reject them (*Re Green & Co. and Balfour & Co.*, 1890, 63 L. T. 97). On the authority of this case, if an engineer were called upon to decide whether work had been done in accordance with contract, it would not be competent for him to award that the employer must accept it subject to an abatement in price.

Although it is true, as already stated, that one part of an award may be held good, an arbitrator deals with the matters before him as if they were all linked together. "I always find a difficulty," said Lord Denman in *Tomlin v. Mayor of Fordwick* (1836, 5 A. & E. 152), "in separating the good part of an award from the bad. The arbitrator probably frames one part with a view to the other; and each may be varied by the view which he takes of the whole."

It follows from this that the bad part must be wholly severable from the rest of the award. If the bad part is so mixed up with the rest that it cannot be rejected, the award is void altogether (*Duke of Buccleugh v. Metropolitan Board of Works*, 1872, 39 L. J. Ex. 137).

An award made in favour of a person who is a stranger to the submission is bad unless it be beneficial to the party entitled to receive satisfaction, and the advantage to the party should appear on the face of the award (*Bird v. Bird*, 1795, 1 Salk. 74).

(b) *An award must extend to all matters mentioned in the submission.* If several distinct matters are referred, and the arbitrator omits to decide upon any one of such matters, the whole award is vitiated (see *Doe v. Horner*, 1838, 8 A. & E. 235). In some cases mere silence on the part of the arbitrator with regard to a particular question is sufficient to show that he has adjudicated upon it. In the case of *Harrison v. Creswick* (1852, 21 L. J. C. P. 113), Baron Parke laid down the following rule: "Where there is a further claim made by

the plaintiff, or a cross demand set up by the defendant, and the award, professing to be made of and concerning the matters referred, is silent respecting such further claim or cross demand, the award amounts to an adjudication that the plaintiff has no such further claim, or that the defendant's cross demand is untenable; but where the matter so set up from its nature requires to be specifically adjudicated upon, mere silence will not do. The arbitrator must not rely upon this decision to justify his remaining silent upon a particular point which may be referred to him. He should keep all the questions before him and answer them specifically in his award."

(c) *An award must be certain.* Passing on to the question of certainty, it is manifest that an arbitrator ill performs his duty if he frames his award in such a way that the parties cannot appreciate his meaning. Where an arbitrator made an award to the effect that Brown overpaid Jones a certain specified sum, this was held to be sufficiently uncertain to prevent the award being carried into effect (*Thornton v. Hornby*, 1831, 8 Bing. 13). An uncertainty must be in a material part of the award. Uncertainty with regard to a matter not in issue would be a matter of no consequence.

In construing an award, however, the Court will endeavour, as far as possible, to read it as if it were certain. Thus the legal maxim, *id certum est quod certum reddi potest*, which, being interpreted, means that "that is certain which is capable of being rendered certain," is applied.

In illustration of the application of this maxim, *Wohlenberg v. Lageman* (1815, 6 Taunt. 254) may be referred to. There an award stated that Jones and Smith should pay Brown a debt in the proportions in which they held shares in a ship. It was held that this was sufficiently certain. In another case an award, which ordered Brown to pay Jones as much as was due in conscience, was held void for uncertainty (*Watson v. Watson*, 1671, Sty. 28).

(d) *An award must be final.* "An award," says Mr. Redman in his "Arbitrations and Awards," "must be a final settlement of all matters contained in the submission requiring decision, and if it leaves the final decision of some of the matters to be ascertained in the future, it will not be binding on the parties." This rule, of course, must be construed with due regard to the submission, and the award need only be as final as the

nature of the thing will admit. An arbitrator must not award a voluntary performance. So an award that if Brown give up his shares, Jones shall pay him a certain sum, is bad. Brown should be peremptorily ordered to give up the shares, and Jones should be directed to pay the sum in question. Finally, an arbitrator should not reserve or except from his award any of the matters referred, or it may be declared not to be final.

(e) *An award must not be impossible, unreasonable, inconsistent, or illegal.* To every one who appreciates the fact that law is founded upon common sense, the propriety of the above rule will be quite clear. To take an illustration, an award that Brown shall deliver up to Jones a deed which is in the custody of Smith is impossible (see *Lee v. Elkins*, 1702, 12 Mod. 585). But the defendant could not say that an award was impossible because his financial position was such as to make it impossible for him to pay the amount which the arbitrator had awarded.

An award must be reasonable. In an old case it was held that an award that one party should give a horse or release his right to certain land in satisfaction of a trespass, or erect a stile on the land of another, was so obviously unreasonable as not to be binding upon the party (*Ross v. Boards*, 1838, 3 N. & P. 382).

Consistency, too, must characterise an award. Where an arbitrator expressly acquitted one party of fraud and yet decided against him, and in favour of the other, his award was set aside for uncertainty (*Ames v. Milward*, 1818, 8 Taunt. 637).

Finally, the award must not direct the doing of any illegal act. An award directing one party to commit an illegal act or trespass or to commit a crime would be at once upset.

§ 31. Time for making an award.—Under the Arbitration Act, 1889 (Sched. I. (c)), where no other time is fixed by agreement, arbitrators must make their award in writing within three months after entering on the reference, or after having been called on to act by notice in writing from any party to the submission; or on or before any later day to which the arbitrators by any writing signed by them may from time to time enlarge the time for making the award. By the same schedule (cl. (e)) an umpire must make his award within one month after the original or extended time appointed for making the award has expired, or on or before any later day to which

the umpire by any writing signed by him may from time to time enlarge the time for making his award. If the arbitrator or umpire fail to exercise the power for enlarging the time, further time may be granted by consent of parties. It should be mentioned that an arbitrator has no power to limit the time for making an award unless the submission empowers him to do so. So where arbitrators had agreed to make their award within a certain time, it was held that they had no power to so agree, and that an award made after that time was valid (*Re Morphett*, 1845, 14 L. J. Q. B. 259). The Court may from time to time enlarge the time for making an award, whether the time has expired or not (Arbitration Act, 1889, s. 9). The ordinary case in which the Court will exercise this power is that in which the arbitrator has no power to enlarge, or where, having a power to enlarge, he has unintentionally allowed the time to pass without exercising it (*Parbery v. Newnham*, 1841, 7 M. & W. 378). But if the arbitrator has intentionally let the time slip by the Court will not exercise this discretion (*Andrews v. Eaton*, 1852, 7 Ex. 221). It is important to notice that the power thus vested in the Court to enlarge the time may be exercised although the submission names a time beyond which no enlargement may be made (*Ward v. Secretary of State for War*, 1862, 32 L. J. Q. B. 53).

§ 31A. *Costs of an arbitration.*—The costs of the reference and award are in the discretion of the arbitrators or umpire, who may direct to and by whom and in what manner those costs or any part thereof shall be paid, and may tax or settle the amount of costs so to be paid or any part thereof, and may award costs to be paid as between solicitor and client (Arbitration Act, 1889, Sched. I (i)).

The effect of this clause is to allow arbitrators and umpires to fix (*inter alia*) the fees which are to be paid to them (*In re Prebble*, 1892, 2 Q. B. 602). But they can also decide whether the plaintiff or the defendant is to pay the costs of the reference; or they may hold it equitable to declare that there shall be no costs on either side. All this is subject to there being no special arrangement as to costs in the submission to arbitration.

A few observations as to the cost of arbitration proceedings may not be out of place at this point. Some people are wont to imagine that arbitration is less costly than a trial in court.

In the author's experience there is little ground for this belief. There are two causes which tend to make a reference expensive. In the first place, the tribunal itself has to be paid. When three eminent engineers are sitting, one as umpire and two as arbitrators, and the proceedings last for a week, it is easy to figure out the appalling bill which one or other of the litigants must pay before the award can be taken up. In the second place, the hearing before a lay tribunal is in general more protracted than a trial in court. The reason is not far to seek. The arbitrator is often unaccustomed to the forms of law. He may not realise that it is competent for him to shorten proceedings by saying that he is satisfied on some particular point; and even if he knows that he has the power, he will probably (and very properly) hesitate to exercise it. A strong judge, on the other hand, can very often so narrow the issues in a case that much valuable time is saved to the parties. The facts that he may have to pay the tribunal, and that the inquiry may be considerably prolonged, are therefore matters fit for the consideration of the contractor who contemplates settling a dispute by arbitration.

For the rest, the expenses of proceeding at law and in an arbitration appear to be about the same. Solicitors, counsel (very often eminent and therefore expensive counsel), and expert witnesses must all be duly paid, whether they appear in a private room at the Westminster Palace Hotel, or the Royal Courts of Justice.

It is easy to recommend the parties to engineering contracts not to go to arbitration; but it is not quite so easy for them to avoid this form of trial. In the first place, all the usual contracts contain an arbitration clause, and as we have already seen (§ 10, *supra*), that clause cannot be evaded except by the consent of both parties. Again, even if both parties desire to have a trial in court, the time of His Majesty's judges is considered too valuable to be expended upon long and technical disputes. A case which involves accounts or any scientific or local examination will inevitably be sent to an official or special referee.

VIII. THE EFFECT OF AN AWARD.

§ 32. *How far binding.*—We have next to consider the effect of an award upon the relations of the parties to an arbitration.

As has already been stated, the award of an official or special referee in a compulsory reference by the Court may be treated as the judgment of the Court (see § 3, *supra*); but, as we have also seen (§ 4, *supra*), it is the proper subject of an appeal. In the case of a reference by consent out of court, a valid award is final and binding on the parties, and is conclusive as to the matters submitted. Further, if the award is good on its face, and is not impeached, each party is prohibited from objecting to it; and as to all matters which it professes to decide, it as much precludes the parties from alleging anything to the contrary effect as a judgment would, on the ground that it is *res judicata* (*Cummings v. Heard*, 1869, 39 L. J. Q. B. 9).

§ 33. **Enforcing an award.**—Although the question how to enforce an award is largely a matter of interest to the legal profession, it is perhaps well to mention that, under the Arbitration Act of 1889, s. 12, an award on a submission may, by leave of the Court or a judge, be enforced in the same manner as a judgment or order to the same effect. This applies only to submissions in writing out of court; but the Arbitration Act, 1889, also provides that, with regard to references under order of the Court, the judge has all the powers conferred by the Act on the Court or a judge as to references out of court. Or. 31A of the Rules of the Supreme Court is practically in the same terms. The section only applies “where an award has definitely settled the rights and liabilities of the parties so that they cannot be further litigated” (*In re Willesden*, 1896, 2 Q. B. 412). Proceedings under this section are not a mere continuance of the arbitration, but are “as much a proceeding outside the arbitration as an action to enforce an award would be” (*Ex parte Caucasian Co.*, 1896, 1 Q. B. 368).

IX. SETTING ASIDE AN AWARD.

§ 34. **Grounds for setting award aside.**—The following are the grounds upon which an award may be set aside:—

- (a) That the award is uncertain, or not final;
- (b) That there has been irregularity in the proceedings, such as want of notice of meetings, or improper conduct on the part of the arbitrator in receiving evidence;

(c) Corruption or misconduct on the part of the arbitrator, or a secret interest in the matters referred, or bias;

(d) Fraudulent concealment of evidence by one of the parties;

(e) That there has been a mistake in law or fact.

Uncertainty and irregularity have already been dealt with (see § 30 (e), *supra*), but some of the other grounds for setting aside the award must be considered.

§ 35. **Corruption, misconduct or bias.**—It is provided by the Arbitration Act, 1889, § 11 (2), that where an arbitrator or umpire has misconducted himself or an arbitration or award has been improperly procured, the Court may set the award aside. A party to a reference is thus protected from injury which might be done him by a biased arbitrator.

It is hardly necessary to go at any great length into the obvious rule that the Court will set aside an award on the ground of misconduct on the part of the arbitrator, or irregularity in the conduct of the proceedings. If the reader is called upon at any time to enumerate the reasons which will induce the Court to upset an award on these grounds or any of them, it is conceived that he need only consider what is fair play in the conduct of a judicial proceeding. He should put himself into the position of an arbitrator who is about to hold a reference. In that capacity he would show no bias towards either side; he would refrain during the hearing from showing any leaning towards one side or the other, and he would decide the issue upon the evidence adduced before him, and without any regard to any preconceived opinion which he may have formed as to the rights and wrongs of the dispute. At the present day, actual corruption or fraud is scarcely ever put forward as a ground for having an award set aside, but, as Mr. Redman points out, there may be ample misconduct in a legal sense when there is no moral culpability. (See further as to bias §§ 13, 14, *supra*.)

§ 36. **Statement of special case.**—By the Arbitration Act, 1889, s. 19, any referee, arbitrator, or umpire may at any stage of the proceedings under a reference, and shall if so directed by the Court or a judge, state in the form of a special case for the opinion of the Court any question of law arising in the course of the reference.

Arbitrators may be compelled to state a case, and where the terms of a reference provide that a named person shall be arbitrator, and that his decision "shall be final," the arbitrator is not precluded from stating a special case for the opinion of the Court (*In re Carpenter and Bristol Corporation*, 1907, 76 L. J. K. B. 145). An arbitrator cannot, however, state a special case under s. 19 after he has made his award, nor can the Court order him to do so after that event (*In re Palmer and Hoskin*, 1898, 1 Q. B. 131).

§ 37. Requisites of a special case.—When an arbitrator states a special case, involving a question of law for the adjudication of the Court, it is his duty to set forth such facts as are necessary to enable the Court to determine the question of law (*Sheridan v. Nagle*, 1872, 6 Ir. R. C. L. 110). In one case where the arbitrator set out a long and rambling statement of the evidence, leaving the Court to draw inferences of fact, this was held not to be a due exercise by the arbitrator of the powers entrusted to him (*Jephson v. Hawkins*, 2 Scott, N. R. 605).

It is necessary, however, to point out that there are a number of cases in which the Court will interfere, even when the parties have chosen an arbitrator as their own peculiar forum.

Broadly speaking, an award by consent may be impeached :

(a) *If the arbitrator has exceeded his jurisdiction* (*Harrison v. Eaton*, 1884, 51 L. T. 846).

(b) *If there is a mistake which is apparent on the face of the award*. As a general rule, however, a mistake will be cured by the award being remitted to the arbitrator (*Sharman v. Bell*, 1816, 5 M. & S. 504).

Thus in a recent case (*In re Baxters and Midland Rly. Co.*, 1906, 70 J. P. 445) an arbitrator, acting under an erroneous impression that costs would follow the event, omitted to make any mention of them in his award. It was held that as this was a mere mistake, the award ought to be remitted to the arbitrator for him to deal with the question of costs.

Again, where an arbitrator has gone wrong in a point of law, and his error in law appears on the face of the award, this is good ground for setting it aside (*Landauer v. Asser*, 1905, 53 W. R. 534).



(c) *If the arbitrator has been guilty of gross carelessness, which may amount to judicial misconduct (In re Hall and Hinds, 1841, 2 M. & G. 847).*

In addition to the above, it is now competent for either party to apply to the Court before the award is given in order to have the arbitrator kept right in a point of law.

It is to be observed, however, that the jurisdiction of the Court in this respect is consultative only, so that no appeal lies from the Divisional Court to the Court of Appeal without special leave.

As to a compulsory reference in court, the parties, as has already been pointed out, are entitled to an appeal as from the verdict of a jury.



APPENDIX

FORMS.

	PAGE
I. A set of conditions for engineering works	235
IA. Short form of general conditions for engineering works .	245
IIA. Forms of model general conditions for electricity works contracts approved by the Institution of Electrical Engineers	247
IIB. Form of tender	266
IIC. Form of agreement	267
III. Agreement with an engineer for preparation of drawings, etc., for sewage works	268

FORM I.

*A Set of Conditions for Engineering Works.**

	PAGE		PAGE
1. Works to be in accordance with plans and complete in every respect	236	14 (c). Procedure in case of contractor's neglect	240
2. Construction of specification to be decided by engineer	236	15. Inferior materials	241
3. Tender and detailed estimate	237	16. Watching and lighting	241
4. Contractor to enter into contract	237	17. Failure	241
5. Plans to be kept in engineer's office	237	18. Superintendence by contractor and discharge of workmen	241
6. Contractor to comply with bye-laws	237	19. Contractor not to sub-let	241
7. Testing of materials, etc.	237	20. Responsibilities for accidents, damages, etc.	242
8. Period of commencing and completing, and order of executing work	238	21. Contractor to maintain works	243
8A. Delay by frost	238	22. Contractor's liability in case of wilful default, etc.	243
9. Service of notices, etc.	239	23. Corporation may execute certain urgent repairs	243
10. Additions, omissions, or other deviations from contract	239	24. Accidents involving repairs, etc.... ..	243
11. Material, plant, labour, etc.	239	25. Payments	244
12. Wages	240	26. Superintendence and settlement of disputes by engineer	244
13. Testings	240	27. Superintendence in the absence of engineer	245
14 (a). Removal of improper materials	240	28. Variation in details... ..	245
14 (b). Engineer may order work to be undone for purpose of examination	240		

* Reprinted, by permission, from "Specification," No. 4 (1899), p. 106.

Specification to be observed in the execution and maintenance of certain works required to be performed in within the town or city of together with such other works in connection therewith, as the corporation may require the contractor to execute during the term of his contract.

Interpretation Clause.

In this contract the word "corporation" shall mean the municipal corporation of ; the word "contractor" shall mean the contractor or contractors whose tender or tenders for the work herein mentioned shall have been accepted by the corporation ; and shall, except where the context forbids, include the contractors' heirs, executors or administrators ; the word "engineer" shall mean of city engineer or such other engineer as may be duly appointed by the corporation as their engineer.

Drawings.

1.
2.
3.

Etc., etc.

[As to the necessity of having a written tender, see Chap. VIII., § 1, ante.]

Conditions.

1. *Works to be in accordance with specification and plans, and complete in every respect.*—The whole of the works shall be set out and executed at the expense and the responsibility of the contractor in accordance with the stipulation of this specification, and the drawings herein referred to ; the contractor providing and executing everything requisite to make the various works perfect and complete, whether the details of such works be especially mentioned or not, and providing and executing everything necessary to carry out the true meaning and intent of the specification, detailed estimate, and drawing.

2. *Construction of specification to be decided by engineer.*—The drawings and specification taken conjointly are intended to explain each other and be descriptive of the whole work comprised in the several contracts, and all doubts as to the meaning of any portion of this specification or of the said drawings on the part of any person proposing to tender, must be settled before sending in his tender, between him and the engineer, and from the date of the execution of his contract, the contractor shall be finally bound by the engineer's decision, as specified in the 27th of these conditions, and any details which are not sufficiently described by the drawing and specification shall be executed according to the engineer's directions, or according to any further detail drawings which he may provide. In the case of any discrepancy between the specification and drawing, or between the several drawings (if more than one), the specification shall be adhered to in preference to the drawing ; and any drawing to a larger scale shall be adhered to in preference to any drawing to a smaller scale, and figured dimensions shall be adhered to in preference to dimensions measured by scale.

