(No Model.)

S. INGERSOLL.

SUPPORT FOR ROCK DRILLS.

No. 333,077. Patented Dec. 22, 1885.

Fig. 1.

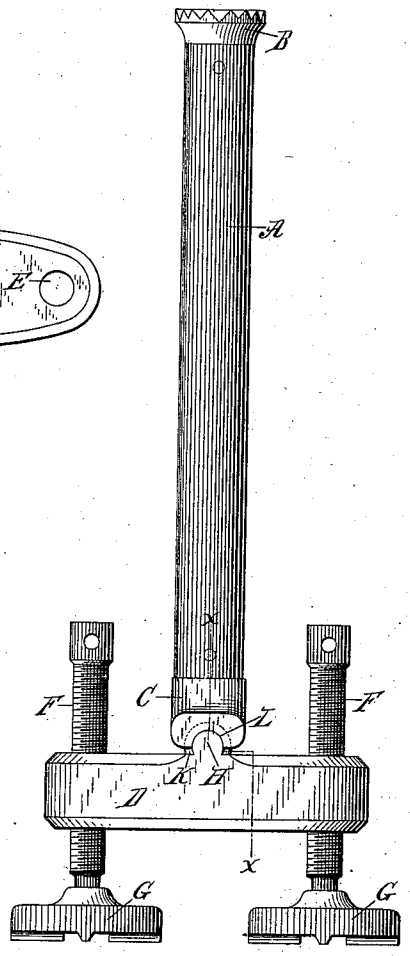


Fig. 2.

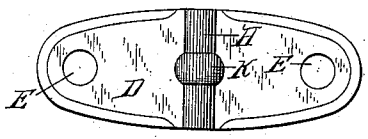


Fig. 3.

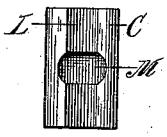
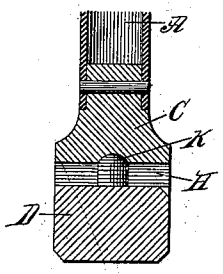


Fig. 4.



Witnesses,
C. C. Perkins.
C. E. Ringglee

Inventor,
Simon Ingersoll
By A. M. Wooster
atty.

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

SIMON INGERSOLL, OF GLENBROOK, CONNECTICUT.

SUPPORT FOR ROCK-DRILLS.

SPECIFICATION forming part of Letters Patent No. 333,077, dated December 22, 1885.

Application filed October 7, 1885. Serial No. 179,197. (No model.)

To all whom it may concern:

Be it known that I, SIMON INGERSOLL, a citizen of the United States, residing at Glenbrook, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Bases and Columns for Rock-Drills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of rock-drills in which the drilling mechanism is carried by a column or tube of any suitable length, the column being supported by a base provided with adjusting-screws, by which it may be raised or lowered.

The object of my invention is to provide a simple and durable joint at the end of the column, which will permit it to turn upon the base sufficiently to prevent any strain upon the column should one of the adjusting-screws be turned a little more than the other. It is of course apparent that if the attachment of the column to the base were rigid there would be a tendency to bend or spring the column so as to seriously impair its efficiency in use. The essential requirement in practice is that both base and column shall be simple in construction, economical in cost, and practically impossible to wear out or to get out of order.

In my improved construction the column can swing in one direction only. The construction is light and strong, no bolts being used, thus permitting it to be readily taken down and put up, there being no separable parts to get lost, and by providing the end of the column with a foot-piece which covers the curved rib upon which it moves I effectually prevent dirt, stones, &c., from getting into the joint, even should the plane of the base vary considerably from the level.

In order that others may understand and use my invention, I will proceed to describe the same, referring by letters to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of the column, base, &c., complete; Fig. 2, a plan view of the base detached; Fig. 3, an inverted plan view of the foot-piece upon the column; and Fig. 4 is a central transverse section of the lower end of the column, foot-piece, and the base.

A represents the column, and B the head, which is of the usual or any preferred construction. At the lower end of the column is a foot-piece, C, which is secured thereto in any suitable manner.

D represents the base, cast in a single piece, and preferably made solid. At each end of the base are threaded holes E, through which the set-screws F pass. At the upper ends of the screws are holes for the engagement of a turning-lever. Their lower ends are rounded in the usual manner and rest in sockets in plates G.

The gist of my invention lies in the construction of the base and the corresponding foot-piece at the lower end of the column.

H represents a curved rib extending entirely across the base. At the center of this rib is an enlargement, K, extending over the rib from side to side, the enlargement also being curved from side to side. Foot-piece C is provided with a longitudinal groove, L, which corresponds exactly with rib H upon the base. Midway of the length of this groove is a curved depression or transverse groove, M, which is made sufficiently deep and of the exact shape to receive enlargement K at the center of the base, the construction being such that the curved bottom of groove M will rest upon enlargement K and the curved bottom of groove L will rest upon rib H. It will thus be seen that the foot-piece, and with it the column, can swing freely in one plane only, which is of course the plane in which the set-screws act. At the same time the column is held firmly against movement in any other direction. It will be observed that the foot-piece fully covers both the rib and the enlargement, so that no matter at what angle the column may be placed relatively to the base it will be impossible for any material to work into the joint. I thus produce a strong and simple joint, which is durable and thoroughly reliable at all times.

The details of construction may be varied within reasonable limits without departing from the spirit of my invention.

Having thus described my improvements, I claim—

1. The combination, with a base having a curved transverse rib provided with a curved enlargement, of a column having a foot-piece provided with a longitudinal groove corresponding with said rib, and with a deeper transverse groove corresponding with said enlargement, whereby the column is permitted to move in one plane only and the joint is at all times thoroughly protected.

2. The combination, with the base having threaded holes at each end for set-screws, and provided with a rib, H, and enlargement K, of a column to which a foot-piece is firmly attached, said foot-piece having a groove, L, corresponding with rib H, and a depression, M, corresponding with enlargement K, as described, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

SIMON INGERSOLL.

Witnesses:
A. M. WOOSTER,
C. E. RUGGLES.