USEFUL HINTS.

The cubic contents of a vessel of water (in feet) multiplied by 62·5 equals the weight in pounds contained therein (of course, if full). The head of water in feet, multiplied by ·434 equals the pressure, in pounds, per square inch, and if multiplied by 62·5 equals the pressure, in pounds, per square foot.

According to the *Illustrirte Zeitung* for Blechindustrie, a grayish black coloring on copper may be obtained by placing the object for treatment, after being well cleaned, in a weak solution of liver of sulphur. When a caustic effect has after a short time, been produced, the object is rinsed, slightly heated, and brushed with a stiff brush. This coating is said to be very durable.

A blackish brown bronzing can be applied to vases, figures, busts, etc., cast from zinc by the application of a solution of sulphate of copper. If the projecting portions are then well rubbed with a woolen rag, they assume a coppery red brilliancy which increases the resemblance to genuine bronze. A solution of verdigris in vinegar also produces an effective bronzing.

Another recipe for an application for removing old paint and varnish from woodwork is given in the *Bayerische Gewerbezeitung*. Two parts of ammonia are shaken up with one part of spirits of turpentine, forming a permanent emulsion, which is applied to the paint to be removed. In a few minutes, the paint will be softened, so that it can be scraped or rubbed away. This application is said to have been successful in removing old paint which had resisted the action of strong lye.

TO TEST EARTHY MATTER IN STONE.—Break off a few chippings about the size of a shilling with a chisel, and a smart blow from a hammer; put them in a glass about one-third full of clear water; let them remain undisturbed at least half an hour. The water and specimens together should then be agitated by giving the glass a circular motion with the hand. If the stone be highly crystalline, and the particles well cemented together, the water will remain clear and transparent, but if the specimens contain uncrystallized earthy powder the water will present a turbid or milky appearance, in proportion to the quality of loose matter contained in the stone. The stone should be damp, almost wet, when the fragments are chipped off. —*Stone.*

Among the many minor troubles which beset the path of the decorator, one of the most annoying is the difficulty of getting paint, as ordinarily applied, to adhere to brass and other copper alloys. The difficulty here arises from the fact that the vehicle on coming into contact with metallic surface induces a chemical action, thereby preventing the paint from firmly adhering. A plan to obviate this difficulty which, though simple, gives excellent results, is as follows: Thoroughly clean the surface with sandpaper, washing with lye and clean water, dry and heat to a temperature which will just permit of holding the hand upon it. Cover the work, while still warm, with a coat of lacquer or shellac largely diluted with alcohol. After this has hardened proceed to paint in the ordinary way.

HEAT—WHAT IS IT?

A word freely used yet difficult to define, says the *Master Steam Fitter*. With a temperature of from 65° to 70° we frequently hear it remarked, "How hot this room is! it is insufferable." Water at the same temperature would be described as cold; a temperatnre of 90° in the shade we call "intensely hot." We should speak of water at this temperature as scarcely warm. A smith would rarely consider his iron hot if less than 800° (red heat) and would call it a good heat at 2,700° (welding). It would appear paradoxical to speak of heat and cold as synonymous terms, yet what we frequently call cold is only another term for a low degree of heat. The word "heat" is commonly used in two senses—(1) to express the sensation of warmth (2) the state of things in bodies which causes that sensation. The expression must be taken in the latter sense. By adopting certain standards we are enabled to define, compare, and calculate so as to arrive at definite results, hence the adoption of a standard unit of heat, unit of power, unit of work, &c. The standard unit of heat is the amount necessary to raise the temperature of 1 lb. of water to 32° Fahr. 1°, *i. e.*, from 32° to 33°.

Prices of Building Materials.

LUMBER.

CAR OR CARGO LOTS.

1¼ and thicker clear picks, Am. ins..	$30 00@	$32 00
1¼ and thicker, three uppers, Am ins.		37 00
1¼ 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	$11 00
1 inch siding, mill culls.....	8 00	9 00
Cull scantling.....	8 00	9 00
1¼ 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
1¼ inch flooring.....	14 00	15 00
1½ inch flooring.....	14 00	16 00
XXX shingles, sawn.....	2 30 @	2 35
XX shingles, sawn.....	1 30	1 35

Metallic Roofing Co. of Canada:

	Per Square.
Eastlake steel shingles (galvanized),	$5 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.....	5 cts.
Corrugated Iron, galvanized, 28 W.G.,	5¼
Corrugated Iron, painted, 26 W. G., per square.....	4 00
Corrugated Iron, painted, 28 W. G.,	3 50
Broad Rib Roofing, galvanized, per square.....	5 50
Bread Rib Roofing, painted..	4 00
Westlake shingles, steel, galvanized, per square.....	5 00
Westlake shingles, steel, painted	3 50
Standard shingles, "Walter's patent," galvanized, per square.....	5 50
Standard shingles, "Walter'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.....		1 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, 1¼ and thicker, dry	25 00	26 00
" " board,	18 00	22 00
Cedar for block paving, per cord.....		5 00
Cedar for Kerbing, 4 x 14, per M....		14 00

B. M.

1¼ inch flooring, dressed, F. M.....	28 00	31 00
1¼ inch flooring rough, B. M.....	18 00	22 00
1¼ " dressed, F. M....	25 00	28 00
" undressed, B. M...	18 00	19 00
" dressed.....	18 00	22 00
" undressed.....	12 00	15 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 stocks.....	16 00	22 00
Picks, American inspection.....		40 00
Three uppers, American inspection....		50 00

BRICK—₩ 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 Toise, delivered		14 00
Large flat " " "		18 00
Foundation Blocks, " Cubic Foot..		50
Slate: Roofing (₩ *square*).		
" red.....		18 00
" purple.....		9 00
" unfading green.....		9 00
" black slate.....		7 75
Terra Cotta Tile, per sq.....		25 00
Ornamental Black Slate Roofing..		8 25
Sand:		
Per Load of 1½ Cubic Yards.....		1 25

PAINTS. (In oil, ₩ lb.)

White lead, Can.....	6 25	6 50
" zinc, Can.....	6½	7 50
Red lead, Eng.....	5½	6½
" venetian.....	1 60	1 75
" vermillion.....	90	1 00
" Indian, Eng.....	10	12
Yellow ochre..	5	10
Yellow chrome.....	15	20
Green, chrome.....	7	18
" Paris.....	25	40
Black, lamp.....	25	25
Blue, ultramarine.....	25	80
Oil, linseed, raw (₩ *imp. gallon*).....	65	68
" " boiled	68	71
" " refined, "	78	85
Putty.....	2¾	2½
Whiting, dry.....	75	1 00
Paris white Eng., dry.....	90	1 25
Litharge, Am.,.....	6½	8
Sienna, burnt.....	15	20
Umber, "	8¼	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, "		2 50
" Queenston, "		1 50
" Napanee, "		1 50
" Hull, "		1 50

HARDWARE.

Cut Nails:		
American Pattern, 1¼ inch, per keg....		3 90
" " 1½ to 2¾ inch, per keg		3 10
Canadian Pattern, 1¼ inch, per keg...		3 40
" " 1½ to 2¾ inch, per keg		2 95
" " 2 to 2¾ inch, "		2 90
" " 2½ to 2¾ inch, "		2 65
" " 3 inch and larger.....		2 30
Steel nails 10c. per keg extra.		
Finishing nails, 2 inch, per keg.....		5 40
" " 1¾ inch, "		4 65
" " 1½ " "		4 15
" " 1¼ " "		3 90
" " " and larger....		3 90