[NOTE.—As to delay on the part of the employers in supplying plans, see Chap. XI., § 13.]

3. *Tender and detailed estimate.*—Every person proposing to contract for these works must send in his tender on the form provided for the purpose, and the amount of such tender shall be the total sum for which he proposes to execute the work, supposing the plans to be carried out precisely as designed; but as in executing the works the actual quantities may vary from those originally intended, the total amount of the contract will be determined at the completion, or during the progress of the work by measuring and ascertaining the quantities actually executed. He shall also deliver with his tender a detailed estimate of the cost of the various works, fully priced out, the total amount being that of his tender; and it is to be expressly understood that the several amounts set forth in the detailed estimate shall be the whole consideration for, and shall be accepted by the contractor in full discharge of, the cost of all materials and plant of every description used and work done, in the execution of the several works therein mentioned, and the value of any alteration or deviation shall be calculated in accordance with the 10th clause of these conditions.

4. *Contractor to enter into contract with sureties.*—Within seven days of the acceptance of his tender by the corporation, or as soon thereafter as the contract shall have been prepared, the contractor shall enter into a formal contract, with two sureties to be approved by the corporation, to complete the whole of the works according to the manner and within the period herein specified.

[As to sureties generally, see *Emden's Building Contracts*, Chap. IV., p. 25.]

5. *Plans to be kept in engineer's office.*—The drawings referred to in the specification shall be signed by the contractor, and kept in the custody of the corporation or at their whence they shall not be removed, but the contractor shall have all reasonable access to them in office hours during the progress of the work.

[NOTE.—As to who owns the plans, see Chap. XI., § 16, ante.]

6. *Contractor to comply with bye-laws.*—The contractor shall in carrying out the works comply with the provisions of the "Public Health" and other Acts and with the bye-laws in force within the said borough of and shall be responsible for any proceedings that may be instituted against him, any of his workmen, or the corporation for any breach thereof, and shall indemnify the corporation against any such breach as aforesaid and any proceedings in respect thereof. He shall also give all such notices (if any) as are required by law to be given to any parties or persons entitled to such notices in respect of the operations to be performed under this specification.

7. *Testing of materials, etc.*—All materials, stock, implements, and plant brought and delivered on the ground and works, and all offices, and other erections made thereon at any time after the contractor's tender has been accepted, shall thenceforward be the absolute property of the corporation, and be held to be legally in their possession, and shall not be removed from the works, without the consent of the engineer, the contractor only having the right of using the same for the

purposes of the works, but the corporation shall not be liable for any loss or damage which may happen to any of the said materials or plant, and the whole responsibility in reference thereto shall remain with the contractor in the same manner as if they had remained his property. When the works shall have been satisfactorily completed and the certificate of completion hereinafter referred to (*see* Cl. 25) has been given, all implements, plant, and unused materials which may be then upon the ground shall revert in the contractor, and he shall forthwith remove the same at his own cost, together with any buildings which may have been erected for the purpose of this contract.

8. *Period of commencing and completing and order of executing work.*—The contractor shall commence the works within seven days from the date of notice from the engineer so to do, and shall complete and deliver up the same within the following periods respectively from the date of such notice, viz. :— or shall forfeit or pay the sum of in respect of each work whereon the specified time shall be exceeded, for each day by which such period shall be exceeded; provided, however, that if the contractor and his sureties shall not have entered into the contract within seven days of the acceptance of his tender, or as soon thereafter as the contractor shall have been requested to enter into the same, then the period specified for the completion of the works shall be held to have commenced seven days after the acceptance of the tender or as soon thereafter as the contractor shall have been requested to enter into the contract or at such later date as the engineer shall agree to in writing, and the contractor shall complete and deliver up the whole of the works within the aforesaid periods respectively, from the commencement of the period for completion, or shall be liable to the penalties hereinbefore set out.

The work shall be carried on without any intermission, unless the weather shall be such as to prevent its proper execution, or unless the engineer shall, in the exercise of his discretion, suspend the work or any part thereof on account of any cause which shall appear to be sufficient; but no such suspension shall extend the period within which the whole of the work shall be completed, unless the cause or duration of such suspension shall in the engineer's opinion require or justify an extension of time, in which case the engineer shall allow such an extension of time as he may consider proper; but the contractor must exercise every endeavour to avoid the necessity for any such extension. The engineer may also allow additional time for any other cause which may appear to him to be sufficient. The contractor shall carry out the works in such order as may be directed by the engineer, and in such manner as will facilitate, as far as possible, the execution of any work to be performed by either parties, and will interfere as little as possible with the traffic upon the various public and private roads and footways.

[NOTE.—As to penalties generally, *see* Chap. XV.; as to effect of delay in commencing work which is due to the acts of the employers, *see* Chap. XV., § 9; as to engineer's power to grant extensions of time, *see* Chap. XV., § 13.]

8A. *Delay by frost.*—The surveyor may delay the progress of the works in case of frost or otherwise, without vitiating the contract, and grant such extension of the time for the completion of the contract as he

may think proper and sufficient in consequence of such delay, and the contractor shall not make any claim for compensation or damages in relation thereto, and no additions by order of the engineer shall excuse any delay in the completion of the works.

9. *Service of notices, etc.*—Any notices, instructions, or drawings to be given or furnished to the contractor, shall be deemed to have been duly served or delivered if they shall have been given to the contractor, his foreman, or superintendent personally or left at or sent by post directed to one of them at his usual or last known place of abode or business. If the contractor fail at any time to carry out any instruction given by the engineer under the conditions of this specification, he shall pay to the corporation the sum of £1 for each day during which such instruction remains unexecuted after a sufficient time for its execution has expired.

10. *Additions, omissions, or other deviations from contract.*—In the execution of his contract the contractor shall make no deviation from the works as herein described or shown on the drawing, with the exception of such deviations as may be ordered by the engineer; the contractor, however, shall execute any alterations or additional work which may be so ordered by the engineer; and any work shown on the drawing, or specified in the detailed estimate on this specification, which the engineer shall countermand, shall remain unexecuted; and the value of such additions, deductions, or other alterations shall be fixed by the engineer according to the detailed estimate, and be deducted from or added to the contract sum as the case may require. For any kind of work not specially mentioned in the detailed estimate the price shall be fixed by agreement between the contractor and the engineer before the work is executed, or in the event of any such agreement not being come to, it shall be determined by the engineer only; but no claim for any extra work will be allowed unless upon vouchers in writing for the same, signed by the engineer. As, however, the engineer or his representative may for some reason give verbal orders for the execution of extra work, the contractor shall, unless he receive written confirmation of such verbal orders, give written notice of his intention to proceed with or of his having commenced, the work referred to, within one week after such verbal orders are given, and the non-delivery of such notice within the stated time shall be taken as an indication that no extra work has been so ordered. Deviations from the contract shall not extend the time for the completion of the works, unless an extension shall be specially allowed by the engineer.

11. *Material, plant, labour, etc.*—The contractor shall provide and defray the expenses of the whole of the plant, implements, materials, and labour of every description (except such as are herein specified to be supplied by the corporation), including all requisite dams, temporary pumps and steam engines, tackle, staging, centering, and other temporary works required in the execution of, and otherwise in connection with, his contract, and all such temporary works shall be of a sufficiently substantial character for the various purposes for which they are required. The whole of the work shall be finished in the best and neatest manner, to the satisfaction of the engineer, and the labour employed shall be that of properly experienced workmen, and the plant, implements, and

materials shall be of the best of their respective kinds, and when brought upon the works shall be placed so as to interfere as little as possible with the traffic. Should the contractor use water from the corporation mains during the progress of the works, he shall pay such charges as may be made by the corporation waterworks department for the use of such water.

12. *Wages.*—The contractor shall pay his workmen not less than the minimum standard rate of wages in the district for each class of labour respectively, and shall observe the recognised hours and conditions of labour generally, and shall forfeit to the corporation the sum of one pound for each infringement of this clause, and a further sum of one pound for each day such infringement continues after his attention has been called to it.

[For a definition of wages, see Chap. VI., § 34, ante.]

13. *Testings.*—The engineer shall have power to require any materials or works to be properly tested as he may think fit, at the contractor's expense, in order to prove their soundness and efficiency, and in case any material or work shall, with or without being so tested, be found defective or imperfect, or not in accordance with the drawing and specification, or in any other respect unsatisfactory, such work shall, on the contractor receiving notice to that effect from the engineer, be forthwith amended or re-executed by the contractor in a proper and satisfactory manner.

14 (a). *Removal of improper materials.*—The engineer may order inferior or improper materials brought on the ground by the contractor, to be removed in twenty-four hours, and in case of non-compliance with any such order, the engineer may cause the said inferior or improper materials to be taken away at the contractor's expense, and the contractor shall forthwith pay to the corporation in each case the amount of such expense and a penalty of £5 as and for liquidated damages.

(b) *Engineer may order work to be undone for purpose of examination.*—The engineer shall have full power to order any portion of the work to be taken up or undone at the expense of the contractor, but if on examination the work shall be found to have been done according to the terms of the contract, the engineer shall allow an extra charge according to the 10th clause of these conditions in respect of the work taken up or undone.

[NOTE.—As to the danger of an engineer allowing work to be closed up before he has inspected it, see *Jameson v. Simon*, noted Chap. V., § 6, ante.]

(c) *Procedure in case of contractor's neglect.*—Should the contractor refuse or neglect to comply with any order of the engineer for examining the work as herein provided, or to rectify any work that may be found to be improperly executed, the engineer shall, after giving 12 hours' notice thereof to the contractor, have full power to do the necessary work; and for such purpose to employ other contractors or workmen, by day work or otherwise, and to provide all necessary materials, implements, and engines, and to charge the expenses incurred thereby to the account of

the contractor, and the corporation may deduct the same from any sum or sums due or to become due to the contractor under this contract.

15. *Inferior materials.*—In the event of any work executed, or materials supplied by the contractor not being in quality or in any other respect satisfactory and fully in accordance with the specification, the engineer instead of having such work or material rectified or changed may make such deductions from the payments to the contractor in respect thereof as he may consider fair and reasonable.

16. *Watching and lighting.*—The contractor shall take every possible precaution, by the erection of fences, by the lighting of the works, and by every other means which circumstances may render necessary, or which the engineer may direct, to protect the works from injury, and the public from accident.

17. *Failure.*—Should the contractor, in the opinion and according to the determination of the engineer, fail in the due performance of any part of the works or shall fail to proceed with the same to the satisfaction of the engineer, it shall be lawful for the corporation, by notice in writing, under the hand of the engineer, to determine the contract so far as regards the performance or completion of the same by the contractor, but without thereby affecting in other respects the obligations and liabilities of the contractor; and in such determination of the contract as aforesaid the further use by the contractor of the plant, implements, and materials then upon the ground shall cease, and the corporation may employ contractors or workmen, either by contract, by measure and value, or by day work to perform and complete the works, or may perform and complete the same themselves; and the cost and charges incurred in any way in performing and completing the works, shall be paid to the corporation by the contractor, or may be deducted by the corporation from any moneys due, or to become due to the contractor, and the certificate of the engineer shall be final and binding, with respect to the sum or sums, or balance of money to be paid by or to the contractor.

18. *Superintendence by contractor and discharge of workmen.*—The contractor shall give or provide all necessary personal superintendence during the execution of the works, and shall employ competent foremen to superintend the same during their progress; and should any of such foremen or of the contractor's workmen at any time disobey the orders of the engineer, or conduct themselves improperly, or be in his opinion incompetent, the engineer shall have full power to discharge them forthwith, and the contractor shall not employ any discharged man on the works again without the permission of the engineer, but shall be bound within one week to replace any person or persons so discharged by others to be approved by the engineer. The person employed by the contractor to superintend the work shall be competent to carry out the same from the contract drawing and to obtain therefrom all requisite particulars, as no further information or enlarged details will necessarily be supplied.

19. *Contractor not to sublet.*—The contractor shall not assign or make over or underlet his contract or any part thereof to any other person,

or make a sub-contract with any workman or workmen for the execution of any portion of the work (except for the supply of the materials) without the consent in writing of the engineer, but he shall, unless with such consent, employ his own workmen at daily wages; and in case the contractor shall, without such consent, assign or make over his contract, or any part thereof, or sublet or let at task work any portion of the work, he shall in each such case forfeit to the corporation the sum of £100, which shall be deemed liquidated assessed damages, and may be recovered by action at law or deducted by the corporation from any sum or sums due, or to become due, to the said contractor under this contract.

[NOTE.—As to the necessity for this clause, see Chap. XVII., § 2.]

20. *Responsibilities for accidents, damages, etc.*—The care of the entire works, until their completion, shall remain with the contractor, who shall be held responsible for all accidents and damage to persons or property arising therefrom from any cause whatsoever, and chargeable for anything that may be stolen, removed, or destroyed. The contractor shall, at his own expense, protect all walls, buildings, gas-pipes, water-pipes, or other property, which may be laid bare or otherwise interfered with, and make good any such property which may be damaged, removed, disturbed, or injured during the progress of the works, or in consequence thereof; and shall also make good all damage occasioned by delay, neglect, or carelessness, deficiency in strutting, fencing, watching, or lighting, either to works or to the buildings or premises adjoining or near thereto, whether such damage or defects be discovered during the progress of the work, or appear, or become known, after the completion thereof, and no payment on account of the works or certificate, or approval of any work by any officer of the corporation shall affect or prejudice the rights of the corporation against the contractor in this respect. If it shall appear to the engineer that the contractor has failed with all practicable dispatch to make good, or to pay and satisfy the expense of making good, the said several matters and things hereinbefore referred to, or any portion of them the corporation shall have power to make good the same, or any of them, at the expense of the contractor, and the expense of making good the same, and incident thereto, shall (without prejudice to any other remedy) be deducted from the moneys due, or to become due, to the contractor under his contract, or shall be paid by the contractor to the corporation. In case of any claim, action, suit, or proceeding being taken against the corporation, any of the officers or servants in respect of any loss, damage or injury caused by the works or consequent thereupon the contractor or his sureties shall fully indemnify them, and each of them therefrom, and forthwith pay to him or them all costs, charges, and expenses which he or they shall have been put to or have incurred in reference thereto, and the corporation may, if they shall see fit, compromise any such action, suit, or other proceeding, or any claim in respect of any such damage as aforesaid on such terms as they shall think proper; and the contractor shall thereupon repay the sum or sums thus paid by the corporation.

The corporation shall not be liable to, for, or in respect of any damages or compensation or claim therefor, under the Employers' Liability Act, 1890, the Workmen's Compensation Act, 1906, or any Act or Acts amending same, because or by reason or in consequence of any accidents to

workmen or others in the employment of the contractor, or of any person acting under him or on his behalf, and the contractor shall serve the corporation harmless thereof, and of any and all costs and expenses consequent thereon.

[See as to liabilities under the Workmen's Compensation Act, Chap. XVII., § 12, ante.]

21. *Contractor to maintain works.*—The contractor shall be responsible for the maintenance, safety, and security for the whole of the works in all stages of advancement, and shall at his own cost and charges keep them in efficient working order for a period of six calendar months after the date of the engineer's certificate of completion of the whole of the works included in this contract, and shall be bound to make good all defects which may appear, and take the risk of all accidents and damages arising therefrom that may occur during such period; and at any time during that period he shall, upon an order in writing from the engineer, immediately repair, restore, or make good such work to the complete satisfaction of the engineer. The corporation will, however, relieve the contractor of any responsibility for injury to the works which may be caused by parties opening the streets under written authority from the engineer, and it is hereby provided that the engineer shall be at liberty to give such authority.

[NOTE.—See generally as to maintenance and defect clauses, Chap. XVI., and as to defects appearing after the stated period of maintenance, *ib.* § 9.]

22. *Contractor's liability in case of wilful default, etc.*—No certificate, whether final or otherwise, shall relieve the contractor from liability for any wilful default or deviation from the contract on the part of himself or his workmen, or any parties supplying him with materials for the work, which may be discovered within six years from the date of the engineer's final certificate of completion; but he shall remain responsible during that period for all work which may be, or may become, defective by reason of such wilful default or deviation, and he shall, upon an order in writing from the engineer, immediately repair, restore, or make good such defective work to the complete satisfaction of the engineer, or the corporation may do the necessary work in any mode they may think advisable, and reimburse themselves out of any money due or to become due to the contractor from the corporation on any account whatever, or recover the amount of any such expense by action at law.

23. *Corporation may execute certain urgent repairs.*—If any repairs or other works shall be considered necessary by the engineer, and the contractor shall refuse or neglect to execute them with proper diligence after receiving notice to do so, or, if in the opinion of the engineer the required work is of such urgency that it is inexpedient to incur the delay involved by giving notice to the contractor, the corporation may execute the required work in any mode they may deem advisable, and reimburse themselves out of the money due, or to become due, to the contractor, or recover the amount of any such expense by action at law.

24. *Accidents involving repairs, etc.*—In the event of any accident occurring in any part of the works which shall require immediate repairs,

if the said contractor shall not be upon the spot, or shall refuse or neglect to execute the necessary works, the corporation may proceed immediately, without giving notice to the contractor, to do the necessary repairs in any mode they may deem advisable, and may reimburse themselves out of the money due, or to become due, to the contractor, or recover at law the expenses so incurred.

25. *Payments.*—Advances of money at the rate of 90 per cent. of the value of the work executed, as certified by the engineer (less all forfeitures and penalties imposed under the contract) will be made to the contractor as the works proceed, and the engineer will include in the amount certified as the value of the work executed such a sum as he may consider fair and reasonable, in respect of the materials and plant provided by the contractor in or near the site of the works. The certificates upon which such advances are paid (excepting the certificate of completion) shall, if desired by the contractor, be furnished at intervals of from four to eight weeks, provided, however, that the engineer may at any time withhold a certificate if the works do not proceed satisfactorily, and in accordance with the specification. The certificate of completion shall be furnished on the completion of the whole of the works to be executed under the contract, except any work of an unimportant nature, which in the opinion of the engineer may with advantage be executed during the period of maintenance, provided that the contractor has delivered to the city accountant a full and detailed account in duplicate of all his claims against the corporation in respect of the works, and that such account has been found correct by the engineer. The final certificate for the balance of 10 per cent. of the value of the work shall be furnished six calendar months after the date of the engineer's certificate of completion, provided it shall appear that the works have been properly maintained by the contractor, and are executed to the satisfaction of the engineer, and that the contractor has complied with the whole of the stipulations of the specifications, and no previous certificate shall be considered as proof or admission of the value, quality, or sufficiency of any work or material that may have been executed or supplied. Before paying any amount certified as due to the contractor, reasonable time shall be allowed for submitting the certificate to the committee of the corporation having control of the works, and for making arrangements for payment after the certificate has passed such committee. When the contractor desires a certificate to be furnished for any payment to which he may be entitled he shall make application therefor to the engineer not later than 10.0 a.m. on the Monday preceding the Friday on which the committee meets, and such application shall be accompanied by a statement showing the value of the work executed. Unless a detailed account has previously been submitted to the city accountant not later than Friday in each week during the progress of the works, the contractor shall furnish to the engineer a detailed statement of such work executed during the previous week as cannot readily be measured on the completion of the works.

