

NOTES ON QUARRYING.

BY WM. L. SAUNDERS.

It is frequently quite as difficult to drill a straight hole as a round one. The shape of the bit has something to do with the alignment of the hole. It is an invariable rule that the edge of the bit should never be tapered in rock of uneven or irregular construction. The marble bit, which has been previously described, is of no use except in a material like marble which is uniform. It is obvious that with a tapered bit passing through a flint seam or other irregularity in rock the tendency would be to glance, and this would result in "running" of the hole.

Where drill holes tend to run out of line the bit should invariably have a straight edge that is at right angles to the axis of the drill steel. It makes no difference whether the bit is a + or a x bit, so far as the alignment of the hole is concerned. In some difficult places where the hole passes through soft spots or seams running diagonally across the hole, it is advisable to upset the steel for a distance of about 6 inches at the bottom. The purpose of this is, that the steel may be caught by the wall of the hole, thus preventing "running" until the pocket or seam has been passed. This is readily understood when it is known that the steel used with percussive drills is usually about one inch diameter octagon with a bit of about two inches and a half diameter, thus there is a space of about three-quarters of an inch between the steel and the drill hole, and should the condition of the bottom of the hole be such as to tend to thrust the bit to one side, it will gradually work the steel up against the side of the hole, and will result in a crooked hole, which will give trouble through binding and sticking. If the bar of steel were nearly equal in diameter to that of the bit, it would, as it were, force the hole to run straight. It will not do, of course, to carry so much weight of steel, hence where trouble is met it is best to upset the steel at the bottom.

In the ordinary course of drilling the runner sometimes finds that his hole is going crooked, and without waiting to get a special piece of steel he attempts to pass through the obstruction. The first thing to do is to reduce the speed of cutting. This is done by either throttling the steam or shortening the stroke of the drill by dulling the bit, but whatever is done it is necessary to "go slow" with the drilling. An effective means by which to prevent "running" is to pull out the steel and throw some iron filings, or small pieces of iron in any shape, into the hole; then put in the steel and go ahead. This not only reduces the speed of cutting, but the pieces of iron are thrust into the softer places, and thus the bit cuts through the obstruction and keeps the hole in line.

Let us assume that a cobble-stone of the size of an egg or larger is discovered by the bit in the line of the hole, but a little to one side of the center. Obviously as the flange of the bit strikes this obstruction it will be thrown off at a tangent and will gradually eat away the side of the hole farthest from the cobble. It is now simply necessary to drill a few inches more of hole without losing the line, and a few pieces of iron, or even a nut, thrown in the hole, will retard the "running" until the bit cuts through the obstruction.

Perhaps the most difficult place to put in a line of straight holes is through a

mass of old masonry or concrete. It is sometimes necessary to drill holes in masonry for the purpose of inserting foundation bolts. The largest drill at hand should be used, no matter what the depth of hole is, because a large drill gives less trouble by sticking, and its force of blow may be regulated by the throttle. It is also advisable to use steel of large diameter—nearly as large as the diameter of the bit. The legs of the drill should be firmly set, and the runner should watch the hole, carefully following the instructions hereinbefore given each time that there is a tendency to get out of order.

Should the hole get the best of him in this respect, and the steel bind so as to stick badly, he had, perhaps, better abandon the hole and start a new one, for a great deal of time is lost in expensive efforts to straighten a hole.

A drill hole will sometimes "run" in a most unexpected manner, and in rock of uniform texture. In a case of this kind the runner should at once stop his machine and see if his bit is in good shape. Sometimes one of the flanges breaks off and serves the same purpose in throwing the steel out of line as though a "hard-head" were encountered. If the broken piece is large it will sometimes get in one corner of the hole and give considerable trouble, even after the bit has been repaired.

It is of much importance that the hole be well started, that is, should be started straight. In dimension stone quarries, the mouth of the hole should be preserved at about the diameter of the hole, and not cratered or broken. This can be done by starting with a light blow and a short stroke, lengthening the stroke and the force of blow after the hole has been made a little deeper than the length of the stroke.—Stone.

