

Joseph Hooper; steam heating, plumbing and metal work, McKelvey & Birch; painting and glazing, T. W. Milo; estimated cost, \$9,000.

**TORONTO, ONT.**—The Toronto Hotel Co. are said to have accepted the tender of Jas. Howard, Jr., of Pittsburg, Pa., for building the proposed million dollar hotel on King street. The building will be 165x197 feet, six stories, of stone, brick and terra cotta. — Henry Simpson, architect, has awarded to Chas. Rogers & Sons a \$6,000 contract for inside finish of Mr. Harris's residence on Pape avenue.

**LONDON, ONT.**—H. C. McBride, architect, has let the following tenders for a new store front on Dundas street for Sreaton & Co.: Mason and brickwork, Jas. Luney; carpenter work, R. G. Wilson.—H. C. McBride, architect, has let the following contracts in connection with the new branch office of the Bank of Toronto on Dundas street east: Mason and brickwork, Mattyn & Hammett; carpenter work, John Wilkie & Sons.

**BLASTING.**

The lines of least resistance should be proportional to the diameter of the bore-holes. The following table is given by M. Eissler:

No.	DIAMETER OF BORE-HOLES.		
	1 1/2 in.	1 in.	3/4 in.
	Lines of Least Resistance.		
1.	3 1/2 ft.	4 ft.	5 ft.
2.	3 1/2 ft.	5 ft.	6 ft.
3.	5 ft.	6 ft.	7 ft.

The corresponding depths of bore-holes in the above, as stated by Eissler, are, for No. 1, equal to the line of least resistance; for No. 2, 1 1/2 times that length, and for No. 3 twice that length.

**CHARGING HOLES WITH DYNAMITE.**

Instructions have been given under *Fulgurates and Fuses* (Chap. 11) for attaching the cap and fuse, or electric detonator, to cartridges. The cartridge thus prepared is called the "primer." The several cartridges constituting the charge are inserted first, and care must be taken to have the bore-hole of such a size that they may pass freely to the bottom without binding. It should never be necessary to force

them to the bottom. In order that they may be compressed to fill the entire width of the hole the cartridge paper must be cut lengthwise. This is best done with a copper blade. To do so with a steel knife is not unattended with danger. The cartridges should now be firmly compressed with a wooden rammer, but they must never be rammed. Firm pressure only is allowable. No steel or iron instrument must ever be used in charging any kind of explosive in a bore-hole. The cartridges must be so well compressed upon each other that no air spaces may remain between them. This would produce an air cushion, and if it did not cause a portion of the charge to escape explosion,

would at least prevent perfect detonation, weakening the effect of the explosive. The primer is inserted last. The cartridge paper, as previously explained, should be tied firmly above the cap with a string, one end of which should be long enough to admit of lowering the primer into the hole with it.

(To be continued next week.)

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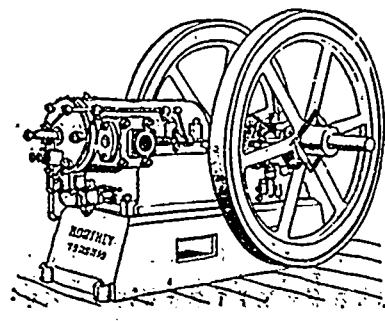
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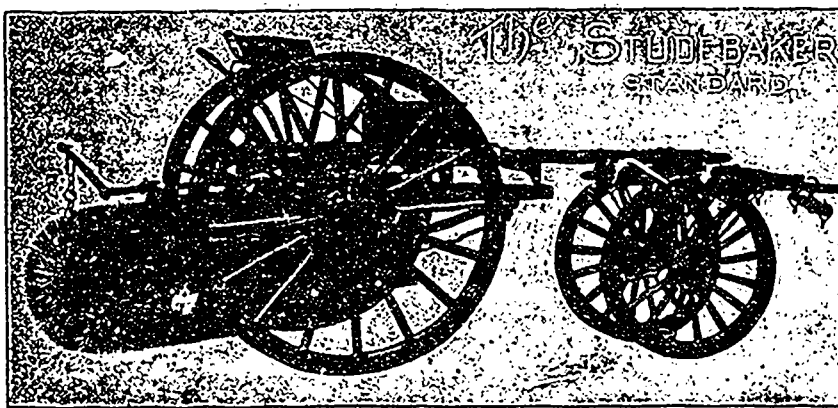
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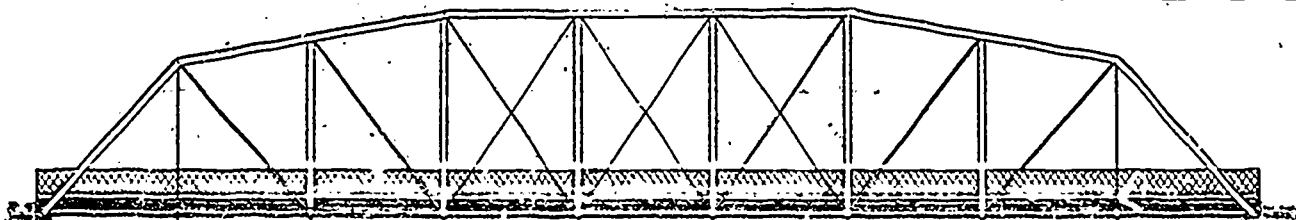
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