[NOTE.—As to certificates and payments generally, see Chap. XIV., ante.]

26. *Superintendence and settlement of disputes by engineer.*—The works generally and every part thereof shall be executed and completed to the satisfaction of the engineer, and in all cases of difference of opinion as

to the manner in which the same is executed or as to quality of the materials, or as to the true intent and meaning of this specification of the said drawing, or as to any matter of charge or account or otherwise as between the corporation and the contractor either during the progress or after the completion of the work, the decision of the engineer shall be final and binding on both parties.

27. *Superintendence in the absence of engineer.*—In the temporary absence of the engineer or his assistant, the foreman, or any other person who shall be appointed to watch the works, shall have power to decide as to the manner of executing and conducting the said works, and the contractor shall follow the instructions or orders of the person so appointed.

[NOTE.—As to the consequences of the engineer failing to perform the duty of superintendence, see Chap. XVIII., § 4, ante.]

28. *Variation in details.*—The contractor shall make such variations in the details of the works as may be required in special cases, even though they may not be shown on the drawings or described in the specification, and all details which are not specially shown on the drawings or described shall be made to correspond so far as possible with similar work which is shown or described in detail.

FORM IA.

SHORT FORM OF GENERAL CONDITIONS FOR ENGINEERING WORKS.

1. *Workmanship to approval of Surveyor.*—The whole of the works are to be executed with the best materials and workmanship of their respective kinds, according to the plans, sections, particulars, and specifications prepared for such purpose and signed by the contractor, and to the satisfaction of the District Council to be expressed in writing by their surveyor; and who shall be the sole judges of the quality and sufficiency of the materials and workmanship.

[NOTE.—As to the advisability of providing that the approval shall be expressed in writing, see Chap. IX., § 2, ante.]

2. *Contractor to verify plans, etc., himself.*—The said plans, sections, particulars, and specifications are believed to be accurate, but the contractor shall verify same if he thinks fit so to do before the contract is entered into, and no extras will be allowed to the contractor for errors in such plans, sections, particulars, and specifications, should any be discovered after the contract is entered into.

[NOTE.—See as to this clause, Chap. XI., § 5, ante.]

3. *Works to the approval of the surveyor.*—The works are to be executed under the direction and superintendence of the surveyor to the said district council, hereinafter called “the surveyor,” and in such manner as shall be directed by, or approved of, by him.

4. *Materials, etc., not specified to be supplied.*—The contractor is to set out all works rectifying errors, if any, and to provide all cartage, plant,

tackle, labour, material, and all and everything that may be requisite for the proper carrying out and due completion of the works, although the matter or thing may not be specifically mentioned or shown, so that the works be left perfect and complete in every respect.

[NOTE.—*As to the completion of a lump sum contract, see Chap. VI., §§ 21—23.*]

5. *Alterations, additions, etc.*—The council by their surveyor shall have full power at any time to order in writing any alterations, additions, deductions, or variations, without invalidating the contract; and all such alterations, additions, deductions, or variations shall be measured and valued by the surveyor, whose decision thereon shall be final, and the amount thereof shall be added to or deducted from the contract sum as the case may require, but no deviation whatever shall be made except upon the surveyor's written order.

6. *Suspension of works.*—The council by their surveyor shall have full power to suspend the works, or any part thereof, at any time should it be deemed necessary so to do, without making any extra payment to the contractor by reason thereof, but the time during which the works or part thereof may be so suspended shall be allowed to the contractor in computing the time of completion of the contract.

7. *Subletting.*—None of the works shall be sublet without the written consent of the council thereto, and no drain or other work is to be covered until the same has been inspected and approved by the surveyor or his authorised assistant.

[NOTE.—*As to subletting generally, see Chap. XVII.*]

8. *Bad materials.*—Should any materials be brought on to, or used on, the works, or any workmanship be executed, which the council by their surveyor may deem to be of inferior quality, or otherwise improper, the same shall be removed, altered, or amended as the case may require, within twenty-four hours after the receipt of a written notice, or order, from the surveyor to that effect, failing which, the surveyor shall be at liberty to remove, alter, or amend the same as the case may require at the expense of the contractor.

9. *Weekly statement of extras.*—The contractor shall furnish the council with a weekly statement in writing of any extras that may arise, but none whatever will be allowed except the same be ordered as hereinbefore mentioned and be duly furnished in accordance with these provisions.

10. *Contractor to give all proper notices.*—The contractor shall give all requisite notices to companies or persons to whom notice should be given, and shall carefully sling, protect, and make good all pipes and works that are interfered with or damaged during the progress of, or owing to the execution of the works, and shall properly watch, light, and guard all excavations, works, materials, or things and shall not obstruct the free entrance to any house or premises in or near to the aforesaid and shall provide as far as practicable for the passage of vehicular traffic through, or along during the progress of the works.

11. *Foreman.*—The contractor shall provide a properly qualified man as foreman of the works, and such foreman shall be deemed to be the representative of the contractor.

12. *Service of notices.*—Any notice, order, or direction from the council, or their surveyor to the contractor shall be deemed to be duly and properly served or delivered, if the same be sent by post to the contractor's last known place of business, or abode, or if delivered, to his representative on the works.

13. *Dismissal of incompetent workmen.*—The surveyor shall have full power to dismiss any person employed on the works whom he may deem to be incompetent, or acting improperly, and no such person so dismissed shall be again employed on the works without the sanction of the surveyor.

14. *Plans of drains, etc., to be made.*—The contractor shall keep an accurate record and plan of all drain and sewer junctions and shall furnish the surveyor with a fair copy of such record and plan at or before the completion of the works.

15. *Contract to be signed.*—The contractor will be required to execute a contract for the due and proper observance of the conditions, and execution of the works, and shall if so required find two responsible sureties.

16. *Penalties for delay.*—The whole of the works are to be fully completed, and all plant, surplus material, *débris*, etc., removed within weeks from the date of the written order of the surveyor to commence the works, subject to a penalty of one pound sterling for each and every day during which default may be made; subject nevertheless to such allowance of time being made as hereinbefore contained in the event of the suspension of the works, and to a reasonable allowance of time for the execution of any extra works that may be ordered.

[NOTE.—*For distinction between penalty and liquidated damages, see Chap. XV., § 3.*]

FORM IIA.

FORMS † OF MODEL GENERAL CONDITIONS FOR ELECTRICITY WORKS CONTRACTS APPROVED BY THE INSTITUTION OF ELECTRICAL ENGINEERS.

*List of General Conditions.**

CLAUSE	HEADING	PAGE	CLAUSE	HEADING	PAGE
1.	Definition of terms	... 248	4.	Use of crane	... 249
1A.	Assistant engineer...	... 249	5.	Site	... 249
2.	Drawings issued with specification	... 249	6.	Tenderer's specification	... 250
3.	Foundations and builders' work	... 249	7.	Drawings to accompany tender	... 250
			8.	Tenders	... 250

† This Form, and Forms IIB. and IIC. are printed in this work by the kind permission of the Institution of Electrical Engineers.

* Clauses marked with an asterisk are not included in the list published by the Institution of Electrical Engineers.

CLAUSE	HEADING	PAGE	CLAUSE	HEADING	PAGE
9.	Contractor to inform himself fully ...	251	30.	Contractor's superintendent and workmen ...	253
9A.	Alternative clause ...	251	31.	Liability for accidents and damage ...	259
10.	Contract and bond ...	251	32.	Replacement of defective work or materials ...	259
11.	Contract drawings... ..	252	32A.	Inspection at contractor's works and rejection of materials on site ...	260
11A.	Discrepancies	253	33.	Deductions from contract price	260
12.	Drawings of foundations ...	253	33A.	Alternative clause... ..	260
13.	Defects in contractor's drawings	253	34.	Terms of payment and certificates of engineer ...	260
14.	Drawings of completed works	253	35.	Due dates of payments ...	261
15.	Subletting of contract ...	253	36.	Certificates not to affect rights of the purchasers or contractor... ..	261
16.	Approved apparatus ...	253	36A.	Commencement of work ...	262
17.	Notices	253	37.	Suspension of works ...	262
18.	Patent rights	254	37A.	Engineer may delay or suspend work	262
19.	Manner of execution, quality of materials, etc.	254	38.	Dates of completion ...	262
19A.	Omissions	254	39.	Penalty clause, and damages for delay in completion	263
20.	Extras, and power to vary or omit work, etc. ...	255	40.	Preliminary trials on site... ..	263
20A.	Extras to be authorised by writing	255	41.	Tests on completion ...	263
21.	Negligence	256	42.	Right of use	264
22.	Death, bankruptcy, assignment, and sub-contracting	256	43.	Interference with tests ...	264
23.	Inspection and testing at maker's works	257	44.	Rejection of inefficient work	265
24.	Testing apparatus	257	45.	Maintenance	265
25.	Delivery of materials ...	257	46.	Requirements of local authorities	266
26.	Access to site	258	47.	Arbitration	266
27.	Materials brought on to the site... ..	258	48.	Construction of contract ...	266
27A.	Materials to be described... ..	258			
28.	Engineer's supervision ...	258			
29.	Engineer's decisions ...	258			

1. *Definition of terms.*—In construing these conditions and the annexed specification, the following words shall have the meanings herein assigned to them:—

The "purchasers" † shall mean (*here fill in the full title of the purchasers*), and shall include their legal personal representatives, successors and assigns.

The "contractor" shall mean the tenderer whose tender shall under these conditions be accepted by the purchasers, and shall include his legal personal representatives and assigns.

The "engineer" shall mean Mr. (*here fill in the name of the engineer*), or other the engineer for the time being, or from time to time duly authorised and appointed in writing by the purchasers to superintend

† The term "purchasers" as used in this form is equivalent to the term "employers" as used elsewhere in this work.

the construction and erection of the work or works the subject of the contract.

[NOTE.—See generally as to this provision, Chap. XVIII.]

“Work” or “works” shall mean and include work to be done and plant and materials to be provided by the contractor under the contract, and where appropriate according to the context “work” or “works” as used in these conditions shall include or denote plant and materials.

The “contract” shall mean the agreement to be entered into between the contractor and the purchaser under clause 10 of these conditions, and shall include the general conditions, specification, drawings, form of tender and schedule of prices.

The “specification” shall mean the specification annexed to these general conditions.

The “site” shall mean the site of the electricity works, situate in (*here give full description of locality*), and any other place in the said where work is to be executed under the contract.

“Writing” shall mean any written, typed or printed statement under or over signature or seal as the case may be.

Words importing the singular shall also import the plural and *vice versa*.

[NOTE.—For the definition of a number of other terms used in contracts, see Chap. VI., § 34.]

1A*. *Assistant engineer*.—An assistant engineer will be appointed by the engineer and is, in the engineer's absence, to be considered his deputy; but he shall have no power to order or permit any deviation from the contract. His directions on all points relative to the mode of carrying on the works, or to the nature and quality of the materials used, or workmanship executed, are to be received and acted on by the contractor.

[NOTE.—See Chap. XIX., § 2.]

2. *Drawings issued with specification*.—The drawings issued with the specification are enumerated under the different sections to which they refer. They will be issued only to tenderers under these sections.

3. *Foundations and builders' work*.—Unless otherwise specified, the necessary foundations and builders' work generally will be provided by the purchasers.

4. *Use of crane*.—Each contractor for plant to be erected in the engine house will be permitted for the purposes of the contract to use, free of charge, but at his own risk, and entirely under the directions of the engineer, the -ton overhead crane in the engine house, but each contractor will be required to leave the same in as good a condition as he finds it, fair wear and tear excepted, and he shall not so use it as to hinder or interfere with the use thereof by the purchasers or any other contractor.

5. *Site*.—Proper access will be provided by the purchasers to the place where the work is to be executed.

There will be (or will not be) a railway siding of feet gauge on to the site. (*Full information as to the site and point or points of access thereto should be set forth by the engineer in this clause or in some other writing.*)

If there is old material on the site which should be removed, it may be necessary to insert a special clause providing for such removal. For an example of such a clause, see Chap. VII., § 3, ante.)

6. *Tenderer's specification.*—The tenderer is required to fill in the details of his tender in the spaces provided for the purpose at the end of each section of the specification. Such statement will be accepted in lieu of a detailed specification, but the tenderer is at liberty to add any details that he may deem desirable, and in the event of his doing so shall print or type the same and annex the added matter to the specification returned by him, but such additional details shall not be binding on the purchasers unless they are approved by them and incorporated in the contract.

7. *Drawings to accompany tender.*—The tenderer must submit with his tender the drawings enumerated in the section for which he is tendering, drawn to as large a scale as is convenient.

Detailed drawings are not required to be submitted with the tender; but if the tenderer wishes to call special attention to any detail of construction, he may submit a drawing of the same with his tender. All drawings and samples submitted by unsuccessful tenderers shall be returned within fourteen days of the date of the adjudication of the purchasers upon the tenders.

8. *Tenders.*—The copy of the specification herewith supplied to each tenderer must be filled up, returned intact, together with the general conditions and drawings, sealed and marked "Tender for Electricity Works," addressed to

and must be received by him before p.m. on

The purchasers reserve to themselves the right of accepting a separate tender or separate tenders for any one or more of the sections of the specification, but not for part of a section.

The purchasers do not bind themselves to accept the lowest or any tender, nor will they be responsible for, or pay for, expenses or losses which may be incurred by any tenderer in the preparation of his tender, except as provided by Condition 10.

The sum deposited by the tenderer on application for the specification will be refunded to him within fourteen days of the date of the adjudication upon the tenders, unless in any case the purchasers on the advice of the engineer shall determine that the tender was not made in good faith, in which case the deposit shall be forfeited. Extra copies of the specification and general conditions may be supplied by the engineer to tenderers on payment of [*five shillings*] per set, and extra copies of the drawings at a reasonable price. The engineer shall decide whether a tenderer should or should not be so supplied.

[NOTE.—*It is advisable that the advertisement inviting tenders should notify a suitable place where the general conditions, specification and drawings may be inspected, and should give such particulars of the class of plant and apparatus required under each section as will enable contracting firms to decide, without obtaining the specification, whether they are able to tender, and should also state the amount of the deposit to be paid for the general conditions, specification and drawings. Even in the absence of this clause, an employer*

is not bound to accept the lowest or any tender. See Chap. VIII., § 13; and as to tenders generally, see the various headings in Chap. VIII.]

9. *Contractor to inform himself fully.*—If the contractor shall have any doubt as to the meaning of any portion of these general conditions or of the specification, he shall, before signing the contract, set forth the particulars thereof, and submit them to the engineer in writing, in order that such doubt may be removed.

[NOTE.—*The importance to the contractor of having the meaning of the specification explained is dealt with in Chap. X., §§ 3, 6, and Chap. XI., § 3. Another form of clause for warning the contractor is as follows:—*]

9A. The contractor, by signing these conditions and the relative drawings, specifications, and schedule (if any), shall be held to have carefully examined the same, and shall, in the absence of any previous written intimation by him to the contrary, be held to concur as a practical tradesman in the method and styles of construction to be adopted, and the sufficiency of the materials proposed to be used in the execution of the work.

(For a still more elaborate clause, see Chap. VIII., § 3, *ante.*)

10. *Contract and bond.*—The contractor shall enter into a sealed agreement for the proper fulfilment of the contract, and provide two sureties, or grantors of an insurance or guarantee policy, whose names shall be set out in the tender, and be subject to the approval of the purchasers, and who shall execute a joint and several bond or grant an insurance or guarantee policy to the extent of 10 per cent. of the value of the contract, by way of suretyship for the due and faithful performance of the contract, as defined by these conditions, such suretyship to be binding notwithstanding any variations, alterations, directions, or extensions of time to be made, given, conceded, or agreed under these conditions.

The required agreement and instrument of suretyship shall be prepared or approved by or for the purchasers, and they shall forward the same to the contractor not less than thirty days from the date of acceptance of his tender.

In case the contract and bond or security shall not be executed by the contractor and his sureties, insurers, or grantors respectively within thirty days after the same shall have been presented to the contractor for that purpose, the purchasers shall not, unless they think fit, be bound by their acceptance of the tender, or by the contract, but the same shall, at the option of the purchasers, be absolutely void, and if the purchasers, by notice in writing to the intending contractor, declare the same to be void, the purchasers shall not be liable to or for any claim or demand from the contractor, in respect of work then already done or materials furnished, or in respect of any other matter or thing whatsoever.

In case the contract shall not be executed by the purchasers within thirty days after receiving the executed portion from the contractor, the tenderer shall not, unless he thinks fit, be bound by his tender, but the same shall, at his option, be absolutely void, and if the tenderer, having duly complied with these conditions, shall, by notice in writing to the purchasers, declare the same to be void, the tenderer shall not be liable to or for any claim or demand from the purchasers, but the accepted

tenderer shall be entitled to be repaid the proper expenses of his tender, together with any sum or sums in respect of work then already done or materials furnished, at the request in writing of the purchasers.

The expenses of completing and stamping the contract and bond or insurance or guarantee policy shall be paid by the purchasers, and the contractor shall be furnished with an executed counterpart of the contract.

[NOTE.—*Bonds and sureties, being of legal rather than general interest, have not been dealt with in this volume. For a form of bond to be given by a contractor, see Emden's Building Contracts, p. 400.*]

11. *Contract drawings.*—The contractor shall submit, for the engineer's approval, a preliminary set of the drawings set out under each section of the specification, by the dates therein indicated.

Within fourteen days of the receipt of the preliminary set of drawings the engineer must signify his approval or otherwise of the same.

Within fourteen days of the notification by the engineer to the contractor of his approval of the preliminary set of drawings, two additional sets, in ink on tracing cloth or ferrogallic prints mounted on cloth, of the drawings as approved shall be supplied to him by the contractor and be signed by him and by the contractor respectively and be thereafter deemed to be the "contract drawings."

These drawings when so signed shall become the property of the purchasers and be deposited with the engineer, and shall not be departed from in any way whatsoever except by the written order of the engineer as hereinafter provided. During the execution of the works one of the sets of drawings shall be available for reference on the site.

[NOTE.—*As to property in drawings generally, see Chap. XI., § 16.*]

In the event of the contractor desiring to possess a signed set of drawings, he may submit three sets, and in this case the engineer will sign the third set and return the same to the contractor.

The contractor shall supply from time to time such additional drawings of any details as the engineer may deem necessary for the execution of the work, but the contractor shall not be called upon to furnish drawings of constructional details further than those which in the opinion of the engineer are required for the purposes of the contract.

The engineer shall have the right, at all reasonable times, to inspect, at the works of the contractor, drawings of any portion of the work.