Prices of Building Materials.

LUMBER.

CAR OR CARGO LOTS.

1 1/2 and thicker clear picks, Am. ins.	\$30 00	32 00
1 1/2 and thicker, three upper, Am ins.		37 00
1 1/2 and thicker, pickings, Am ins.		27 00
1 x 10 and 12 dressing and better.	18 00	20 00
1 x 10 and 12 mill run.	13 00	14 00
1 x 10 and 12 dressing.	14 00	16 00
1 x 10 and 12 common.	12 00	13 00
1 x 10 and 12 spruce culls.	10 00	11 00
1 x 10 and 12 maple culls.		9 00
1 inch clear and picks.	28 00	30 00
1 inch dressing and better.	18 00	20 00
1 inch siding, mill run.	14 00	16 00
1 inch siding, common.	11 00	12 00
1 inch siding, ship culls.	\$10 00	\$12 00
1 inch siding, mill culls.	8 00	9 00
Cull scantling.	8 00	9 00
1 1/2 and thicker cutting up plank.	22 00	25 00
1 inch strips, 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common.	11 00	12 00
1 1/2 inch flooring.	14 00	15 00
1 1/2 inch flooring.	14 00	16 00
XXX shingles, sawn.	2 30	2 35
XX shingles, sawn.	1 50	1 35

Metallic Roofing Co. of Canada :

Eastlake steel shingles (galvanized).	Per Square.	\$2 25 to \$5 75
Eastlake steel shingles (painted).		3 75 4 00
Improved Broad Rib Roofing, (galvanized)		5 00 5 75
Improved Broad Rib Roofing (painted)		3 50 4 00
North Western steel siding (painted).		3 25 3 50
Manitoba steel siding (painted).		3 25 3 50
Metallic Finished Brick.		3 25 3 50
Tower or Mansard shingles, (galvanized)		6 25
Tower or Mansard shingles (painted).		4 50
Metallic Terra Cotta Tiles.		7 00
Price of Copper shingles according to weight, and "Hayes" Patent Metallic Lathing according to quantity.		

Canada Galvanizing & Steel Roofing Co. :

Corrugated Iron, galvanized, 26 W.G., per lb.	2 cts.
Corrugated Iron, galvanized, 28 W.G., per lb.	2 1/4
Corrugated Iron, painted, 26 W.G., per square.	4 00
Corrugated Iron, painted, 28 W.G., per square.	3 50
Broad Rib Roofing, galvanized, per square.	5 50
Broad Rib Roofing, painted	4 00
Westlake shingles, steel, galvanized, per square.	5 00
Westlake shingles, steel, painted	3 50
Standard shingles, "Walt's patent," galvanized, per square.	5 50
Standard shingles, "Walt's patent," painted.	4 00
Northwestern steel siding, patented, per square.	3 50
Metallic Finish Brick, per square.	3 25
Metallic Finish Clapboard, per square	3 50

YARD QUOTATIONS.

Mill cull boards and scantling.		10 00
Shipping cull boards, promiscuous widths.		13 00
Shipping cull boards, stocks.		7 00
Hemlock cantling and joist up to 16 ft.	11 00	12 00
" " " " 18 "	12 00	13 00
" " " " 20 "	13 00	14 00
Scantling and joist, up to 16 ft.		14 00
" " " " 18 ft.		15 00
" " " " 20 ft.		17 00
" " " " 22 ft.		19 00
" " " " 24 ft.		21 00
" " " " 26 ft.		23 00
" " " " 28 ft.		25 00
" " " " 30 ft.		27 00
" " " " 32 ft.		27 00
" " " " 34 ft.		29 50
" " " " 36 ft.		31 00
" " " " 38 ft.		33 00
" " " " 40 to 44 ft.		36 00
Cutting up planks, 1 1/2 and thicker, dry board.	25 00	26 00
Cedar for block paving, per cord.	18 00	22 00
Cedar for Kerbing, 4 x 14, per M.		5 00
		14 00

