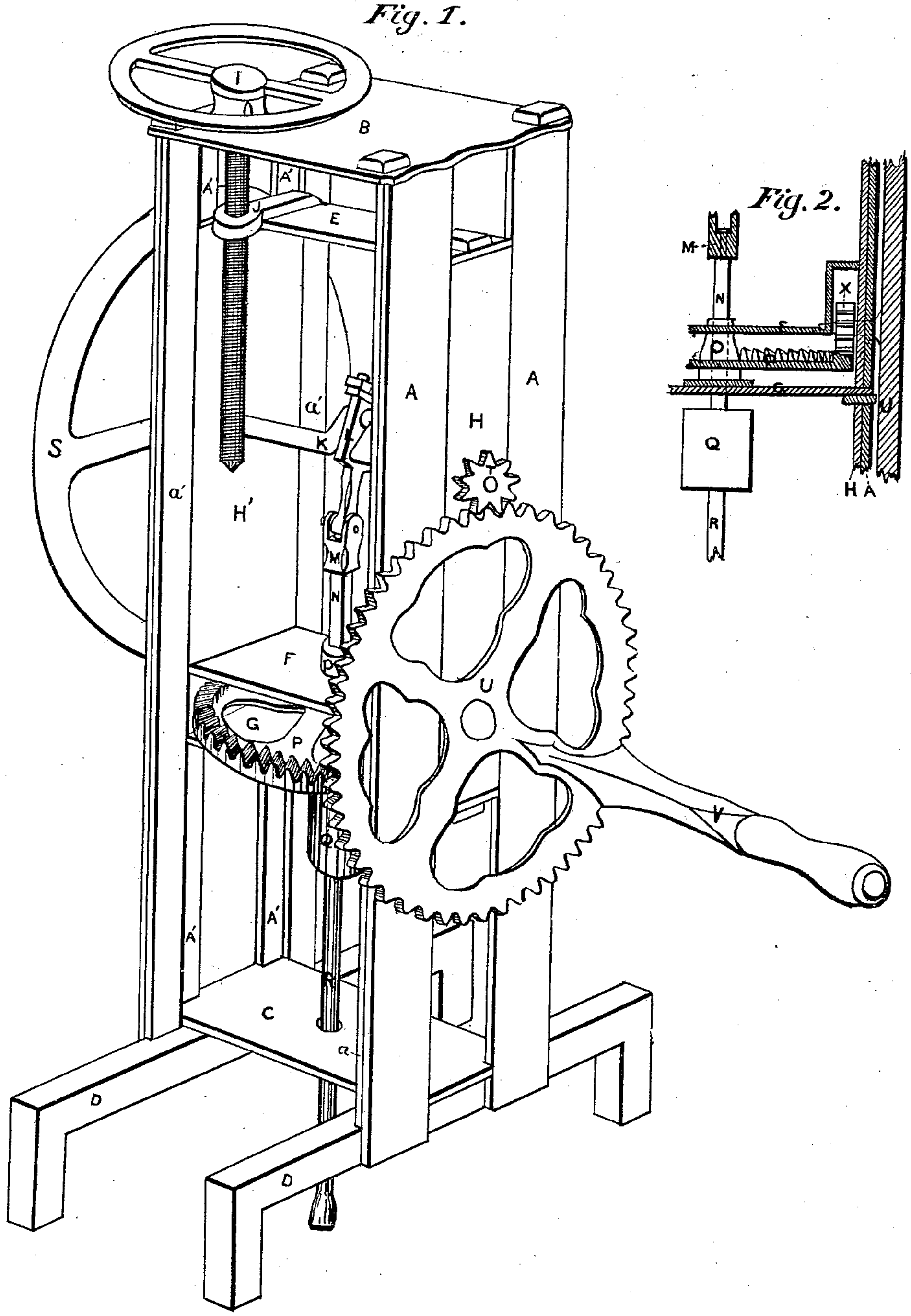
C. C. CREEGER.

Rock-Drilling Machine.

No. 166,590. Patented Aug. 10, 1875.

Fig. 1.



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UNITED STATES PATENT OFFICE.

CHRISTOPHER C. CREEGER, OF TIFFIN, OHIO.

IMPROVEMENT IN ROCK-DRILLING MACHINES.

Specification forming part of Letters Patent No. **166,590**, dated August 10, 1875; application filed January 21, 1875.

To all whom it may concern:

Be it known that I, CHRISTOPHER C. CREEGER, of Tiffin, in the State of Ohio, have invented a Rock-Drilling Machine, of which the following is a specification:

The object of my machine is to rapidly drill holes in rocks for splitting or blasting.

The various parts of the machine are nearly all shown in the perspective view, Figure 1, of the accompanying drawing.

The drill R is firmly attached to the weight Q. This weight is also firmly connected with the square sliding shaft or rod N, which, passing through and fitting the square center of the cog-wheel P, is riveted to the swivel M in such a manner as to admit of its being turned around without becoming detached, as is more fully shown in the sectional drawing, Fig. 2. The swivel M is connected by a bolt or pin to the movable arm L. This arm is connected at the other end to a crank on the main shaft K, around which it turns. This crank I consider an improvement upon the combinations now in use, as it does away with the springs, and is much simpler in construction.

When the main cog-wheel U is turned by means of the crank V the main shaft K is set in motion, the shaft K being connected to the cog-wheel T, which works in the main cog-wheel U. The crank on the main shaft K gives an up-and-down motion to the shaft or rod N and drill R, by this means cutting the stone. The cog-wheel U also turns the cog-wheel P by means of the cog-wheel X, shown in Fig. 2, and thus turns the rod or shaft N by means of its square center. The arbor of the cog-wheel U passes through the plate H, and is provided on the other side with a small cog-wheel, X. The bearing of the other side of this cog-wheel X is in the plate F. The cogs of this wheel work in the cogs of the cog-wheel P. When the cog-wheel U is set in motion the drill, as hereinbefore described, is given an up-and-down motion. At the same time the drill is made to rotate by means of the cog-wheel P, the center of which being square and fitting the shaft or rod N, and those of the cog-wheel P are on the upper side in the plate F, and on the lower side in plate G. A washer is interposed between plate G and the lower surface of the wheel P.

The above drilling-machinery is all connected together by means of the upright plates H H′ and the horizontal plates E, F, and G, and can be lowered or raised by means of the screw I, which turns in the nut J connected to the plate E, the bearing of the screw I being the upper plate B. This plate B is firmly connected to the frame-work A A A′ A′ *a a a′ a′*. This frame-work is fastened firmly to the standards D D, and connected at the bottom by means of the plate C. When the machinery is raised or lowered the plates H and H′ slide upon the upright plates A A A′ A′ and the edges of the plates *a a a′ a′*. This is for the purpose of feeding the machine.

I claim as my invention—

The combination of the swivel M and movable arm L, the crank on the main shaft K raising and lowering the drill, the rotating mechanism U, X, and P, weight Q, feeding-screw I, sliding frame H H′ E F G, frame A A A′ A′ B, and standards D D, substantially as and for the purposes herein described.

CHRISTOPHER C. CREEGER.

Witnesses:

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