If the contractor shall not submit the drawings within the time specified, or subsequently within seven days after the purchasers or the engineer shall in writing have required him so to do, and if the delay shall not have been occasioned by the purchasers or the engineer, or any other contractor, or other reasonable cause, the purchasers may notify in writing to the contractor that they will not be bound by the contract, and on such notification the contract shall be avoided and the purchasers shall not be liable to or for any claim or demand from the contractor in respect of work then already done or material furnished, or in respect of any other matter or thing whatever.

Or, *alternatively*, the purchasers may, at their option, maintain the contract, and in such case the contractor shall pay or allow to them in account all expenses incurred by such default.

[NOTE.—*As to drawings generally, see Chap. XI., §§ 2 et seq.*]

11A*. *Discrepancies.*—In the event of there being any discrepancies between the specification, plans, drawings, or other documents forming the basis of the contract, the specification shall take precedence of and be held to be more correct and binding than the drawings; and in like manner the figured dimensions on any plans or drawings shall take precedence of and be held to be more correct than the scale affixed to any such plans or drawings; and in the event of any discrepancies between large-scale and small-scale drawings, the large-scale drawings shall be taken and held to be correct, and shall overrule the small-scale drawings; and in case of any dispute as to any such discrepancy, or as to the true intent or meaning of the specification, plans, drawings, or other documents forming the basis of the contract, the same shall be determined by the engineer, whose decision shall be final and binding.

[NOTE.—As to the necessity for this clause, see Chap. XI., § 9.]

12. *Drawings of foundations.*—Where foundations are necessary, the contractor shall supply the engineer with drawings of the foundations necessary for his plant, such foundations being provided by the purchasers (see Clause 3). The contractor shall insure, by means of templates, the correct position of the foundation bolts and other details.

13. *Defects in contractor's drawings.*—The contractor shall be responsible for any mistake that may arise from any defect in the drawings supplied by him, and for any costs, damages, or expenses which may be sustained or incurred by the purchasers by or in consequence of any such mistake, unless such drawings shall have been approved and signed by the engineer.

14. *Drawings of completed works.*—Within one month of the taking over of the plant under Clause 41, and of the receipt of a list from the engineer of working drawings of such portions of the plant as may reasonably be required for the future use of those in charge of the works, the contractor shall supply the same at the cost of production.

15. *Subletting of contract.*—The contractor shall not, without the consent in writing of the engineer, assign his contract, or any substantial part thereof, nor underlet the same or any substantial part thereof, nor make any sub-contract with any person or persons for the execution of any portion of the works other than for raw materials, for minor details, or for any part of the work of which the makers are named in the contract.

[NOTE.—As to sub-contractors, see Chap. XVII.]

16. *Approved apparatus.*—In all cases where plant or apparatus of "approved" type or make is required by terms of the specification, the engineer's approval thereof in writing must be obtained before such plant or apparatus is constructed or ordered, provided that if the contractor shall have submitted with his tender drawings of the apparatus which he has included in his tender or otherwise shall have described the same in detail, the engineer shall not have the right to demand other plant or apparatus of a greater value than that so drawn or described.

17. *Notices.*—All notices to the contractor for the purposes of the contract and these general conditions, shall be sufficiently authenticated if signed by

the purchasers or by the engineer; all notices from the purchasers to the contractor, and from the contractor to the purchasers, shall be served respectively upon them personally, or by letter addressed to the places of business respectively named in the contract, and any notice by letter shall be deemed to have been duly served at the time when the letter containing the same would be delivered in the ordinary course of post, and in proving such service it shall be sufficient to prove that the notice was properly addressed and posted. Provided always that if the contractors or the purchasers respectively shall, after the contract shall have been entered into, change his or their place of business and shall notify such change to the other of them in writing, all future notices if sent by letter shall after the receipt of such notification be addressed to such new place of business.

18. *Patent rights.*—The contractor shall fully indemnify the purchasers against any action, claim or demand, costs, or expenses arising from or incurred by reason of any infringement or alleged infringement of letters patent, trade mark or name, copyright or other protected rights, in respect of any plant, fixing, working or arrangement used or fixed or supplied by the contractor, but such indemnification shall not be operative in respect of any system or method of use that may be specifically mentioned by the specification. All payments and royalties payable in one sum or by instalments or otherwise shall be included by the contractor in the prices named in his tender, and shall be paid by him to those to whom they may be due or payable.

In the event of any claim being made or action brought against the purchasers in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof, and he shall, with the assistance, if necessary, of the purchasers, but at his sole expense, conduct all negotiations for the settlement of the same, or any litigation that may arise therefrom.

19. *Manner of execution, quality of materials, etc.*—The plant is to be manufactured, constructed, provided, erected in position, and maintained in accordance with the contract, in the best and most substantial and workmanlike manner, and, unless otherwise specified, with materials of the best and most approved qualities for their respective uses.

[NOTE.—As to the meaning of “best,” see Chap. VI., § 34.]

19A*. *Omissions.*—The contractor at his own cost and charge is to find, provide, and do everything of every kind and description, including plant and temporary works, which in the opinion of the engineer is necessary for the due and proper execution of the whole of the works included in the contract and every part thereof, whether comprised in the drawings, specification, bill of quantities, or other documents hereto annexed or herein referred to or not, it being definitely and distinctly understood that should anything be omitted, either in the drawings, specifications, or schedules which is fitting, and is usually considered necessary to be done for the completion of the work, the contractor shall execute same as if it had been particularly specified or shown, and shall supply whatever may be necessary to complete the whole work, without any claim for payment for such omitted work.

[NOTE.—*As to what constitutes a whole or completed work, see Chap. VI., § 27. For the distinction between a clause providing for the making good of omissions, and an ordinary maintenance clause, see Chap. XVI., § 10.*]

20. *Extras—Power to vary or omit work, etc.*—The contractor shall not alter, in any way whatsoever, any of the work, except as directed in writing by the engineer; but the engineer shall have full power from time to time during the execution of the contract to alter, amend, omit, or otherwise vary any of the work, without in any way affecting or vitiating the contract, and the contractor shall carry out such alterations, amendments, omissions, variations, or directions, and be bound by the same conditions, as far as applicable, as though the said alterations, amendments, omissions, variations, or directions occurred in the contract. The difference of cost, if any, occasioned by any such alterations, amendments, omissions, variations, or directions, shall be added to or deducted from the contract price as the case may require. The amount of such difference, if any, shall be ascertained and determined in accordance with the rates specified in the schedules of prices, so far as the same may be applicable, and where the rates are not contained in the said schedules, or are not applicable, they shall be settled by the engineer and contractor jointly. But the purchasers shall not become liable for the payment of any charge in respect of any such alterations, amendments, variations, or directions unless the instruction for the performance of the same shall have been given in writing by the engineer, nor unless such instruction shall state that the matter thereof is to be the subject of an extra or varied charge, nor unless the particulars of his claim shall be set forth in writing by the contractor, and furnished to the purchasers within thirty days after the execution of the same; but subject to these conditions being duly complied with, the purchasers shall be bound by such particulars unless they or the engineer object thereto in writing within thirty days after delivery thereof.

In the event of the engineer requiring to dispense with or add to any part of the plant or works to be done under this contract such reasonable and proper notice shall be given to the contractors as will enable them to make their arrangements accordingly.

Unless the contractor shall otherwise agree in writing, the total sum of money set out in the contract shall not be affected by such alterations, amendments, omissions, variations, or directions to the extent of more than 10 per cent. of the amount of the contract. Provided always that in cases where goods or materials are already prepared, or any matter or patterns made or work done that require to be altered in respect thereof, a reasonable sum shall be allowed by the engineer.

[*For the meaning of "omission," see Chap. VI., § 34. For the limitation of an engineer's powers under the extra clause, see Chap. XII., § 8.*]

20A*. *Extras to be authorised by writing.*—The contractor must not execute any extra or omit any specified work whatsoever unless upon the written order or authority of the engineer, or upon some plan or drawing expressly given or signed by the engineer as an approved alteration. An order form will be made out by the engineer stating the amount of the extra or deduction agreed to in each case. The contractor must refer

to the number of the order form in any account or claim for payment by him.

[As to the meaning of "extras," see Chap. VI., § 34, *ante*.]

21. *Negligence*.—If the contractor shall fail to execute the work with due diligence and expedition, or shall refuse or neglect to comply with any orders given him in writing by the engineer, or shall fail to execute any other matter stipulated in the contract, or shall contravene the provisions of the contract, the purchasers shall, after seven days' notice to the contractor, in writing, be at liberty to employ other workmen, and forthwith perform such work as the contractor may have failed to do, or, if the purchasers shall think fit, it shall be lawful for them to take the works wholly, or in part, out of the contractor's hands and re-contract with any other person or persons, or provide any other material, tools, tackle, or labour for the purpose of completing the works or any part thereof, and the purchasers shall, without being responsible to the contractor for fair wear and tear of the same, have the free use of all the materials, tools, tackle, or other things, the property of the contractor, which may be on the site, for use at any time in connection with the work, to the exclusion of any right of the contractor over the same.

If the cost of completing the works exceed the balance due to the contractor, the said materials, tools, tackle, or other things may be sold by the purchasers, and the proceeds applied towards the payment of such difference. Any outstanding balance existing after crediting the proceeds of such sale shall be paid by the contractor on the certificate of the engineer, but when all expenses, costs, and charges incurred in the completion of the work are paid by the contractor, all such materials, tools, tackle, or other things shall be removed by the contractor.

22. *Death, bankruptcy, assignment, and sub-contracting*.—The conditions and penalties in favour of the purchasers contained in the last preceding condition may, subject as hereinafter provided, be enforced by the purchasers if the contractor die, goes into liquidation, become bankrupt or insolvent, or have a receiving order made against him, or compound with his creditors, or propose any composition to his creditors for the settlement of his debts, or assign his contract without the consent of the purchasers, or if the contract become vested in any other person, or if he commit any act of bankruptcy, or carry on his business under an inspector or a receiver for the benefit of his creditors, or permit any execution to be levied on his property, or if he sub-contract for any portion of the work otherwise than as provided in Clause 15. Provided that the consent of the purchasers to an assignment of the contract shall not be unreasonably withheld. In the case of the death, liquidation, insolvency, or other disability or act as aforesaid of the contractor, his executors or other representatives in law of his estate shall have the option of carrying out the contract subject to the executors providing such additional surety as may be required by the purchasers as will bring the amount of the surety up to the contract value of the work for the time being remaining unexecuted.

The apparatus, instruments, unused material, and apparatus so provided by the contractor shall remain the property of the contractor.

In the case of cable contracts, current for tests on site shall be supplied free to the contractors at the pressure of the ordinary supply.

[NOTE.—*As to the rights of a sub-contractor on the bankruptcy of the contractor, see Chap. XVII., § 8.*]

23. *Inspection and testing at maker's works.*—The engineer and his duly authorised representative shall have at all reasonable times access to the contractor's works, and shall have the power at all reasonable times to inspect, examine, and test the materials and workmanship of the plant during its manufacture there; and if part of the plant is being manufactured on other premises, the contractor shall obtain for the engineer and for his duly authorised representative permission to inspect as if the plant were manufactured on his own premises.

The engineer shall, on giving fourteen days' notice in writing of his grounds of objection, have liberty to reject all or any materials, plant or workmanship, which in his opinion are not in accordance with the contract, or are defective for any reason whatever, and such rejection shall be operative at the expiration of such notice, provided that, if notice of any such rejection, setting forth the reason for such rejection, be not sent to the contractor within fourteen days after the grounds upon which such rejection is based have come to the knowledge of the engineer, he shall not be entitled to reject the said materials, plant or workmanship on these grounds.

The contractor shall give the engineer not less than seven days' notice of any material being ready for testing, and unless otherwise arranged, the engineer, or his representative, shall proceed to the contractor's works within three days of the date on which the material is notified as being ready: failing which visit the contractor may proceed with the tests, and, in the absence of the engineer, the tests shall be taken as if they were made in his presence.

24. *Testing apparatus.*—In all cases where the contract provides for tests, whether at the works of the contractor or the sub-contractor or on the site, the contractor, except where otherwise specified, shall provide, free of charge, such labour, materials, chemicals, coal, oil, waste, apparatus, and instruments, as the engineer may consider requisite from time to time, and as may reasonably be demanded, to efficiently test the plant, material or workmanship, in accordance with the contract, and shall at all times give facilities to the engineer or to his authorised representative to accomplish such testing.

25. *Delivery of materials.*—No plant or materials shall be forwarded until an intimation in writing shall have been given to the contractor by the engineer that the purchasers are ready to take delivery.

If the purchasers withhold the forwarding of instructions so as to prevent the contractor giving delivery by the dates stipulated in the contract, the purchasers shall bear the cost of the storage and protection, including fire insurance, of the plant and materials, and make payments therefor as if delivery had been given, provided that possession thereof and the property therein be duly secured to the purchasers.

[NOTE.—*As to delay in commencing work, see Chap. XV., § 9.*]

26. *Access to site.*—In the execution of the work, no person other than the contractor, or his duly appointed superintendent, sub-contractors and workmen, shall be allowed to do work on the site, except by the special permission, in writing, of the engineer, but access to the works at all times shall be accorded to the engineer and his representatives, and other officials or representatives of the purchasers.

[NOTE.—*As to the advisability of preventing strangers having access to the site of the works, see Chap. V., § 12.*]

27. *Materials brought on to the site.*—The contractor shall provide all materials, labour, haulage power, tools, tackle, and plant of every description, necessary to execute and complete the works in an efficient and satisfactory manner. All such materials, plant, tools, and tackle (except as provided by Clause 24 with regard to instruments and apparatus for testing empty drums and packing cases), brought to and delivered upon the site for the purpose of the work, shall, from the time of their being so brought, vest in and be the property of the purchasers until the completion of the contract, when the property in any surplus materials, and in the plant and tools, shall revert to the contractor, unless there shall be due, owing to, or accruing, or to accrue, from the contractor to the purchasers, any money or moneys under, or in respect of or by reason of this contract, in which case the purchasers shall be at liberty to sell and dispose of such materials, plant and tools as they shall think fit, and to apply the proceeds in or towards the satisfaction of such money or moneys so due, owing or accruing, or to accrue to them as aforesaid.

If application be made to the engineer by the contractor, he may at any time permit the removal of such machinery, plant, tools, and tackle as may not be required for the execution of work under this contract, or which may be required by the contractor for uses elsewhere.

27A*. *Materials to be described.*—The contractor must produce vouchers proving all materials to be genuine, and of the nature described in the specification, when called upon to do so by the engineer.

28. *Engineer's supervision.*—All the works are to be carried out under the direction, control, and to the entire satisfaction in every respect of the engineer; but the contractor shall be responsible for the accuracy of his work, and no plea as to the acts or general supervision of the engineer otherwise than instructions given by him in writing will be admitted in justification of any errors of construction or fixing.

29. *Engineer's decisions.*—In respect of all matters which are left to the decision or certificate of the engineer, the engineer shall, if required so to do by the contractor, give in writing a decision thereon, and his reasons for such decision, or if he shall withhold any certificate then his reasons for so doing. All decisions of the engineer shall be subject to the right of arbitration reserved by these conditions.

[NOTE.—*As to whether an engineer is bound to give reasons if the contract does not specially so provide, see Chap. XIV., § 6.*]

30. *Contractor's superintendent and workmen.*—The contractor shall constantly employ at least one competent superintendent to superintend the erection of the plant and the carrying out of the works. The said

superintendent shall be present on the site during working hours, and shall be prepared to receive from time to time orders and instructions from the engineer or his duly authorised representative.

The said superintendent, if objected to by the engineer, on account of incapacity, misconduct, or negligence, shall be removed by the contractor, and the contractor shall, after receiving formal objection in writing, forthwith replace him by another superintendent, competent to fulfil his duties.

The engineer shall be at liberty to object to any person employed by the contractor in the execution of or otherwise about the works who shall, in his opinion, misconduct himself or be incompetent or negligent, and the contractor shall forthwith remove the person so objected to, and if necessary replace him by a satisfactory person who shall be the servant of and be remunerated by the contractor.

31. *Liability for accidents and damage.*—The contractor shall properly cover up and protect such of the work as may be liable to sustain injury by exposure. He shall also take every necessary, proper, timely and useful precaution against accident or injury to the plant, and shall be and remain answerable and liable for all losses, damages or injury which, during the progress of the work, and until it be taken over under Clause 41, may arise or be occasioned by the acts or omissions of the contractor or his servants, but not for any subsequent consequential loss or damage, nor for any breakage or injury, wholly or partially caused by, or arising from, the acts of the purchasers or others, or due to circumstances over which the contractor has no control; and all such losses, damages, or injuries, if sustained by the purchasers, shall be made good in the most complete and substantial manner by and at the sole cost of the contractor, and to the satisfaction of the engineer, and the contractor shall indemnify the purchasers against all claims and demands in respect of such losses, damages, or injuries, if sustained by any other person or persons.

The contractor shall likewise, until the plant shall have been taken over under Clause 41, indemnify and save harmless the purchasers against actions, suits, claims, demands, costs or expenses arising in connection with the works under the Workmen's Compensation Act, 1906, and any other statute in force at the date of the contract dealing with the question of the liability of employers for injuries sustained by employees.

In the event of any claim being made or action brought against the purchasers arising out of the matters referred to in this clause, the contractor shall be immediately notified thereof, and he shall, with the assistance if necessary of the purchasers, but at his sole expense, conduct all negotiations for the settlement of the same, or any litigation that may arise therefrom. The purchasers will, at the expense of the contractor, afford all available assistance for any such purpose.

32. *Replacement of defective work or materials.*—If during the progress of the work on site, the engineer shall decide and notify in writing to the contractor that the contractor has executed any unsound or imperfect work, or has supplied any plant or materials of inferior quality to those specified, the contractor shall at his own expense, within twenty-four hours of his receiving the notice, proceed to alter, re-construct, or remove such work, or supply fresh materials up to the standard of the

specification, and in case the contractor shall fail to comply with such orders, the purchasers may, without further notice, remove the work or materials complained of, and, at the cost of the contractor, perform all such work or supply all such materials.

[NOTE.—See also as to maintenance, Clause 45, *infra*. As to the distinction between “maintenance” and “defect” clauses, see Chap. XVI., § 10. As to meaning of “defect,” see Chap. VI., § 34.]

32A*. *Inspection at contractor's works and rejection of materials on site.*—The engineer or the assistant engineer shall have full power to inspect the plant or materials at the contractor's works during construction, and the engineer shall also have full power, after the delivery of any plant or material, to reject any materials or workmanship which he considers objectionable, and to order the removal of the same from the works, and his decisions and instructions on such subjects shall be obeyed by the contractor. If the contractor shall so desire, and of such desire shall give notice in writing to the corporation within seventy-two hours after receiving notice from the engineer, the question involved in any such decision of the engineer may be submitted to arbitration in the manner and subject as herein provided. The contractor shall not under these circumstances cease to proceed with the execution of the contract, to the prejudice of the purchasers. In the event of the engineer not receiving such notice from the contractor within seventy-two hours, he shall have power to have the work and materials so objected to taken down and removed, without being answerable or accountable for any loss or damage that may arise or happen to such materials, and shall also have the power to deduct the consequent expense, or cause it to be deducted from moneys due to the contractor.