B. M.

1 1/2 inch flooring, dressed, F. M.	28 00	31 00
1 1/2 inch flooring rough, F. M.	18 00	22 00
1 1/2 " " " " dressed, B. M.	25 00	28 00
" " " " undressed, B. M.	18 00	19 00
" " " " dressed.	18 00	22 00
" " " " undressed.	17 00	25 00
Beaded sheeting, dressed.	22 00	35 00
Clapboarding, dressed.		12 00
XXX sawn shingles, per M, 16 in	2 65	2 75
Sawn lath.	2 00	2 20
Red oak.	30 00	40 00
White.	35 00	45 00
Basswood, No. 1 and 2.	18 00	20 00
Cherry, No. 1 and 2.	70 00	70 00
White ash, No. 1 and 2.	25 00	25 00
Black ash, No. 1 and 2.	20 00	30 00
Dressing stock.	16 00	22 00
Picks, American inspection.		40 00
Three uppers, American inspection.		50 00

BRICK—B. M.

Common Walling.	\$7 50
Good Facing.	9 00
Sewer.	8 50 9 00

Pressed Brick:

Plain brick, f. o. b. at Milton, per M.	\$18 00
" " " " 2nd quality, per M.	14 00
" " " " 3rd	10 00
Hard Building.	8 00
Moulded and Ornamental, per 100.	\$3 to 10 00
Roof Tiles.	24 00
Diamond locking tile.	16 00
First quality, f. o. b. at Campbellville, per M	18 00
2nd " " " "	14 00
3rd " " " "	11 00
Ornamental, per 100	\$3 to 10 00
Tiles.	24 00

Stone

Common Rubble, Per Tonne, delivered	14 00
Large flat " " Cubic Foot.	18 00
Foundation Blocks, " "	50

Slate: Roofing (per square).

" red.	18 00
" purple.	9 00
" unslating green.	9 50
" black slate.	7 75
Terra Cotta Tile, per sq.	25 00
Ornamental Black Slate Roofing.	8 25

Sand:

Per Load of 1 1/2 Cubic Yards.	1 25
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PAINTS. (In oil, B. M.)

White lead, Can.	6 25	6 50
" zinc, Can.	6 37 1/2	7 50
Red lead, Eng.	5 50	6 3/4
" venetian.	7 00	7 75
" vermilion.	90	1 00
" Indian, Eng.	10	12
Yellow ochre.	5	10
Yellow chrome.	15	20
Green, chrome.	7	12
" Paris.	25	40
Black, lamp.	18	25
Blue, ultramarine.	18	20
Oil, linseed, raw (4 Imp. gallon).	65	68
" " " " boiled.	68	71
" " " " refined.	78	85
Putty.	2 1/2	2 1/2
Whiting, dry.	75	1 00
Paris white Eng., dry.	90	1 25
Litharge, Am.	6 1/2	8
Sienna, burnt.	15	20
Umber.	8 1/2	12

CEMENT, LIME, etc.

Lime, Per Barrel of 2 bushels, Grey.	40
" " " " White	55
Plaster, Calcined, New Brunswick.	2 00
" " " " Nova Scotia.	2 00
Hair, Plasterers', per bag.	1 00
Cement, Portland, per bbl.	3 00 3 50
" " " " Thorold.	1 50
" " " " Queenston.	1 50
" " " " Napance.	1 50
" " " " Hull.	1 50

HARDWARE.

Cut Nails:	
American Pattern, 1 1/2 inch, per keg.	3 00
" " " " 1 1/2 to 1 3/4 inch, per keg	3 10
Canadian Pattern, 1 1/2 inch, per keg.	3 40
" " " " 1 1/2 to 1 3/4 inch, per keg	2 95
" " " " 2 to 2 1/4 inch, "	2 90
" " " " 2 1/2 to 3 inch, "	2 65
" " " " 3 inch and larger.	2 40
Steel nails 10c. per keg extra.	
Finishing nails, 1 inch, per keg.	5 40
" " " " 1 1/2 inch, "	4 65
" " " " 2 inch, "	4 15
" " " " 1 1/2 " " and larger.	3 90