

they can adduce sufficiently good proof in support of any disputed point. At this juncture, I wish to convey my thanks to Messrs Hodges, Braddeley, Braithwaite, and the fire-engine makers for their

courteous attention and kindness in supplying me with information. I will now leave the subject in your hands, trusting that it may be discussed in a fair and candid manner.

TABLE OF RESULTS OF ACTUAL PUBLIC TRIALS OF STEAM FIRE-ENGINES.*

ENGINE-MAKERS.	Steam pressure.	Horizontal Distance.	Vertical Height.	Size of Jet.	NUMBER OF GALLONS DELIVERED.
Messrs. Easton, Amos, and Sons. (Lee and Co.'s Patent.)	120 lbs. 140 "	222 ft. 202 "	175 ft. 160 "	1½ in. 1½ "	448 Gallons in 1 minute 5 seconds, through 1½-inch jet.
Messrs. Merryweather and Son.	120 lbs. 140 " 145 "	215 ft. 220 " 190 "	165 ft. 170 " 150 "	1½ in. 1½ " 1½ "	448 gallons in 1 minute 11 seconds, through 1½-inch jet.
Messrs. Shand and Mason.	120 lbs. 150 "	190 ft. 220 "	150 ft. 170 "	1½ in. 1½ "	448 gallons in 1 minute 15 seconds, through two 1-inch jets.

* The piston engine owned by the Toronto Fire Department gets up steam for working in from 3½ to 4 minutes, and the rotary engine in 4 minutes.

BRITISH PUBLICATIONS FOR MARCH.

Burn (Robert Scott) Year-Book of Agricultural Facts for 1862, 8vo.....	0	4	0	<i>Blackwoods.</i>
Cambridge Year Book (The) for 1863.....	0	2	6	<i>Macmillan.</i>
Campin (Francis) Engineer's Pocket Remem. an Epitome of Data &c., fcap. 8vo.....	0	5	6	<i>Atchley.</i>
Craik (Geo. L.) Manual of English Literature, &c., new edit., cr. 8vo.....	0	7	6	<i>Griffin.</i>
Ede (George) Management of Steel, including Forging, Hardening, &c., fcap. 8vo...	0	1	0	<i>Tweedie.</i>
English Catalogue of Books (The) for 1862, roy. 8vo.....	0	3	6	<i>Low & Tucker.</i>
Fitz Roy (Rear Admiral) Weather Book; a Manual of Prac. Meteor., 2nd ed. 8vo...	0	15	0	<i>Longman.</i>
Fownes (George) Manual of Elementary Chemistry, 6th edit., revised fcap. 8vo.....	0	12	6	<i>Churchill.</i>
Garden Manual (The), 7th edit., revised and corrected, fcap. 8vo.....	0	1	6	<i>Jour. Hort. Off.</i>
Girdlestone (W. H.) Mechanics & Hydrostatics, with an Appendix of Solutions, 8vo...	0	5	6	<i>Macmillan.</i>
Jackson (G.) New Check Jour., upon the principle of Double Entry, 12th ed., 8vo...	0	5	0	<i>E. Wilson.</i>
Jones (Edw. Jas.) Handbook of Phonography, fcap. 8vo.....	0	1	6	<i>S. W. Partridge.</i>
Little by Little: Graduated Lessons in Art of Reading Music, oblong.....	0	3	6	<i>Griffith & Far.</i>
Sheriff (D.) Improved Principle of Single Entry Bookkeeping, roy. 8vo.....	0	3	6	<i>Longman.</i>
Smith (Goldwin) The Empire, a Series of Letters, post 8vo.....	0	6	0	<i>J.H. & J. Parker.</i>
Tomlinson (C.) Experimental Essays on the Motions of Camphor on Water, 12mo...	0	1	0	<i>Virtue.</i>
Twisden (Rev. J. F.) Elementary Introduction to Prac. Mechanics, 2nd ed. p. 8vo...	0	10	6	<i>Longman.</i>
Tyndall (J.) Heat Considered as a Mode of Motion: Twelve Lectures, post 8vo...	0	12	6	<i>Longman.</i>
Watson (J.) Theory and Practice of the Art of Weaving by Hand & Power, 8vo.....	0	10	6	<i>Kent.</i>
Wayland (Francis) Elements of Moral Science, Notes by G. B. Wheeler, cr. 8vo.....	0	2	6	<i>Tegg.</i>

Proceedings of Societies.

THE TORONTO MECHANICS' INSTITUTE.

The pupils of the various classes, and members and friends of the Institute, to the number of about six hundred, celebrated the close of the class session on the evening of the 15th ultimo. After tea in the Lecture Room, the company adjourned to the Music Hall, in the gallery of which the "Queen's Own Rifles" band was stationed, when the chair was taken by the President of the Institute, Rice Lewis, Esq.

The Chairman of the Class Committee, Mr. D. G. Carnegie, in addressing the meeting stated that seven classes had been in existence for a term of five months, and had numbered in all one hundred and fifty pupils. The subjects of study were English Grammar and Composition, Arithmetic and Mathematics, Book-keeping, Penmanship, Architectural and Mechanical Drawing, and Figure and Landscape Painting and Drawing.

The sum of \$116 had been offered in prizes, \$100 of which had been liberally presented for this purpose by the Directors of the Northern Railway, in addition to the right to nominate from the classes two apprentices to the machine shops of the Company.

The various prizes, in appropriate books, were then presented to the successful competitors by his Worship the Mayor, as follows:—

Ralph Lillie...1st prize	English class, value \$10 00
W. Ault....2nd "	" " " 6 00
J. A. Milne...1st "	Bookkeeping " 10 00
W. Langley...2nd "	" " " 6 00
W. Graham...1st "	Mathematical " 10 00
A. Cook....2nd "	" " " 6 00
J. Purcell....1st "	Penmanship " 10 00
W.W. Willis...2nd "	" " " 6 00
A. Greenlees...1st "	Mechanical Drawing 10 00
T. Cheshire...2nd "	" " " 6 00

William Marling, having passed a very satisfactory examination in English, Arithmetic, Mensuration, Mechanical Drawing and Geometry, was presented with a Mechanics' Institute Diploma, a prize of \$12 in books, and one of the apprentice-