33. *Deductions from contract price.*—All costs, damages, or expenses which the purchasers may have paid, or be liable to pay, or which shall have become forfeited to the purchasers as provided for by these conditions and by the specification, shall be paid by the contractor to the purchasers on the certificate of the engineer, or if not so paid may be deducted from any moneys in their hands due or becoming due to the contractor under the contract, or recovered by action at law, or otherwise from the contractor.

33A*. *Alternative clause.*—The purchasers shall have power to deduct from time to time, or at any time, any moneys due or payable to the purchasers by the contractor under these conditions from any sums due or accruing due to the contractor under this or any other contract with him, or the same may be recovered from him by the purchasers as ascertained and liquidated damages.

[NOTE.—As to “liquidated damages,” see Chap. VI., § 34.]

34. *Terms of payment and certificates of engineer.*—The contractor shall from time to time be entitled, upon the written certificates of the engineer, to payments by the purchasers by instalments in accordance with the following provisions :—

I.—As the works progress, 80 per cent. upon the contract value of the work from time to time delivered or executed on the site to the satisfaction of the engineer.

II.—The remaining 20 per cent. (referred to herein as retention money) in respect of each distinct section or part of a section of the works as follows :—

- (a) 10 per cent. at the expiration of one month after the works shall have been taken over by the purchasers under Clause 41 or alternatively, at the option of the contractor, at the expiration of one month after the works shall have been put into beneficial use by the purchasers.
- (b) 10 per cent. at the expiration of nine months after the first 10 per cent. becomes due under (a).

No part of the "retention money" will be payable at the time at which payment of the same ought otherwise to be made under the contract, unless in the opinion of the engineer the works are then in good repair, and condition, and sound working order, fair wear and tear and accidental injury or damage by persons other than the contractor's servants and not due to faulty workmanship or material, excepted. Provided, however, that where the defects are not of such importance as to affect the full beneficial use of the works, the retention of the whole instalment shall not be insisted on, but the purchasers shall be entitled to retain such less sum of money as, in the opinion of the engineer, represents the damage to the purchasers arising out of incomplete or defective details. Any sum retained under this clause will become due upon the adjustment of such details to the satisfaction of the engineer.

Every application to the engineer for a certificate must be accompanied by a detailed claim (in duplicate) setting forth, in the order of the schedule of prices, particulars of the work executed to the date of claim, and the certificate shall be issued within fourteen days of the application for same.

Not more than one certificate shall be issued in any one month in respect of the same section.

The engineer may by any certificate make any correction or modification in any previous certificate which shall have been issued by him, and payments shall be regulated and adjusted accordingly.

[As to the desirability of a written certificate, see Chap. XIV., § 2, and as to finality of a certificate, see *ib.*, § 11.]

35. *Due dates of payments.*—Payments shall be made by the purchasers within thirty days from the date of each certificate of the engineer.

In the event of the purchasers failing to pay the contractor any amount certified by the engineer, within the specified period, and in accordance with the contract, the contractor shall have the right, on giving fourteen days' notice in writing to the purchasers or the engineer, to stop all operations, and the expenses incurred in resuming work shall be paid by the purchasers to the contractor as an extra over and above the amount payable under the contract.

36. *Certificates not to affect rights of the purchasers or contractor.*—No certificate of the engineer on account, nor any sum paid on account by the purchasers, shall affect or prejudice the rights of the purchasers against the contractor, or relieve the contractor of his obligations for the due performance of the contract, or be interpreted as approval of the work done or of the materials supplied, and no certificate shall create liability in the purchasers to pay for alterations, amendments, or

variations not ordered in writing by the engineer, or discharge the liabilities of the contractor for the payment of damages, whether due, ascertained or certified, or not, or of any sum against the payment of which he is bound to indemnify the purchasers, nor shall any such certificates affect or prejudice the rights of the contractor against the purchasers.

[NOTE.—*As to the effect of a final certificate on extras, see Chap. XII., § 10. This clause tends to make all the certificates like progress certificates. See Chap. XIV., § 3A.*]

36A*. *Commencement of work.*—The works shall be commenced immediately upon acceptance by the engineer on behalf of the purchasers, in writing, of the contractor's tender, and shall be carried on with diligence, and in regular progression, so that the whole work shall be entirely completed within the time stated in the tender, and in these conditions.

37. *Suspension of works.*—The purchasers shall pay to the contractor all reasonable expenses arising from suspension of works by order in writing of the purchasers or the engineer unless such suspension be due to some default on the part of the contractor.

[NOTE.—*As to extension of time by engineer, see Chap. XIII., §§ 5, 6.*]

37A*. *Engineer may delay or suspend work.*—The engineer shall have power, by notice in writing, to delay or suspend the whole or any part of the work during unsuitable weather, or for any other sufficient reason, but the works shall be recommenced after receiving due notice in writing from the engineer. Such delay shall in no way vitiate or invalidate the contract; and in no case shall any compensation for damage, injury, or loss of profit or otherwise be allowed the contractor for or on account of such delay or suspension of the work.

38. *Dates of completion.*—The works shall be completed on the site and ready for beneficial use or for testing by the date named under each section, or by such other date (if any) as may be incorporated in the contract.

[NOTE.—*For the meaning of words in a time clause, see Chap. XIII., § 2.*]

Provided always that, if by reason of extra work, alterations in, or deviations from the specifications, directed in writing by the engineer, or by reason of the suspension of the works under the direction of the engineer, or of unusual inclemency of the weather, or by reason of civil commotion or general or local strikes, or lock-outs, or combinations of workmen, or in consequence of fire or of any unpreventable accident to or breakage of machinery in the manufacturer's premises or on the site, causing a delay in the supply of plant or materials to the contractor, or by reason of the non-completion of a section of the contract executed by another contractor, or by any act or default on the part of the purchasers, or of other cause beyond the reasonable control of the contractor, or by any delay on the part of the purchasers to give forwarding instructions to the contractor under Clause 25, the contractor shall have been unduly delayed or impeded in the completion of the work, the engineer shall, on the receipt of a written request from the contractor, grant from time to

time, and at any time or times, by writing under his hand, such extension of time, either prospectively or retrospectively, and assign such other day or days for the completion as to him may seem reasonable, without thereby prejudicing, or in any manner affecting, the validity of the contract, and any and every such extension of time shall be deemed to be in full compensation and satisfaction for, and in respect of, any and every actual and probable loss sustained or which may be sustainable by the contractor in the premises, and shall in like manner exonerate him from any claim or demand on the part of the purchasers for, and in respect of, the delay occasioned by the cause or causes in respect of which any and every such extension of time shall have been made, but not further or otherwise, nor for, or in respect of, any delay continued beyond the time mentioned in such writing or writings respectively, provided that unless such request be made within two weeks after the expiry of the calendar month in which the delay existed no such extension of time shall be granted.

The contractor shall not be called upon to commence any work which is of a nature requiring a building or structure for the reception or efficient installation thereof, and which building or structure is by the contract to be provided by the purchasers, unless and until such building or structure shall be in a condition sufficient for the reception or efficient installation of the plant, and the contract date of completion shall be extended *pari passu* with the delay in the providing of any such building or structure.

[As to the meaning of a strike, see Chap. VI., § 34.]

39. *Penalty clause—Damages for delay in completion.*—If the contractor shall fail in the due performance of his contract by and at the time fixed under the contract, whether by way of extension or otherwise, the engineer shall, in writing, certify the fact of such failure, and in such case the contractor shall pay to the purchasers, as and for agreed liquidated damages, the following amounts reckoned on the contract value of such portion only of the works as cannot, in consequence of the delay, be used beneficially—

- during the first four weeks between the appointed time and the actual time of completion, five shillings per £100 per week ;
- during the second four weeks, ten shillings per £100 per week ;
- during the third four weeks, fifteen shillings per £100 per week ; and
- during any subsequent week, twenty shillings per £100 per week.

[NOTE.—As to meaning of liquidated damages, see Chap. VI., § 34, and Chap. XV., § 3 ; as to the danger of fixing too large a penalty, see Chap. XV., § 4 ; as to the necessity for a penalty clause in a contract with a local authority, see Chap. XV., § 14.]

40. *Preliminary trials on site.*—On the completion of the works on the site, the contractor shall be at liberty, as far as convenient to the purchasers, to make any preliminary trials that he may desire.

All expenses whatever of raising steam, or otherwise of or in connection with such preliminary trials, to which the purchasers be put, shall be borne by the contractor.

41. *Tests on completion.*—On the completion of the works on the site, the contractor, after giving the engineer fourteen days' notice of his readiness to make the "tests on completion," shall test the operation thereof, either

together or in sections, in the presence of the engineer, and in all respects in accordance with and in manner provided by the specification.

On the giving of such notice, the plant shall, for the purpose of the tests, be deemed to be complete, and no alterations or readjustments of the same shall be made within forty-eight hours before the time fixed for starting the tests, without the express permission of the engineer in writing.

Should any alterations or re-adjustments be found necessary within forty-eight hours before the time fixed for starting the tests, the tests of the plant to which the alterations or re-adjustments are to be made may, at the sole option of the engineer, be deferred for a period not exceeding fourteen days, and all reasonable expenses to which the purchasers may be put by the deferring of the tests shall be borne by the contractor.

The contractor shall find and provide all necessary superintendence and labour for the purposes of the tests, and during the tests shall have the full working control of the plant.

If at the time agreed upon between the contractor and the engineer for the starting of the tests, the engineer or his duly authorised representative shall fail to attend, the tests may proceed in his absence.

As soon as the tests have proved that the plant has completely fulfilled the contract conditions, the engineer shall forthwith so certify in writing to both the purchasers and the contractor, and *thereupon it shall be deemed that the purchasers have taken over the plant.*

If the works fail under the tests to fulfil the contract conditions, complete new tests shall, if required by the engineer, or by the contractor, be carried out upon the same terms and conditions, and upon payment to the purchasers of all reasonable expenses to which they may be put by the repeated tests.

If the tests, proving that the works fulfil the contract conditions, be not made by the contractor within one month after the date fixed under Clause 38 for the completion and the readiness of the works for beneficial use or for testing, and if, in the opinion of the engineer, the tests are being unduly delayed, the engineer may, in writing, call upon the contractor under seven days' notice to make such tests, and on the expiry of such notice such tests shall forthwith be made by the contractor.

If after the expiry of the notice from the engineer the contractor neglects to make such tests, the engineer may proceed to make such tests himself at the contractor's risk and expense.

42. *Right of use.*—If the contractor neglects to make the "tests on completion" by the dates stipulated under Clause 38, the purchasers shall, nevertheless, have the right of using the works at their own expense for the supply of electrical energy or otherwise; but such use shall be at the contractor's risk until he elects to make the "tests on completion" or until such tests prove that the plant fulfils the contract conditions. The purchasers may, pending any arbitration under the contract, use any portion of the works reasonably capable of being used, but in such case the contractor shall be entitled to be paid in respect of any work beneficially used, a sum equal to £5 per cent. per annum (according to the period of user) upon the amount withheld or deducted in respect of such work.

43. *Interference with tests.*—If any act of the purchasers or of the engineer, or the use of the work as above provided for, shall interfere

with the contractor carrying out the tests after the fourteen days' notice to be given by him to the engineer, the payments to the contractor shall be made as if final satisfactory "tests on completion" had taken place, but notwithstanding any such payments, the contractor shall be liable to make, and shall make, the said tests during the period provided for maintenance as and when required by the engineer upon fourteen days' notice; and the obligations and liabilities of the contractor shall be the same as if the tests had been made on the expiry of his fourteen days' notice.

The provisions of this condition as to payment shall apply in the event of such use, or any other act of the purchasers, or of the engineer, interfering with the remedying, by the contractor, of any defects which may have appeared in the works.

44. *Rejection of inefficient work.*—If the completed work or any portion thereof fails to pass the specified "tests on completion," or be defective in any way, the engineer may reject such work or portion thereof, and the purchasers shall then have the option of—

- (a) Permitting the contractor to replace the defective work, or
- (b) Themselves replacing the defective work by purchase from or contract with any other party or parties, or,
- (c) Returning the defective work and recovering the sum or sums paid or allowed on account of same.

In the event of (a), the substituted works shall be in all respects deemed to be subject to all the terms and conditions of the contract.

In the event of (b), no further sum beyond that already paid to the contractor in respect of the work in question shall be due or payable by the purchasers to the contractor in respect of such defective work, but the contractor shall repay to the purchasers any sum paid by them in respect of such work; and the contractor shall also pay to the purchasers any loss or damage to which they may be put by reason of the purchase or replacing of fresh work by them; it being agreed that if the contractor shall fail to execute works in strict accordance with the specification, it shall be lawful for the purchasers, at their discretion, to obtain, without additional cost to them, the work in question from any other party or parties, or so to arrange for the execution of the works as they may deem desirable, and that the contractor shall be liable for any loss suffered, or expenditure beyond the contract prices incurred by the purchasers in consequence of such failure.

In the event of (c), if the defective work be required by the purchasers for beneficial use, they shall be entitled to make use of the same for a reasonable time sufficient to enable them to obtain other work to replace it, the contractors being allowed a reasonable sum for the use of the same.

45. *Maintenance.*—Until the final certificate shall have been issued the contractor shall be responsible for any defects that may develop under normal and proper use arising from bad materials, design or workmanship in the works. When called upon, in writing, by the engineer to remedy such defects, the contractor shall do so with due diligence, and unless such defects be remedied by the contractor within a reasonable time, the contractor shall be responsible for all losses and damages sustained by the purchasers through such defects. If the defects be not remedied within a reasonable time, the purchasers may proceed to do the work at the contractor's risk and expense.

Until the final certificates shall have been issued, the contractor shall have the right of entry by himself or his duly authorised representatives, at all reasonable working hours, upon all parts of the works for the purpose of inspecting the working and the records of the works, after taking notes therefrom, and, if necessary, making any tests at reasonable times at his own risk and expense.

[NOTE.—As to distinction between “maintenance” and defect clauses, see Chap. XVI., § 10; and as to the necessity of giving notice to the effect that repairs, etc., are necessary, see *ib.* § 12. For a stringent form of repairing clause, see *ib.* § 13.]

46. *Requirements of local authorities.*—The contractor shall throughout the continuance of the contract, and in respect of all matters arising in respect thereof, promptly and effectually conform to all the requirements of any local or municipal authority in whose district the work may be executed, and provide for the safety and due convenience of the public.

47. *Arbitration.*—If at any time any question, dispute or difference shall arise between the purchasers or their engineer, and the contractor, upon or in relation to or in connection with the contract, either party may forthwith give to the other notice in writing of the existence of such question, dispute or difference, and such question, dispute or difference shall be referred to the arbitration of a person to be mutually agreed upon, or, failing agreement, to some person appointed by the President for the time being of the Institution of Electrical Engineers.

[As to the meaning of “dispute,” see Chap. VI., § 34, *ante.* For form of award, see Chap. XX., § 29, *ante.*]

Work under the contract shall continue during the arbitration proceedings.

The award of the arbitrator shall be final and binding on the parties. Upon every or any such reference, the costs of and incidental to the reference and award respectively shall be in the discretion of the arbitrator, who may determine the amount thereof, or direct the same to be taxed as between solicitor and client, or as between party and party, and shall direct by whom and to whom, and in what manner the same shall be borne and paid. This submission shall be deemed to be a submission to arbitration, within the meaning of the Arbitration Act, 1889.

48. *Construction of contract.*—The contract shall in all respects be construed and operate as an English contract and in conformity with English law, and all payments thereunder shall be made in [England and in] sterling money.

[NOTE.—To be included where the work is to be done wholly or partly abroad or in Scotland.]

II B.

FORM OF TENDER.

Section . . .

To the
Gentlemen,

the undersigned, do hereby offer to contract for the above-named work, in accordance with the preceding general conditions

and specification, at the prices which have submitted on the pre-
ceding page, and in case tender be accepted do hereby under-
take and agree to execute a contract in accordance with general conditions,
Clause 10, and propose as sureties as required by that clause
of and of .

Dated day of 190 .

Signature

Address

List of drawings submitted by tenderer under section :—

II C.

FORM OF AGREEMENT.*

THIS AGREEMENT made the day of 190 BETWEEN
(hereinafter referred to as the "Contractor") of the first part the
(hereinafter called the "Purchasers") of the second part and of
and of (hereinafter called the "Sureties") of the third part
WHEREAS the purchasers are about to erect and maintain the
hereinafter called the "works" mentioned enumerated or referred to in
certain general conditions specifications drawings form of tender and
schedule of prices and the further specification entitled "Additional
Details" which for the purpose of identification have been signed by
on behalf of the contractor and (the engineer of the pur-
chasers) on behalf of the purchasers AND WHEREAS the purchasers have
accepted the tender of the contractor for the provision and execution of
the said works for the sum of upon the terms and subject to
the conditions hereinafter mentioned AND WHEREAS the sureties have
agreed for the consideration hereinafter appearing to enter into the
covenants hereinafter contained and on their part to be performed: NOW
THIS INDENTURE WITNESSETH that in pursuance of the said agreement
and in consideration of the payments to be made to the contractor by the
purchasers as hereinafter mentioned the contractor hereby covenants
with the purchasers their successors and assigns that he shall and will
duly provide erect and complete uphold and maintain the works men-
tioned enumerated or referred to in the contract and shall do and perform
all other works and things therein mentioned or described or which are
implied therefrom or therein respectively or may be necessary for the
completion of the said works within and at the times and in the manner
and subject to the terms conditions and stipulations in the contract
mentioned and to the satisfaction of the engineer for the time being of
the purchasers and also will to the like satisfaction maintain the same in

* As to stamp duty, see Chap. VI., § 7, *ante*.

an efficient manner as mentioned in the contract and shall and will observe and perform all the conditions and provisions set out in such contract and that all the powers liberties rights and privileges mentioned therein and conferred thereby in respect of such works shall and may be exercised according to the true intent and meaning thereof AND in consideration of the due provision erection execution construction and completion of the said works and the maintenance thereof as aforesaid and of the covenant of the sureties hereinafter contained the purchasers do hereby for themselves their successors and assigns covenant with the contractor that they the purchasers their successors and assigns will upon the certificates of the engineer for the time being of the purchasers pay to the contractor the said sum of or such other sum as may become payable to the contractor under the provisions of the contract such payments to be made at such time and in such manner as is provided by the contract. And the sureties at the request of the contractor and in consideration of the purchasers entering into this agreement do hereby jointly and severally covenant and guarantee with and to the purchasers that the covenant on the part of the contractor in this contract contained shall be well truly and faithfully performed by the contractor in every respect according to the true intent and meaning of this contract and that in the event of default on the part of the contractor in respect of the performance in any particular of the said contract the sureties will pay to the purchasers all such losses damages costs charges and expenses as the purchasers may sustain incur or be put unto by or by reason or in consequence of any such default but so nevertheless that the total amount to be demanded or recovered by the purchasers of or from the sureties shall not exceed the sum of ten per cent. of the total contract price.

