

boring holes Om. 036 diameter, costs about 150 francs, but as the black or opaque diamonds used in its construction are ordinarily employed in the shape of dust for polishing transparent diamonds, and as their wear during the act of perforation is very light, they can be extracted from the socket in which they are set, and be returned to the trade with a depreciation proportionate only to the diminution of weight.

The diamonds extracted from the worn-out ring generally fetch seventy or eighty francs—that is to say, about one half of their first cost.

“The following are the results of the experiments made during the Exposition, the speed of rotation varying from two hundred and fifty to two hundred and eighty revolutions per minute ;

“Advance per minute in the Mont Cenis quartz, Om. 054 (2½ inches): in granite, Om. .050 (about 2 inches); in very hard calcareous dolomite, Om. .080 (3 3-16 inches).

“The holes were perfectly regular, and being so, were well adapted to the use of powder cartridges, which are much less dangerous than the ordinary powder.

“The hydraulic engine (by which the tool on exhibition was operated) and the perforator have worked four hours every day for a period of seven months, without necessitating any serious repairs.”

The American Diamond Drill Company claim that by long practical experimenting they have greatly improved upon the machines which Messrs. De La Roche-Tollay & Perrett manufacture under Professor Leschot's patent in France. While their machines rotate the annual ring (or diamond boring head) only 200 to 280 revolutions per minute, the American rotate the same from 400 to 800 revolutions per minute, according to the style and application of the machine. This increased speed, with improved mechanical devices for adjusting and applying the tool, is said to greatly economize time, and enable bores to be made in sandstone, limestone, slate and marble at a uniform rate of fifteen to twenty (15 to 20) feet per hour. and in quartz, flint and granite from six to eight (6 to 8) feet per hour.

The si
sary the
and since
men are
necessar

This
known n
than it c
to bore
near the
tant con
through

The
Diamon
which is
and swi
through
horse-p
to sever
also car
This ge
beveled
The rel
is a fra
which l
a differ
the bot
bined c
sensiti
and m
sudder
soft in
rod (p
rod, m
to one

The
inches