Prices of Building Materials.

PRESSED BRICK, Per M.

TORONTO PRESSED BRICK AND TERRA COTTA WORKS.

	F.O.B. Milton, Ont.	F.O.B. Montreal.
Red No. 1	$12 50	$18 00
" 2	10 50	16 00
" 3	8 50	10 00
Buff No. 1	14 50	20 00
" 2	13 00	18 50
Brown	20 00	25 50
Roman Red	25 00	30 50
" Buff	28 00	33 50
" Brown	35 00	40 50
Hard Building	6 50	12 00
" Sewers	6 50	12 00
" Backing	5 00	11 50

Moulded and Ornamental from $2.00 to $5.00 per 100.
Terra Cotta String Courses and Friezes, from 50c. to $2.00 per ft. run.
Roofing Tiles, $20.00 per 1,000, $23.00 Montreal.

BEAMSVILLE BRICK AND TERRA COTTA CO.

	F.O.B. Beamsville.	F.O.B. Montreal.
Red Peerless Facing	$15 00	$19 50
" No. 1	13 00	18 50
" No. 2	11 00	16 50
" No. 3	8 00	14 00
Brown Peerless Facing		25 50
" No. 1		23 50
Buff Peerless	20 00	25 50
" No. 1	13 00	23 50
" No. 2	15 00	20 50

Moulded and Ornamental Brick from $3 to $10 per C
Roman Red (Size 12 x 4 x 1½ in.) 28 00 33 50
" Buff " " " 28 00 33 50
" Brown " " 34 00 39 50
Vitrified Paving Brick No. 1 18 00 23 50
" " " No. 2 15 00 20 50
Sewer 6 50 12 00
Roofing Tile 22 00 26 00

COMMON BRICK, Per M.

	F.O.B. Toronto.		F.O.B. Montreal.	
Common Walling	7 00	8 00	9 00	
Good Facing	8 00	9 00	9 00	
Sewer	8 00	9 00	10 00	12 00

STONE.

Common Rubble, per toise, delivered	10 00	11 00
Large flat Rubble, per toise, delivered	14 00	18 00
Foundation Blocks, per c. ft.	30	50
Granite (Stanstead) Ashlar, 6 in. to 12 in., rise 9 in., per ft.		25
Amherst Red Sandstone, Amherst, N.S., per cub. ft.	1 00	75
Kent Free stone Quarries, Moncton, N.B., per cu. ft.	1 00	95
River John, N. S., brown Freestone, per cu. ft.	95	95
Port Philip, N. S. Brown Sandstone		
"Scoriæ" Paving Blocks 8"×3½"×5"	55	
"Scoriæ" Paving Blocks, 8"×3½"×4"	45 00	
Masillon	30 00	
Quebec and Vermont rough granite for building purposes, per c.ft. f.o.b. quarry	40	1 00
For ornamental work, cu. ft.	40	
Granite paving blocks, 8 in. to 12 in. x 6 in. x 4¾ in. per M.		50 00
Granite curbing stone, 6 in. x 20 in. per lineal foot		
Bactouche Olive Freestone	85	

BLASTING.

For this purpose black powder and Judson powder are most commonly employed, although any slow powder will serve, as much as 50,000 lb. being sometimes exploded in one blast. From 10 to 20 lb. of black powder are required for each 1,000 cubic yards of gravel. Although the method must be adapted to the local condition, it may be said in general that a drift should be run in at the bottom of the bank, with a length equal to the height of the bank, or a shaft should be sunk at a distance from the edge of the bank equal to its height. A cross drift is then driven at the end of this excavation, forming a T, the cross of the T being also of the same length as the height of the bank. Kegs of powder are then piled upon each other in each end of the cross drift, every tenth keg having its head removed. A train of kegs, with the heads off, are placed in the drift to its centre, where the primer is located, or a dynamite primer may be inserted in each keg in the train, all connected in series for instantaneous electric firing. When a single central primer is used, it consists of a box into which about 200 lb. of powder are placed, with several dynamite primers inserted into it, their detonators being connected in series for firing. The space above the large primer is now tamped tightly with debris, and the leading wires are laid to the surface. The drift or shaft is now tightly filled with clay and gravel, so as to make a firm tamping. The charge is then fired by a powerful battery.[5]

LOCATING BORE-HOLES.