PROVIDED ALWAYS and it is hereby covenanted agreed and declared between and by the parties hereto that these presents are entered into and the said works are to be provided erected executed constructed completed and maintained upon and subject to the terms and conditions contained in the contract AND that the parties hereto respectively shall have such rights powers and liabilities and the said engineer shall have such powers and authorities in respect of the said plant and the tools and materials for the same and extension in respect of the contract and all matters connected therewith as are given and expressed by and in the same terms and provisions of the contract.

IN WITNESS whereof etc.

FORM III.

AGREEMENT WITH AN ENGINEER FOR PREPARATION OF DRAWINGS, ETC., FOR SEWAGE WORKS.*

1. *Parties.*—This indenture made the day of 190
Between A. B. of etc. civil engineer (hereinafter called the engineer) of
the one part and the mayor aldermen and burgesses of (hereinafter
called the corporation) of the other part.

* Reprinted, by permission of Messrs. Butterworth, from the *Encyclopædia of Forms and Precedents*, Vol. II. 579.

2. *Recital of works proposed to be executed by the engineer.*—Whereas the corporation under and by virtue of being about to execute and carry out certain works for the extension and improvement of the sewerage of the city of have requested the engineer to prepare the necessary drawings specifications and estimates for the said intended works and to superintend the same during their execution and the engineer has agreed to undertake and carry out the same as requested.

Now this indenture witnesseth that it is hereby agreed as follows:—

3. *Engineer to prepare drawings.*—The engineer will take all levels make all surveys and prepare all drawings specifications and estimates of and for the said intended works to such scales and with such particulars as may be necessary to enable the corporation to obtain the sanction of the Local Government Board to the same and also to enable the corporation to obtain tenders and enter into a contract or contracts for the due execution of the said intended works and will alter and amend the said drawings specifications and estimates as may be required by the corporation or by the Local Government Board.

4. *Engineer to assist corporation generally.*—The engineer will attend the meetings of the corporation to which he may be summoned in writing by the town clerk and will assist and advise the corporation in all matters relating to the design and execution of the said intended works and will attend and assist at any local inquiries with respect to the said intended works which may be held by order of the Local Government Board and will also attend and give evidence if required at any arbitration held to determine the amount of compensation to be paid to any persons whose lands or premises may be taken for or injuriously affected by the execution of the said intended works.

5. *Engineer to supervise the works.*—The engineer will aid and advise the corporation in obtaining tenders for the execution of the said intended works in considering and determining upon the same and in entering into a contract or contracts for the execution of the said intended works and will superintend such execution by means of such periodical inspections as may seem necessary and will report on the progress thereof to the corporation and will issue periodical certificates according to the terms of the contract for the said intended works so as to enable the corporation to make payments from time to time to the contractor or contractors and will assist in winding up all accounts between such contractor or contractors and the council.

6. *Drawings, etc., to belong to the corporation.*—Immediately upon the corporation entering into a binding contract or contracts for the execution of the said intended works the said drawings specifications and estimates shall become the property of the corporation and the engineer shall at his own expense prepare and deliver to the contractor or contractors such copies of the said drawings and such further drawings as may be reasonably required for the proper execution of the said intended works.

7. *Reasonable skill and care.*—The engineer will exercise all reasonable skill and care and diligence in the discharge of the duties hereby commanded to be performed by him and will act fairly as between the corporation and the contractor or contractors.

8. *Fees of engineer.*—The corporation will pay to the engineer the sum of £ at the times and in the manner following that is to say one payment of £ being one moiety of the total sum of £ when a contract or contracts for the said intended works or a substantial portion thereof has or have been entered into and a second payment of £ being a moiety of the balance of the total sum of £ where two-thirds in value of the said intended works are shown by the engineer's certificates to have been executed and a third and final payment of £ being the residue of the total sum of £ within three months after the date of the issue by the engineer of the final certificate to the contractor or contractors for the said intended works.

[NOTE.—As to the fees of an engineer generally, see Chap. II., § 2 *et seq.*]

9. *Fees if works not proceeded with by the corporation.*—In case the corporation shall determine not to proceed with the said intended works or shall not within one year after the said drawings specifications and estimates to be prepared by the engineer have been delivered to them enter into a contract or contracts for the execution of the said intended works or a substantial portion of the same they shall on the request of the engineer pay him the sum of £ and the said drawings specifications and estimates shall become the property of the council.

[*Even in the absence of a clause of this kind, the engineer could probably sue the employer as on a quantum meruit. See Chap. II., § 7, ante. See also Chap. III., § 6.*]

10. *If part only of the works executed.*—If after a contract or contracts have been entered into for the execution of the said intended works or a substantial portion of the same the engineer shall die or the corporation shall resolve to abandon a substantial portion of them then the engineer or his executors or administrators shall be entitled to be paid besides the moiety of the total sum of £ payable on the council entering into such contract or contracts a further sum which shall be in the same proportion to the balance of the total sum as the value of the works actually executed under the supervision of the engineer is to the estimated cost of the whole of the intended works.

11. *Arbitration.*—In case any dispute shall arise between the corporation and the engineer the same shall at the option of either of them be reported to an arbitrator to be appointed by the President of the Institute of Civil Engineers whose decision shall be final and conclusive on all parties.

IN WITNESS whereof the engineer has hereunto set his hand and seal and the council have caused their common seal to be affixed hereto the day and year first above written.

INDEX

ABANDONMENT

- of contract, effect of, on payment, 157
- payment for plans on, 127
- quantity surveyor's fees after, 111

ACCEPTANCE

- of sub-contractor's work, 187
- of tender, when it takes effect, 98
- of work, no answer to claim for defective work, 182
 - partly performed, 85

ACCIDENT

- due to supply of power, 199
- indemnity against, 194
- liability for, clause as to, 259
- responsibility for, clause as to, 242
- to stranger, liability for, 62
- to work before completion, 78
- to workmen of sub-contractor, 193
- work destroyed by, 85

ACCURACY

- of figures, etc., in specification, danger of assuming, 118, 119

ACTION

- against arbitrator, for fees paid in excess, 218, 219
- against engineer to recover fees paid, 15
- for failure to maintain, 177
- for not accepting tender, 99
- stay of, pending arbitration, 209
- to enforce award, 230

ADVERTISEMENTS

- consulting engineer should not answer advertisements for consulting engineers, 5
- for plans, 123
- for tenders, 94
 - by local authority, 102, 103

AGENT

- contractor acting as, for employer in employing sub-contractor, 188

AGREEMENT

- between engineer and employer unknown to contractor, 156
- consideration for, to be stated, 18
- for life, 17
- memorandum in writing, what is, 18
- not to tender, 101
- signature to, 18, 19
- to refer to arbitration, 147, 210

AGREEMENT FOR EMPLOYMENT (*and see* CONTRACT OF SERVICE)

- illness does not determine, 20
- obligation to keep a man employed, 19, 20
- salary, when to be paid, 19
- to be stamped, 18
- what it should contain, 18
- where payment by commission, 20
- whether writing necessary, 17

ALTERATIONS (*and see* EXTRAS, and TABLE, p. 129)

- assent of employer to, 134
- causing machine order to be a failure, effect of, 83
- clause as to, 246
- effect of, on penalties, 165
- in work, how employment of engineer affected by, 33
- on engineer's written order, 158

APPEAL

- on compulsory reference to arbitration, 208, 231

APPROVAL

- of employer, when work to be done to, 157
- of engineer, expressed by progress certificate, 143, 144
- of plans and drawings by engineer, 121
- of work, claim for defects after, 184

ARBITRATION (*see* ARBITRATOR, and TABLE, p. 205)

- agreement to submit to, certificate clause is not, 147
- appeal on compulsory reference to, 208
- as to value of extras, 211
- attendance of witnesses at, 50
- award, whether certificate is, 147, 148
- by consent out of Court, 208 *et seq.*
- by official referee, 207
- by order of Court, 207
- by single arbitrator, 215
- by special referee, 207
- by two arbitrators, 215
- clause as to, forms of, 266, 270
 - for, effect of, on sub-contractors, 212
 - strictly construed, 212

ARBITRATION—*continued.*

- compulsory reference to, 208
- costs of, 228, 229
- definition of, 206
- dispute, definition of, 86
- evidence in, 221, 222
 - on oath, 222
- fees of arbitrator, 216 *et seq.*
 - witnesses attending, 50
- jurisdiction of Courts not ousted by, 210 *et seq.*
- power of judge to refer a matter to, 207
- proceedings at, 220, 221
- proceedings, cost of, 228
 - disadvantages of, 228, 229
- qualifying fee for witness attending, 51
- reference to, by order of Court, 207
- revocation of submission to, 148, 212, 213
- scientific or local investigation referred to, 207
- stay of action pending, 209
- submission to, enforcement of, 209
 - what constitutes, 148
 - whether writing necessary, 210
- time and place of, 220
 - for award under, 227, 228
- what may be referred to, 209, 210

ARBITRATION CLAUSE

- applying to mode of carrying out work, 136
- effect of, on certificate, 152, 153
- forms of, 266, 270
- implied application of, to varied contract, 74
- whether applicable to extras, 135

ARBITRATOR

- appointment of, 214 *et seq.*
 - avoided, because of bias, 214
 - by parties, 215
- award of, 223 (*and see* AWARD)
- bias of, 155, 156
- carelessness of, 233
- compelled to state special case, when, 232
- conduct of, 221, 231
 - proceedings before, 220, 221
- corruption, misconduct, or bias of, 231
- death of, 215, 216
- employer not to act as, 168
- engineer acting as, fees of, 219, 220
- exceeding jurisdiction, 232
- failure to appoint, result of, 215

ARBITRATOR—*continued.*

- fees of, 216 *et seq.*
 - duty to specify items, 217, 218
 - how taxed, 217
 - should not be exorbitant, 218, 219
 - standard for, 217
 - to be measured according to eminence, 219
- improperly admitting or excluding evidence, 221, 222
- lay, may have legal assistance, 223
- may consult skilled persons, 222
- misconduct of, 220, 221
- mistake by, 231, 232
- omission of, to decide some of the matters submitted, 225
- power of Court to appoint, 209
- prejudiced person acting as, 214
- proceedings before, 220 *et seq.*
- recovery of fees from, if exorbitant, 218
- should not accept hospitality from one party, 221
 - specify items of his fees, 218
- silence of, may amount to decision, 225
- special case by, requisites of, 232
- statement of special case by, 231, 232
- submission to single, 215
 - two, 215
- to hear and determine, 221
- to settle a difference between parties, 206

ARCHITECT

- acting as arbitrator, 215
- action against, for not rejecting improper materials, 150
- fees of, where he is a shareholder, 13
 - where employed to measure up for extra work, 11
- liability of, for mistakes in bills of quantities, 106
- quasi-judicial* position of, 106

ASSENT

- of employer to extras, 134

ASSIGNMENT

- clause to prevent, in contract, 256

ASSISTANT (*and see* TABLE, p. 196)

- authority of, to stop work, 198
- clause as to, in contract, 249
- duties of, 198
- checking materials delivered, 198
- generally treated of, 196
- liability for acts of, 57
- negligence of, liability for, 62

ASSISTANT—*continued.*

- power of engineer to appoint, 197
 - to grant certificate, 197
- result of entrusting details to, 57
- supervision not to be entirely delegated to, 197, 198
- whether contract gives any powers to, 196, 197

AUTHORITY

- engineer has no, to employ sub-contractor, 187
- of engineer as to extras, 132

AWARD

- action to enforce, 230
- care in drawing up, 223
- certain, to be, 226
- consistent, should be, 227
- effect of, 229 *et seq.*
- enforcement of, 230
- essential features of, 223 *et seq.*
- final, should be, 226, 227
- form of, 223
- good in part and bad in part, 225
- grounds for setting aside, 230, 231
- how far binding, 229, 230
- in favour of a stranger, 225
- lien of arbitrator on, 216
- must not exceed the submission, 224
- reasonable, should be, 227
- recitals in, 224
- requisites of a valid, 224
- should be a final settlement, 226, 227
- time for, extension of, 228
 - making, 227, 228
- to extend to all matters mentioned in submission, 225
- when a condition precedent to an action, 212
- whether certificate is an, 147, 148

BANKRUPTCY

- clauses as to, in contract, 256
- of contractor, vesting of contract materials on, 89

“BEST”

- meaning of, 85

BIAS

- consulting engineer should not be interested in contracts, 4
- of arbitrator, 155, 156
- suspicion of, not always a disqualification for an arbitrator, 210

BILLS OF QUANTITIES (*see* TABLE, p. 104)

- accuracy of, necessity for, 68, 108, 109
 - not guaranteed, 109
- clause drawing attention of contractor to, 109
- definition of, 104
- errors in, 105
- liability for mistakes in, 106
- rectification of, 109
- whether they are a warranty, 104

BONUS CLAUSES

- generally, 171, 172
- how interpreted, 171, 172
- where completion prevented by employer, 172

BOROUGH ENGINEERS

- are "consulting" engineers, 3

BREACH OF CONTRACT (*and see* CONTRACT)

- penalties for, 160 *et seq.* (*see* PENALTIES)

BREAKDOWN

- provision for, 200

BRIBE

- effect of, on tender, 101

BUILDER (*and see* CONTRACTOR)

- to furnish bills of quantities, when, 108

BUILDING OWNER (*see* EMPLOYER)**BYE-LAWS**

- clause providing for compliance with, 237
- compliance of plans with, 121
- engineer to have knowledge of, 53

CABLE

- defective, causing damage, 61

CERTAIN

- award should be, 226

CERTIFICATE (*see* TABLE, p. 142)

- and extras, 158, 159
- bias of engineer in relation to, 155, 156
- clause as to, 260, 261
 - providing for, is not a submission, 209
- condition precedent to payment, 146, 157

CERTIFICATE—*continued.*

- effect of, according to electrical engineers' conditions, 154
 - arbitration clause on, 152, 153
 - on defects appearing after completion, 178
- final, 145
- finality of, 58, 151, 152
 - as to extras, 158
 - destroyed by arbitration clause, when, 152, 153
- formalities as to, to be observed, 146
- fraud and collusion in relation to, 154, 155
- generally, 142, 143
- may be verbal, 143
- mere checking accounts is not, 147
- must engineer give reasons for, 146, 147
- necessity for writing, 143
- negligence in not granting, 55, 56
- no action for negligence in granting, 149
- not final as between employer and engineer, 58
- "on account," 144
- power of assistant to grant, 197
- powers of engineer as to, limited by contract, 148
- refusal of engineer to grant, 56, 154, 155
- to be given on knowledge, not assumption, 54, 198
- what amounts to, 147
- when engineer should give reasons for, 147
 - it may be dispensed with, 56
- where no arbitration clause, 154
- whether it is an award, 147, 148

CIVIL ENGINEER

- definition of, 6

CLAUSE (*and see* FORMS)

- as to employment of sub-contractor, 187
- as to strikes, 167, 168

CLERICAL ERRORS

- liability for, 107

CLERK OF WORKS

- delegation of work to, 197

CLIENT

- should be informed of engineer's interest in contract, 5

COMMENCEMENT OF WORK

- clause as to, 138, 262
- prevented by employer, 139

COMMISSION

- “on estimate,” payment by, 72
- payment by, 20
 - of, to persons introducing clients, undesirable, 5
- penalties for paying, 164

COMPANY

- agreement for employment with, 17
- contracts with, 66
- directors of, authority of, 66
- employment by, how affected by winding-up, 21
- power of, to contract, 66
- to be formed, agreement with, 32

COMPETITION

- plans and drawings for, 123

COMPLETE INSTALLATION

- meaning of, 200, 201

COMPLETION

- accident preventing, 85
- defects after, 178
- of contract, summary of law as to, 84, 85
- prevented by ordering of extras, 139, 140
- tests on, clause as to, 263

CONCEALED WORK

- supervision of, 198

CONDITION PRECEDENT

- final certificate may be, to payment of retention money, 146

CONDITIONS

- as to time, 137 *et seq.*
- to be observed on tendering, 94, 95

CONFIDENTIAL INFORMATION

- disclosure of, 28, 29, 30

CONFORMITY

- to specification, 117

CONSIDERATION

- for agreement, to be set forth, 18
- for contract, amount of, 69
 - to be legal, 69

CONSTRUCTION OF CONTRACT (*see* CONTRACT)

CONSULTING ENGINEER

- advertising by, not desirable, 5
- American definition of, 51
- commission, not to pay, 5
- definition of, 1, 3
- degree of skill required in, 52
- discount, should not receive, 5
- duties of, described, 3
- not to be interested in contracts, 4
- shareholder, should not be, when, 4
- should not solicit employment, 5
- standard for judging competence of, 51, 52
- substitute of, 33

CONTINGENT REMUNERATION (*see* FEES)CONTRACT (*and see* TABLE, p. 63)

- acceptance of work done under, 78
 - partly performed under, 85
- accident preventing completion of, 78
- authority of persons contracting, 66
- between employer and sub-contractor, 187, 188
- bills of quantities, whether part of, 107, 108
- by tender and acceptance, 98
- clause providing for execution of, 251
- clauses in, as to old materials, 90, 91
- completion of, 76, 77
 - summary of law as to, 84, 85
- consideration for, 69
- construction of, 69, 70
- covenant implied in, 74
- custom imported into, 72 (*and see* CUSTOM)
- deviation from, agreement for, how proved, 71
- deviations from, 81, 82
- extras to, ordered by engineer, 82
- form of, generally, 67, 68
- general conditions of, 68
- illegal, how defeated, 70
- illegality of, 69
- implied promise to pay for work done under, 84, 85
 - terms in, 73, 74, 81
- impracticability of works under, 82
- in more than one document, 65
- inconsistency between parts of, 68
- instalments payable under, 80
- latent ambiguity in, 70
- "lump sum," 76, 77
 - failure to complete, 77
- mistake in, 75, 76
 - when relief granted for, 76

CONTRACT—*continued.*

- new contract, when implied, 82, 83
- of employment, when it must be in writing, 17, 18
- part performance of, 84
- parties to, 66
- payments on account of, 79
- penalty for not stamping, 67
- performance of, summary of law as to, 84, 85
- plans and drawings forming part of, 123, 124
- price, when recoverable, 79
- principle of construction of, 69
- rectification of, 75
- refusal to carry out, 84
- severable, payment of price for, 79, 80
- specification becoming part of, 116
- stamp on, 67
- sub-contracting of work under, 185 (*see* SUB-CONTRACTOR)
- time for performance of, 137 *et seq.*
- to do complete work, 81
 - entire work, 81
- with company, when *ultra vires*, 66
 - local authority, need not be sealed, when, 37
 - urban authority, penalty for breach of, 36
- words in, having fixed meaning, 72
 - used in, meaning of, 69, 85, 88
- work superior to, 83
- written, parol evidence to vary, 70, 71
 - subject matter of, may be proved by parol, 70

