

A MACHINE-DRILL COMPETITION

A unique contest, in which teams from most of the copper mines in Michigan took part, was held at Calumet on August 23, 1912. The competitors used only drills made by one firm—and the contest was chiefly in speed of rigging up the machines. After rigging up the miners turned on full air for 2 minutes, and then turned it off and changed steel. No account was taken of the depth of the hole bored, and the prizes went to the team that took the shortest time for the complete operation.

Owing to the large number of contestants two blocks of granite were used, and the drills rigged up on opposite faces. In this way four faces could be used at once. The rules of the day were as follows:

1. Only one entry will be accepted for each contest, from each mine.
2. Complete outfit to be placed 10 ft. from place of rigging.
3. Nuts on clamp and arm to be even with the bolt, at the start.
4. One standard wrench to be used.
5. A 50-ft. length of hose coiled, one end connected with the air supply.
6. Both chuck bolts to be tightened.
7. Jack screws to be flush with bottom of jack, at the start, and collar to be stationary on the post.
8. Each contestant to rig up, turn on full air, and run his drill 2 minutes and change steel at the finish and tighten both chuck bolts.

9. Numbers will be marked on rock and cap and contestants will draw for position and place in contest.

10. Machines, drill steel and hose and complete equipment will be furnished.

11. The drilling will be on flat, dry holes.

Provision was made for 1-man and 2-man contests. Two men rigged up a Rand 3 B and one man a C 113 Butterfly machine. The Ingersoll-Rand Company donated three prizes of \$100, \$50 and \$25 for each class. The Calumet and Hecla Mining Company furnished compressed air delivered at the drills at about 85-lb. pressure. The accompanying photographs show how the frameworks for the granite blocks were constructed.



Drilling Contest, Calumet, Mich.

Thirty-eight teams were entered.

The 1-man contest was won in 4 min. 33 sec., and the 2-man in 3 min. 42 sec.

After the rigging-up contests a match between a machine drill and two hammers and drill, resulted in a victory for the machine. The hand-drillers made 49 ins. in 15 minutes. The machine-drill made over 50 ins. in 14 minutes.

The rules for this match provided that each competitor should drill for 15 minutes, in a block of granite, but the machine operator pierced the block before the expiration of the time allowed.

The hand drillers started with a 1¼-inch bit and finished with a ¾-inch. The machine operator started with a 2-inch and finished with a 1⅛-inch bit.