The general principles governing the placing of shot-holes have already been stated. It only remains to explain the method of procedure in special cases. In blasting the benches in homogeneous massive (i.e. unstratified) rock, the bore-hole should be exactly as long as the intended height of the bench. If the charge, the diameter of the hole and the line of least resistance are properly proportioned, the rock will break in an approximately perfect bench form. If the rock is stratified (Fig. 4), the hole should be bored short of the bedding plane C. D. The force of the explosion will tend to relieve itself along this plane; hence the length of the charge in the bore hole must be proportioned to the relation subsisting between the thickness of the stratum and the length of line of least resistance. The diameter of the hole, as shown before, depends upon its length. The reduction in the length of the charge, M, calculated in the ordinary way, is regulated as follows, T being the thickness of the stratum, M the calculated length of charge, M_1, the reduced length, and W the line of least resistance:

When $t = w$	$m_1 = \frac{1}{2}m$.
" $t = 1\frac{1}{4}w$	$m = \frac{5}{8}m$.
" $t = 1\frac{1}{2}w$	$m_1 = \frac{3}{4}m$.
" $t = 1\frac{3}{4}w$	$m_1 = \frac{7}{8}m$.
" $t = 2w$	$m_1 = m$.

In shaft sinking or tunnel driving, if there is a persistent joint, or seam, advantage can be taken of it for the "unkeying or "breaking-in" shots. These can then be set deeper, so as to break out a "key" to the full depth of each cut, with a minimum of explosive. This is a "side cut. A side cut can be used where there is no seam or wall to shoot to, but it offers no particular advantages. In homogeneous rock the "center cut," either the square or the V-cut, is most commonly adopted.

The square center cut is shown in Fig 5, the small circles in the plan indicating the commencement of the holes, and the parallel lines the projection of the hole on a plane surface, revealing its position. To further elucidate this the section on the line A B is given. Hole No. 18 does not properly fall on this line, but its relative position as shown is approximately accurate. It will be seen that in this tunnel heading, 6 ft. wide and 7 ft. high, 20 holes have been bored, reaching to a distance of 3 ft. 3½ in. from the face, which is the length of the cut.

(To be continued next week).

[5] For further details on this subject see "A Practical Treatise on Hydraulic Mining," by A. J. Bowie; New York. D. Van Nostrand Co., 1889, and a paper on the Simultaneous Ignition of Thousands of Mines, by Julius H. Striedinger, in the Transactions of the American Society of Civil Engineers, New York, June, 1877.

CREDIT VALLEY STONE.

	F.O.B. Quarries.
Rubble, per car or 15 tons	7 00
Brown Coursing, up to 10 in., per sup. yard	1 50 to 1 75
Brown Dimension, per cub. ft	60
Grey Coursing, per sup. yard	1 00
Grey Dimension, per cub. ft.	45

LONGFORD STONE.

Rubble, per 30 M. car	5 50
Ashlar, per cub. yd	2 00
Dimension, per cub. ft	18

SLATE.

	Toronto.	Montreal
Roofing (*squares*).		
" red	17 50	20 00
" purple	8 50	10 00
" ding green	8 50	7 00 8 00
" black	7 50	6 50
Terra Cotta Tile, per sq.	20 00	25 00
Ornamental Black Slate Roofing	8 80	6 80

CEMENT, LIME, etc.