CONTRACT FOR WORKS

- employment of engineer in relation to, 32
- penalty for breach of, when it must be prescribed, 36

CONTRACT OF SERVICE (*and see* AGREEMENT FOR EMPLOYMENT)

- absence without leave, 24
- alteration in character of work to be done under, 33, 34
- breach of, by accepting secret commission, 25, 26
 - by disclosing secrets, 28, 29
- customs relating to, 22
- damages for wrongful dismissal, 24
- death of employer determines, 21
- employment for a year, effect of, 22
 - of marine engineer, 31
- gratuitous service, 25
- how affected by winding-up of employing company, 21
 - determined, 21
- not determined by employer's bankruptcy, 21
 - sealed, ratification of, 36
- restrictive covenants in, 26 *et seq.* (*see* RESTRICTIVE COVENANTS)
- termination of, without notice, 23, 24

CONTRACT OF SERVICE—*continued.*

- verbal, with urban authority, effect of, 35
- when servant entitled to reasonable remuneration, 25
- with company to be formed, 32
 - urban authority, penalty for breach of, 36
- written, to be, when with local authority, 34, 35, 36

CONTRACTOR

- cannot sue engineer for negligence, 57
- clause warning him of difficulties, 251
- dealings of, with engineer, should be disclosed, 5
- expulsion of, from contract, 148
- how bound by specification, 113, 114
- independent, liability for negligence of, 195
- insolvency of, effect of, on sub-contractor, 189, 190
- liability of, to quantity surveyor, 109, 110
 - under Workmen's Compensation Act, 194
- position of, where no certificate given, 143
- right of, to employ sub-contractors, 186
- should apply for plans, 125
- superintendence by, clause as to, 241
- to verify possibility of works in specification, 113, 114

COST

- of generating electricity, 201, 202

COSTS

- of arbitration, 228, 229
 - indiscretion of arbitrator, 228
- power of arbitrator to deal with, 208

COUNSEL'S OPINION

- arbitrator may take, on a point of law, 223

COURT

- jurisdiction of, not ousted by submission to arbitration, 210
- power of, to extend time for award, 228

CUSTOM

- as to accepting lowest tender, 99
 - payment of quantity surveyor, 109, 110
- examples of invalid, 73
 - valid, 72, 73
- reasonable and certain, must be, 72
- that architect may retain plans, 127, 128
- to be certain, 72

CRIMINAL COURTS

- witnesses in, 49

CROSS-EXAMINATION (*see* WITNESS)

CROWN

contracts of service with the, 22

DAMAGES

Broadstairs Case as to, 60

caused by failure to perform contract in time, 141

latent defect, liability for, 204

claimed by sub-contractor, against contractor, 188

for delay of sub-contractor, 190, 191

for defects appearing after long delay, 192

for withdrawing tender, 99

for wrongful dismissal, 20

may be nominal, 25

measure of, 24, 25

liability for, clause as to, 259

of sub-contractor for, at suit of contractor, 193

liquidator, distinguished from penalty, 162, 163

measure of, for negligence, 59, 60, 61

where contractor has bribed engineer, 101

witness liable to action for, owing to non-attendance, 45

DANGEROUS MACHINERY

accidents arising from, liability for, 62

DEATH,

clause providing for, 256

of arbitrator, 215, 216

of employer determines contract of service, 21

DECISIONS

of engineer, clause as to, 258

DEFECTS

absence of clause as to, 182

acceptance of work, no answer to claim in respect of, 182

after completion, when employer cannot sue for, 178

where there is no defect clause, 178

appearing after final certificate, 173

claim for, effect of payment on, 183

clause as to, 259

definition of, 86, 180

due to orders of employer, liability for, 53

effect of clause as to, on defects appearing after stated period, 179

final certificate on, 145

form of clause as to, 179

in material or workmanship, 179

liability for, though discovered late, 183

under clause to rectify, 177

DEFECTS—*continued.*

- may exist, though work accords with specification, 115
- of soil and foundations, liability of contractor for, 115
- waiver of claim for, 83
- when liability for ceases, 179

DEFINITIONS (*and see* WORDS)

- “actual cost of generating light,” 201, 202
- “arbitration,” 206
- “as soon as possible,” 137, 138
- “bill of quantities,” 104
- “civil engineer,” 6
- clause as to, 248
- “complete installation,” 200, 201
- “completion” of contract, 76, 77
- “contract drawings,” 121
- “defects,” 180
- “design,” 175
- “directly,” 137
- “expert witness,” 38
- “extras,” 129
- “final certificate,” 145
- “lowest tender,” 99, 100
- “month,” 138
- of words used in contract, 85—88
- “progress certificate,” 143
- “reasonable remuneration,” 9, 12, 13
- “specification,” 112
- “submission to arbitration,” 208
- “whole” or “completed” work, 80
- work, 81

DELAY (*and see* TIME)

- by frost, clause as to, 238
- damages for, clause prescribing, 263
- due to employer, effect of, on penalties, 166, 167
- implied covenant as to, 74
- in giving possession of site, 84
- in supplying plans, 125, 126
- interference of employer causing, 140
- of sub-contractor, 190
- owing to employer not giving possession, 167
- whether engineer has power to determine liability for, 151

DEPRECIATION

- allowance for, in estimating cost of generating electricity, 202

DESIGN (*and see* PLANS)

- departure from, not allowed as an extra, 133, 134
- meaning of, 175

DEVIATIONS

- agreement for, from written contract, how proved, 71
- charges for, 82
- clause as to, 239
- due to contributory negligence of employer or his agents, 176
- from contract, 81, 82
- from plans and drawings, 124

DISCOUNT

- consulting engineer should not receive, 5

DISCREPANCY

- between drawings and specification, 116
 - plans and specification, 124
- clause providing for, between specification and plans, 253

DISMISSAL

- damages for wrongful, 24
- illness does not necessarily justify, 20
- servant dismissed not to remain idle, 24
- without notice, secret commission justifies, 25, 26

DISPUTE

- definition of, 86

DOCUMENTS

- forming specification, 112

DRAWINGS (*and see* PLANS AND DRAWINGS)

- clause as to, 269
 - ownership of, 269

EASEMENT

- definition of, 86

ELECTRICAL ENGINEERS, CONDITIONS, 247 *et seq.*

ELECTRICITY

- actual cost of generating light, what is, 201, 202
- complete installation, what is, 200
- contracts as to supply of, 199
- cut out, whether part of complete installation, 200
- default in supply of, 61
- wiring contracts, 202, 203

ELECTRIFICATION OF RAILWAY, 34

EMPLOYER

- approval of plans and drawings by, 123
- assent of, to extras, 134
- can sue engineer for negligence, 58
- extras ordered by, 134
- failure of, to complete work, 13, 14
 - to continue employment, 14
- implied covenants by, 74
- liability of, for delay of sub-contractor, 190
 - to pay fees, 10, 11
 - to sub-contractor, 187, 188
- ordering extras, may impliedly extend time, 139, 140
- specifying particular method of construction, 53

EMPLOYMENT

- of engineer (*see* CONTRACT OF SERVICE)
- of sub-contractors, 186 (*see* SUB-CONTRACTOR)

ENFORCEMENT

- of an award, 230

ENGINEER

- approval of plans and drawings of, 122
- as witness (*see* WITNESS)
- assistant of, 196 *et seq.* (*and see* ASSISTANT)
- authority of, as to extras, 132
 - to determine questions arising on implied contract, 152
- bias of, in relation to certificate, 155, 156
- commission earned by, 72
- company, employed by, 66, 67
- consent of to employment of sub-contractor, 187
- decision of, as to extension of time, 140
- decisions of, clause as to, 258
- delegation of duty by, 196
- discretion of, as to extension of time, 137
- duty of, as to employment of sub-contractors, 185
 - to employer and contractor, 150
 - with regard to penalties, 161
- employed at a salary, 16 *et seq.*
- employment of in relation to contract for works, 32, 33
 - sub-contractors by, 186
- fees of, (*see* FEES)
- finality of certificate of, 151, 152
- fraud of, 154, 155
- granting certificate, whether he must give reasons, 146, 147
- has no property in plans, 127, 128
- held liable for trespass, 53, 54
- holding shares in company, 156
- misconduct of, in not certifying, 56

ENGINEER—continued.

- negligence of, in drawing specification, 117, 118
- not to be interested in contracts with local bodies, 36
 - participate in profits, 6
- of employer, acting as arbitrator, 156
- patents taken out by, when in service, 37
- persons agreeing to be bound by decision of, 213
- power of, as to deviations and extras, 82, 132
 - to appoint assistant, 197
- powers and duties of, as to penalties, 168, 169, 170
- powers of, as to certificate limited by contract, 148
- reference to, in contract for works, 66
- responsibility of, for acts of assistant, 197
- rights of, under the Workmen's Compensation Act, 31
- salary of, how and when to be paid, 19
- settlement of disputes by, clause providing for, 244
- status of, 1 *et seq.*
- substitute appointed by, 33
- successor of, authority of, 32
- summoned before parliamentary committee, 49
- supervision of, clause as to, 258
- suspension of work by, clause as to, 262
- to know bye-laws, 53
 - the law, 53, 54
- when he alone has power to certify, 197
 - may be passed by, 56
 - personally liable for extras, 133
- who may call himself an, 1
 - sue him for negligence, 57, 58

ENGINEERING WORK

- definition of, 86

ENTIRE CONTRACT

- performance of, before action for fees, 14

ERROR (see MISTAKE)**ERRORS**

- in bills of quantities, 109
- made by resident engineer, 7

ESTIMATE

- equivalent to tender, 97
- exceeded, payment for plans and drawings when estimates have been, 126
- negligence in preparing, 54, 55
- specification and bills of quantities may be, 108

ETIQUETTE (see RULES OF ETIQUETTE)**EVIDENCE (see WITNESS)**

EVIDENCE (*and see* CONTRACT)

parol, to vary written contract, 70

EXPEDITION

bonus for, 171

EXPENSE

extras causing additional, 131

EXPENSES

of arbitration, 229

of preparing tender, 95

EXPERT WITNESS (*see* WITNESS)

EXTENSION

of time by engineer, 140

EXTENSION OF TIME

by engineer, effect of on penalties, 170

effect of on penalties, 170, 171

EXTRA WORKS (*see* EXTRAS)EXTRAS (*see* TABLE, p. 129)

arbitration clause, whether it applies to, 135, 136

ascertainment of value of, a reference to arbitration, 211

assent of employer to, effect of, 134

authorised in writing, clause as to, 255

authority of engineer as to, 132

clause as to, 255

for, does not authorise the substitution of one thing for another, 134

does not extend to work wholly outside contract, 131

cut-out and resistance, whether they are, to a complete installation, 201

definition of, 86

effect of final certificate on, 134, 135

on time conditions, 139, 140

fees of engineer when extras create more work, 10

generally, 81, 82, 129

included in certificate, 158

gravity of liability imposed by, 129;

how authorised, 132, 133

in case of lump-sum contract, 131

liability of engineer ordering, 59

limitation to clause as to, 133, 134

may have to be done in time originally specified, 139

omission from specification not always, 116, 117

ordered by employer, 134

EXTRAS—*continued.*

- terms of contract as to, 130
- weekly accounts of, 88
 - statement of, clause as to, 246
- where contract under seal, 132
- wholly outside contract, 133
- written order for, 130

FACTORY ACT

- protection of trade secrets by, 30

FAILURE

- to observe time conditions, 141

FEES (*see* TABLE, p. 9)

- American practice as to, 10
- amount of, 12
 - how estimated, 12
- arbitrator may fix his own, 216
- clause as to, 270
- dependent on contingency, 126
- employer liable to pay, 10
- fixed scale of, not recognised for architects, 12
- if works not proceeded with, clause as to, 270
- implied contract to pay, 9
- in contract with local authority, 36, 37
- in respect of extra work, 10
 - measurements for extra work, 11
- instalments, payment of, by, 14, 15
- lien for, on award of arbitration, 216
- lost where engineer relied on another man's measurements, 126
- not full measure of damages for negligence, 59, 60
- of arbitrator, 216
 - claim for, how enforced, 216, 217
 - how determined, 228
 - not to be exorbitant, 218, 219
 - standard of, 217
- of engineer acting as arbitrator, 219, 220
- of quantity surveyor, 109, 110
- of witness, 45, 46 (*and see* WITNESS)
- part performance sometimes enables engineer to recover, 14
- payment of, on account, 10
- provision for payment of, where work partly performed, 9, 10
- reasonable remuneration, how determined, 9
- recovery of, from arbitrator, 219
 - from engineer, 15
- Ryde's scale of, for architects, 12
- travelling expenses, provision for payment of, 10
- various methods of providing for payment of, 9, 10
- when employment ended by employer, 13

FEES—*continued.*

- when right to payment of accrues, 11
- they may be recovered, 14
- back, 15
- remuneration depends on a contingency, 11, 12
- where work useless to the employer, 13
- who is liable for, 10, 11

FINAL CERTIFICATE (*and see* CERTIFICATE)

- effect of, on extras, 134, 135
- not always conclusive as to extras, 135

FINALITY

- of certificate, 151

FIRE

- insurance against, 181
- liability for, 202, 203
- work destroyed by, 85
- before completion, 78

FIRM

- employment of engineer by, 21

FORFEITURE

- of salary, by wrongfully quitting service, 22, 23

FORMS (*and see* TABLE, p. 235)

- clause to secure conformity to specification, 117
- defect clause, 179
- maintenance clauses, 174, 175
- of agreement attached to general conditions, 267
- with engineer for preparation of drawings, 268
- of a set of conditions for engineering works, 235
- of award by arbitrator, 223, 224
- of clause as to employing assistant, 196
- sub-contracting, 187
- sub-contractors, 187
- for providing for direct payment of sub-contractor, 190
- providing for remuneration of sub-contractor, 188
- of commencement of specification, 113
- of maintenance clause, 174, 175
- of model conditions for electricity works contracts, 247
- of progress certificate, 144
- of repairing clause, 182
- of tender, 266
- of time clause, 138
- short form of conditions for engineering works, 245

FOUNDATIONS

drawings of, clause as to, 253
failure to examine, 118

FRAUD

engineer may be sued for fraudulently withholding certificate, 154, 155
in relation to certificate, 154, 155
 specification, 118, 119
 tenders, 101
of agents, responsibility for, 119
questions involving, not referred to arbitration, 209, 210
reckless indifference may be equivalent to, 119

GENERAL CONDITIONS (*and see CONTRACT*)

form of, for electricity works contracts, 247
 engineering works, 235, 245

GOOD REPAIR

meaning of, 86

GUARANTEE

contract of, to be written, 65

ILLEGAL CONTRACT (*and see CONTRACT*)

breach of, 69

ILLEGALITY

award must not direct, 227
of contract between engineer and local board, 36

ILLNESS

of servant, does not determine contract, 20
of witness, may justify non-attendance, 45

IMMEDIATELY

meaning of, 87

IMPLIED AUTHORITY

none, in engineer, to employ sub-contractor, 186

IMPLIED CONDITION

on sale of machinery, 203

IMPLIED CONTRACT

difference concerning, when not to be settled by engineer, 152
to do altered work, 83
 extra work, 131
 work in reasonable time, 138
to pay fees, 9
 for services since last quarter, 22

IMPLIED TERM (*and see* CONTRACT)

as to arbitration clause, 74

IMPOSSIBLE

quantity surveyor's fees on performance becoming, 111
work becoming, no justification for breach, 82

INCOMBUSTIBLE MATERIAL

meaning of, 87

INDEMNITY

against accidents to workmen, 194

INDEMNITY CLAUSE

to protect contractor from delay of sub-contractor, 192

INEFFICIENT WORK

rejection of, clause as to, 265

INJUNCTION

result of disobeying, 30
to restrain disclosure of confidential information, 29
secrets, 29, 30

INSTALMENTS

payable when employer satisfied, 157
payment by, 144, 169

INSTITUTION OF CIVIL ENGINEERS

rules of etiquette prescribed by, 5

INSURANCE

against fire, 181

INTEREST

consulting engineer should not be interested in contracts, 4, 5

INTERFERENCE

by employer, causing delay, 140
may waive penalties, 166, 167

JUDGMENT

no action for negligence in exercise of, 149

LATENT DEFECTS

in machinery, 203, 204
liability of vendor for, 204
meaning of, 87

LIABILITY

- for fire and accidents, 202, 203
- of engineer for extras, 133
- under maintenance clause, 180 (*see* MAINTENANCE)
 - repairing clause, 180, 181
- where work destroyed, 181

LIBEL

- what is a libel on an architect, 2
- on a man's work distinguished from libel on man himself, 2

LIEN

- none, on work partly completed, 84
- of arbitrator, on award, 216
- on machine for cost of repair, 72

LIQUIDATED DAMAGES

- distinguished from penalty, 162, 163

LOCAL AUTHORITY

- advertisement for tenders by, 102
- approving plans and drawings, 124
- contract with, to be written, 65
- employment of engineer by, 34 *et seq.*
- extras to contract with, 132
- lowest tender, need not accept, 100, 101
- municipal corporation, employment by, 35
- penalties in contracts with, 171
- persons employed by, not to be interested in contracts, 36
- requirements of, clause as to, 266
- specification in contracts with, 117
- tenders for contracts for, 93, 94
 - to, 100, 102, 103
- urban authorities, contracts with, 35

LUMP SUM

- salary, payment of in a, 19

LUMP-SUM CONTRACT (*and see* CONTRACT)

- error in calculation for, 97
- extras in case of, 131, 132

MACHINERY

- contracts for erection of, 65
- defined, 87
- inspecting and testing, clause as to, 257
- latent defects in, 203
- preliminary trials of, clause as to, 263

MAINTENANCE (*and see* TABLE, p. 173)

- action for failing to maintain, 177
- absence of clause as to, 182
- clause as to, form of, 265
 - compared with defects clause, 177, 180
 - providing for, 243
- effect of maintenance clause, 175, 176
- forms of maintenance clause, 174, 175
- preliminary observations regarding, 173
- of work not properly supervised, 176

MAINTENANCE CLAUSE

- form of, used by Sheffield Corporation, 175
- importance of, to contractor, 174
- meaning of, 174

MARINE ENGINEER

- certificate of competency of, 32
- rights of, 31, 32
- where employed on a particular ship, 31

MATERIALS

- checking of, on site, 198
- clause providing for testing of, 237, 240
 - to prevent removal of, 92
- delivery of, clause as to, 257
- description of, clause as to, 258
- excavated, right to use, 90, 91
- improper, clause as to removal of, 240
- inferior, clause as to, 241
- inspection of, clause as to, 260
- old materials, duty to clear away, 89, 90
 - forms of clauses as to, 90, 91
 - on the site, 89 *et seq.* (*see* TABLE, p. 89)
 - property in, 90, 91
 - use of for new works, 91
- of sub-contractor, property in, 185
- payment for, when contract not completed, 85
- rejection of, on site, clause as to, 260
- superior to those ordered additional price cannot be claimed, 83
- use of better, not necessarily an extra, 131

MISCONDUCT

- what sufficient to justify dismissal, 23

MISTAKE

- a ground for setting an award aside, 231
- in contract, 75, 76
- of architect, in not discovering defects, 178

MODELS

use of by witnesses, 44

MONTH

meaning of, 138

MUNICIPAL CORPORATION (*see* LOCAL AUTHORITY)NEGLIGENCE (*and see* TABLE, CHAP. V., p. 51)

accident due to *force majeure* is not, 61
 alleged in not pricing out additions or deductions, 149
 causing breakdown at central station, 61
 personal injuries, damages for, 61
 clerical error may not be, 52
 damages for, difficulty in defining, 59
 degree of skill required, 52
 engineer not guilty of when he refuses to give reasons for certificate,
 146
 error in judgment is not, 51, 52
 generally, 51
 in calculating quantities, 58
 in drawing specification, 117, 118
 in granting certificate, 149
 in measuring proposed site, 15
 in not certifying, 55, 56
 in not inspecting work before hidden, 54
 in preparing bills of quantities, 107
 plans, etc., 54
 in relying on another's survey, 55
 in supervising, 54
 injuries to strangers caused by, 62
 liability for acts of assistant, 57
 measure of damages for, 59, 60, 61
 of architect, may involve loss of fees, 15
 of consulting engineer, 51, 52
 of contractor, causing damage after long delay, 192
 clauses providing for, 240, 256
 of engineer carrying out employer's orders, 52
 of quantity surveyor, 105, 106
 of station engineer, 61, 62
 of sub-contractor, 192, 193
 where works in public highway, 194
 who may sue engineer for, 57, 58

NOTICE

clause as to giving, 247
 dismissal without, when justified, 23, 24
 of dismissal, length of, 21, 22
 to determine contract of service, 21
 to terminate contract of service, length of, 21, 22
 of want of repair, 181, 182

NOTICE OF DISMISSAL

not dispensed with by illness, 20

OFFICIAL REFEREE

appeal from, 208

arbitration before, 207

OLD MATERIALS (*see* MATERIALS)

OMISSION

clause as to, 239, 254

definition of, 87

from specification, not always extras, 116

ORDER

for extras, what is sufficient, 132, 133

ORDER OF COURT

arbitration by, 207, 208

PARLIAMENTARY COMMITTEES

witnesses attending, 49

PART PERFORMANCE

fees on, clause as to, 270

of work by architect or engineer, 14

PARTIES

to a contract, 66

to contract, disabilities of, 66

PARTNERSHIP

dissolution of, effect of, on contract of service, 21, 25

PATENTS

clause as to, in contract, 254

danger of engineer owning, 4, 5

engineer taking out, 37

right of person employed to take out, 37

PAYMENT (*and see* CERTIFICATE)

by instalments, 80, 144, 169

certificate condition precedent to, 157

clause as to, 260

providing for, 244

contingent on quality of work, 157, 158

deduction of, from contract price, clause as to, 260

penalties from payments due, 164

PAYMENT—*continued.*

- due dates of, clause as to, 26
- for plans and drawings, 126, 127
- for preliminary plans, 122
- of contract price, effect of on claim for defects, 183
- of sub-contractor, 188, 189
- retention money, 144
- under progress certificate, readjustment of, 143
- where contract severable, 79, 80
- with knowledge of defects, 184
- without certificate can be enforced where there is fraud, 154, 155

PEARSON v. DUBLIN CORPORATION

- facts in case of, 118, 119

PENALTIES (*see* TABLE, p. 160)

- cases as to, 163
- clauses as to, 247, 263
- effect of extension of time on, 170, 171
- employer not to decide as to, 168
- for not stamping contract, 67
- for paying commission, 164
- framing clause to provide for, 163, 164
- generally, 160, 161
- how amount of should be fixed, 163
- imposed on engineer having an interest in contract with local authority, 36, 37
- in contract with local authority, 36
- in contracts with local authorities, 171
- legal effect of penalty clause, 161, 162
- liquidated damages distinguished from, 162, 163
- not exacted where delay caused by employer, 166, 167
- payable by sub-contractor for delay, 191
- powers and duties of engineer as to, 168, 169, 170
- retention of, out of money due, 164
- severity of clause as to, 164—166
- should not be too large, 162, 163
- strike clause, effect of on penalties, 167, 168
- waiver of, by action of employer, 166
- when delay excused, 84
 - relief granted for, 161
- where damage uncertain, 163

PENALTY CLAUSE (*see* PENALTIES)**PERSONAL INJURIES**

- damages for, against architect and contractor, 61

PLANS AND DRAWINGS (*see* TABLE, p. 120)

- approval of, by employer, 122, 123
 - by local authority, 124

PLANS AND DRAWINGS—*continued.*

- approval of, by principal engineer, 7
- are no warranty, 121, 122
- clause as to, 237, 249
- compliance of, with statutes, 124, 125
- contract, clause providing for, 252
- “contract drawings,” what are, 121
- contractors should apply for, 125
- custom that architect may retain, invalid, 73
- defects in, clause as to, 253
- delay in providing, may waive penalties, 167
 - supplying, 125, 126
- deviation from, 124
- fees for preparation of, 11
- for competition, 123
- form of agreement as to preparation of, 268
- matters considered in preparing, 121
- may be read with bills of quantities, when, 107
- negligence in preparing, 54, 55
- part of contract, 65, 123, 124
- payment for dependent on contingency, 126, 127
 - where estimate exceeded, 126
 - partially used, 14
 - work abandoned, 127
- preliminary, 122
- property in, 127, 128
- requirements as to, by persons tendering, 120, 121
- return of, to unsuccessful tenderers, 120
- right to use, when sent in for competition, 123
- to accompany tender, clause as to, 250
- to be furnished by person tendering, 121
- use of, by witness, 44
- verification of, clause as to, 245
- with specification, forming part of contract, 116
- working drawings, to be scheduled to specification, 112

PLANT AND MATERIALS (*see* MATERIALS)

POST

- sending tender by, 98

POWER

- contracts to supply, 199
 - what is implied in, 200

PRELIMINARY PLANS, 122 (*see* PLANS AND DRAWINGS)

PREVENTION OF CORRUPTION ACT, 6

PRICE

- contract, deductions from, clause as to, 260
- of materials better than those specified for, 83

PRICE—*continued.*

- payment of, 79
- when recovered on *quantum meruit*, 84

PROFESSION

- the engineering, compared with other professions, 2

PROGRESS CERTIFICATE (*and see* CERTIFICATE)

- definition of, 143
- form of, 144
- sometimes called certificate on account, 144

QUANTITIES (*and see* BILLS OF QUANTITIES)

- mistakes in, 76
- negligence in calculating, 58
- tender for uncertain, 97

QUANTITY SURVEYOR

- custom as to payment of, 73
- duty of, generally, 104, 105
- fees of, after assignment or abandonment of contract, 111
 - amount of, 111
 - liability for, 109, 110
- liability of, 105, 106
- whether bound to disclose calculations, 105

"REASONABLE REMUNERATION"

- how determined, 9

REMUNERATION (*see* FEES)

REASONABLE TIME

- implied contract to do work in, 138, 139
- plans and drawings to be furnished in, 125

REASONS

- for granting or withholding certificate, whether engineer bound to give, 146

REJECTION

- of inefficient work, 265

REPAIR

- meaning of, 87, 88
- notice of want of, whether necessary, 181, 182
- urgent, clause providing for, 243

REPAIRING CLAUSE

- form of, 182
- liability under, 180, 181
- meaning of, 174
- notice to contractor under, 181

RESIDENT ENGINEER

- assistant, acting as, 7, 8
- liabilities of, 7
- powers and duties of, to be reserved by the contract, 8
 - of, 7, 8
- rights of, as tenant, 31
- when employed, 6
- whether servant or independent, 6, 7

RESTRICTIVE COVENANTS

- generally, 26, 27
- may be world-wide in extent, 27
- principles of law as to, 27, 28
- where covenant too wide, 27

RETENTION MONEY

- action by contractor for, 146
- provision for, 144
- used for penalties, 164

RULES OF PROFESSIONAL ETIQUETTE, 5**RYDE'S SCALE**

- for architects, 12
- for witnesses attending arbitration, 50

SALARY

- effect of termination of employment on salary due, 22, 23
- forfeiture of, on wrongfully quitting employment, 22, 23
- how computed under the Workmen's Compensation Act, 31
- payable quarterly, 32
- payment of, by instalments, 19
- when to be paid, 19

SATISFACTION

- of architect or engineer expressed by certificate, 151

SCHEDULE

- of various kinds of work to be done, 145

SEAL

- effect of not affixing, 35
- extras where contract is under, 132
- provisions of Public Health Act, as to, 35

SEAL—*continued.*

- stamp on contract under, 67
- time for affixing, 36
- when contract with local authority to be under, 34, 35
- where contract work of an essential character, 37
 - value of contract exceeds £50, 35

SECRET COMMISSIONS, 25, 26

- presumption that agent influenced by, 26

SECRETS

- disclosure of, by servant, 28, 29, 30
- injunction to restrain disclosure of, 29
- trade, protected by the Factory Act, 30

SERVANT

- disclosure of secrets by, 28, 29

SHAREHOLDER

- result of architect being, on claim for fees, 13

SICKNESS (*see* ILLNESS)**SITE**

- checking materials on, 198
- clause as to, 249, 258
- delay in giving access to, may waive penalties, 167
- implied covenant for access to, 75
- materials brought on to, clause as to, 258

SKETCH

- not a sufficient order for extras, 132

SKILL

- employer entitled to the benefit of skill of engineer, 13
- of contractor, employer entitled to rely on, 83

SOUND MACHINE

- specification for, effect of, 115

SPECIAL CASE

- requisites of, 232
- statement of, by arbitrator, 231

SPECIAL REFEREE

- arbitration before, 207

SPECIALIST

- employment of, by contractor, 189

SPECIFICATION (*see* TABLE, p. 112)

- cases illustrating danger of relying on accuracy of, 114
- commencement of, 113
- conformity to, how secured, 117
- consistency between, and general conditions, 68
- construction of decided by engineer, clause as to, 236
- danger of engineer putting his own patent in a, 5
- definition of, 112
- documents forming, 112
- for "a sound machine," 115
- fraud in relation to, 118, 119
- how far contractor bound by, 113, 114
- in contract with local authorities, 117
- mistake in, 76
- negligence in drawing, 117, 118
- omissions from, not always extra, 116, 117
- part of contract, 65
 - when, 68, 116
- preliminary observations on, 112, 113
- preparation of, by consulting engineer, 3
- tender and, may form contract, 116

STAMP

- on agreement for arbitration, 210
- on contract, 67
 - under seal, 67
- to be put on agreement, 18

STATION ENGINEER

- liability for accidents to strangers, 62
- negligence of, 61, 62

STATUTE OF FRAUDS

- provisions of, as to agreements in writing, 17

STATUTES

- result of not complying with, in preparing plans, 125

STRIKE

- clause as to, effect of on penalty clause, 167, 168
- meaning of, 88
- exemption of, from time clause, 138

SUB-CONTRACTING (*see* SUB-CONTRACTOR)

- clause to prevent, 241, 256

SUB-CONTRACTOR (*see* TABLE, p. 185)

- and arbitration clause, 212
- clause to regulate employment of, 187
- contract between and employer, not implied, 187

SUB-CONTRACTOR—*continued.*

- damages, liability of, for, 193
- delay of, 190, 191, 192
 - effect on penalties, 161
- employment of, by engineer, 186
 - when not allowed, 186
- liability of employer to, 187, 188
- negligence of, 192, 193
- payment of, out of money due to contractor, 188
- preliminary observations as to, 185, 186
- remuneration of, 188, 189
- right to employ, 186
- rights of, against head contractor, 188
 - where contractor insolvent, 189, 190
- when liable for damages for delay, 191
- workmen of, accidents to, 193

SUBMISSION (*and see* **ARBITRATION**)

- arbitration clause in engineering contract, may be, 208, 209
- not revoked because question to be settled is a matter of law, 213
- scope of, 225
- to arbitration, defined, 208
 - when revoked, 212, 213
- to one, or two, arbitrators, 215
- whether forfeiture and default clause amounts to, 206

SUPERINTENDENCE

- in absence of engineer, clause as to, 245
- of work by consulting engineer, 3

SUPERINTENDENT

- employed by contractor, clause as to, 258

SUPERVISION

- clause providing for, 269
- duty of, explained, 198
- failure to exercise, effect of, on maintenance clause, 176
- negligence in, 54, 57
- not to be altogether delegated to assistant, 197, 198
- of an entire contract, 14
- of engineer, clause as to, 258

SUPPLY OF ELECTRICITY

- contract as to, 199

SURETIES

- clause in contract as to, 237

SURETY

- employer going, for sub-contractor, 188

SURVEYOR

granting certificate, position of, 157

TENDER (*and see* TABLE, p. 93)

acceptance and, constituting contract, 99
 of, when it takes effect, 98
 advertisement for, 94
 agreements not to, 101, 102
 in competition, 102
 clause as to, 237, 250
 conditions to be observed on sending in, 94
 contract to be entered into after, 99
 cost of preparing, 95
 custom of trade as to accepting lowest, 99, 100
 damages for withdrawing, 99
 definition of, 93
 equivalent to estimate, 97
 for uncertain quantities, 97
 form of, what it should contain, 96, 266
 fraud in connection with, 100
 highest, what is, 100
 local authority must advertise for, 102, 103
 lowest, what is, 99, 100
 necessity for care in preparing, 96, 97
 of expenses to witness, 45
 plans and drawings required with, 120, 121
 posting, effect of, 98
 preparation of form of, 95, 96
 specification and, may form contract, 116
 to local authority, 100, 102, 103
 whether tender and acceptance amount to contract, 94
 writing necessary for, 93, 94
 withdrawal of, 97, 98
 invitation for, 95

TEST

clause for testing of materials, 237, 257
 interference with, clause as to, 264
 on completion, clause as to, 263

TEXT BOOKS

use of by witnesses, 43

THORNE v. MAYOR OF LONDON

facts of case of, 113, 114

TIME (*see* TABLE, p. 137)

commencement of work, clause as to, 262
 conditions as to, effect of extras on, 139

TIME—*continued.*

- clause as to, 138
 - commencement and completion of work, 238
- conditions as to, result of failure to observe, 141
- extension of, by engineer, 140, 141
 - when presumed, 171
- for action for failure to maintain, 177
- for award, extension of, 228
- for making award, 227, 228
- for suing for fees, 11, 14
- implied extension of, by extras, 139, 140
- meaning of terms as to, 137
- reasonable, what is, 138, 139
- where contract makes no provision for, 138, 139

TOUTING

- engineer not to indulge in, 4, 5

TRESPASS

- liability of engineer for, 53, 54

UMPIRE

- fees of, 217, 218

URBAN AUTHORITY (*see* LOCAL AUTHORITY)**USAGE** (*see* CUSTOM)**USELESS WORK**

- fees not recoverable for, 13

WAGES

- clause as to, 240
- meaning of, 88

WAIVER

- of claim for defects, what amounts to, 83
- of penalties, 166, 167

WARRANTY

- express, effect of, 203
- implied, when, 203
- none, in specification, 114
- plans and drawings are not, 121, 122

WATCHING AND LIGHTING

- clause as to, 241

WEAR AND TEAR

meaning of, 88

WITNESS (*see* TABLE, p. 38)

- arbitration, attending, 50
- attendance of, at arbitration, 50
- before arbitrator, 220, 221
- cannot sue solicitor on implied promise to pay fees, 46
- criminal courts, in, 49
- cross-examination of, 43
- documents, use of by, to refresh memory, 42, 43
- engineer as, generally, 38
- expenses of, 45
 - before parliamentary committees, 49
 - in county court, 49
 - in criminal courts, 49
 - who liable for, 49
- expert, at arbitration, 50
 - duties of, generally, 39, 40
 - evidence generally, 38, 39
 - hints on giving evidence, 41, 42
 - in consultation, 40
 - in court, 40, 41
 - may sometimes be kept after evidence given, 47
 - opinion of, when admissible, 38, 39
 - prompting counsel, 41
 - should not be advocate, 39, 40
 - fight the case, 42
 - special allowances to, 47, 48
 - to warn clients, 40
 - views of, on giving evidence, 42
- fees and expenses of, generally, 45
- fees of, at arbitrations, 50
 - in county court, 48
 - High Court, 47
 - particular courts, 46
 - promise to pay may be inferred, 46
 - who liable for, 45, 46
- giving evidence, hints on, 41, 42
- loss of time of, 48
- non-attendance of, 44, 45
- notes, use of, by, 42, 43
- on oath before arbitrator, 222
- parliamentary committees, in, 49
- previous statements of, 43, 44
- qualifying fee for, 48, 50
- railway fares of, 49, 50
- refusal to answer because fees not paid, 45
 - when justifiable, 44
- scales of fees of, 47 *et seq.*
- subpœnaed but not called, 46

WITNESS—*continued.*

surveys and reports of, allowances for, 47, 48
text books, use of, by, 43
travelling expenses of, 47
use of plans and models by, 44

WORDS (*and see* DEFINITIONS)

capable of two meanings, 70
“difference concerning contract,” 152
“estimate,” 97
meaning of, in contract, 69, 70
“lowest tender,” 99, 100
“strong and sound workmanship,” 157
used in contracts, 85—88

WORKMANSHIP

conditions implied as to, 83

WORKMEN

accidents to, of sub-contractor, 193
incompetent, clause as to dismissal of, 247

WORKMEN'S COMPENSATION ACT

indemnity against, 194
liabilities under, 193
rights of engineer under, 31

WORKS

alteration in character of, how employment of engineer affected by, 33
commencement of, clause as to, 262
in accord with specifications, may yet be defective, 115
suspension of, clause as to, 246

WRITING

contracts requiring, 65
whether agreement for employment should be in, 17
certificates need be in, 143
necessary for submission to arbitration, 210

WRITTEN ORDER

for extras, 130

WRONGFUL DISMISSAL (*see* DISMISSAL)

UNIVERSITY OF CALIFORNIA LIBRARY
BERKELEY

**THIS BOOK IS DUE ON THE LAST DATE
STAMPED BELOW**

Books not returned on time are subject to a fine of 50c per volume after the third day overdue, increasing to \$1.00 per volume after the sixth day. Books not in demand may be renewed if application is made before expiration of loan period.

APR 30 1918

FEB 11 1985

IN STACKS

FEB 11 1984

SEP 6 1984

CIRCULATION DEPT.

DEC 07 1995

RECEIVED

DEC 05 1996

CIRCULATION DEPT.

just
less key

U. C. BERKELEY LIBRARIES



051409809

TA 257
B3

Ball

204811