Portland Cements —				
German per bbl.	2 90	3 10	2 55	2 65
London "	2 70	2 90	2 25	2 45
Newcastle "	2 50	2 70	1 95	2 10
"Dyckerhoff	3 00	3 15	2 60	2 75
North's "Condor	2 95	3 10	2 55	2 65
Alsen's, (German)	2 00	3 15	2 60	2 75
English, artificial, per bbl.	2 85	3 00	2 35	2 45
Belgian, natural, per bbl.	2 50	2 75	2 00	2 20
Karlstadt" (German)	3 05	3 25	2 75	2 90
Germania" (German)	3 00	3 15	2 60	2 75
"Rooster" (Belgian)			2 15	2 20
"Keystone" (Belgian)			2 05	2 20
"Anvil" (Belgian)			2 00	2 10
White Cross (Belgian)	2 40	2 50	2 10	2 20
"Burham" (English)	2 60	2 70	2 20	2 30
Rathbun's Star, per bbl.	2 65	3 00		
Beaver, "	2 55	2 90		
Ensign, "	2 40	2 75		
Ontario, "		1 50		
Roman "			2 20	2 25
Parian "	5 25	5 25	5 75	5 75
Keene Superfine "Whites"	11 00	12 00	9 00	10 00
Keene's Coarse "Whites"	8	8 50	8 50	9 00
Fire Bricks, Newcastle, per M	30 00	35 00	16 00	22 00
" Scotch "	30 00	35 00	19 00	22 00
Lime, 100 lbs., Grey		30		
" " White		35		30
Plaster, Calcined, N. B.		2 00		1 50
" " N. S.		2 00		1 50
Hair, Plasterers', per bag	80	1 00		000

HARDWARE.

The following are the quotations to builders for nails at Toronto and Montreal:

	Toronto.	Montreal
Cut nails, 50d & 60d, per keg	2 85	2 85
" " " "	2 95	2 9

CUT NAILS, FENCE AND CUT SPIKES.	Toronto.	Montreal
40d, hot cut, per 200 lbs	2 45	2 85
10 to 12d, hot cut	2 55	2 95
8d, 9d, " "	2 60	3 00
6d, 7d, " "	2 75	3 15
4d to 5d, " "	2 85	3 25
3d, " "	3 10	3 50
2d, " "	3 45	3 85

Cut spikes, 10 cents per keg advance.
Steel Nails, 10c. per keg extra
Wire nails, 2.85 base price.

Iron Pipe:

iron pipe, ⅜ inch, per 100 feet	$3.25
" " ½ " " "	3.35
" " ¾ " " "	3.60
" " 1 " " "	5.00
" " 1¼ " " "	7.00
" " 1½ " " "	7.60
" " 2 " " "	11.00

Lead Pipe:

Lead pipe, per lb. 7c. } 15 per
Waste pipe, per lb. 7½ } cent. dis.

Galvanized Iron:

Ads "—Mar's Best and Queen's Head and Opollo:

16 to 24 guage, per lb.	4½c.	4¾c.	4¾
26 guage, "	4¾	5	4½
28 " "	5	5¼	4¾
Gordon Crown—			
16 to 24 guage, per lb.	4¼	4½	4¼
26 guage, "	4½	4¾	4½
28 " "	4¾	5	4¾

Note.—Cheaper grades about ¼c. per lb. less.

Structural Iron:

Steel Beams, per 100 lbs.	2 75	2 30
" channels, "	2 85	2 33
" angles, "	2 50	2 60
" tees, "	2 80	2 60
" plates, "	2	2 00
Sheared steel bridge plate		2 35

ARCHITECTURAL VARNISHES.

THE IMPERIAL VARNISH AND COLOR CO, LIMITED.
(Highest grade)

(Cans free.)	In 5 gal. cans. Per gal.	In 2 gal. cans. Per gal.	In ½ gal. cans. Per gal.	In ¼ gal. cans. Per gal.	Pint Cans. Per gal.
Exterior wearing body	$5 50	$5 75	$5 85	$6 20	$6 60
Exterior rubbing	3 50	3 75	3 85	4 20	4 60
Elastonia	3 50	3 75	3 85	4 20	4 60
Ivory Enameline	5 00	5 25	5 25	5 70	6 10
Crystalite	4 50	4 75	4 85	5 20	5 60
Yachtine	3 00	3 25	3 35	3 70	4 10
Architectural Coach	2 50	2 75	2 85	3 10	3 60
Granitine floor finish	2 50	2 75	2 85	3 20	3 60
Architectural flatting	2 00	2 25	2 35	2 70	3 60