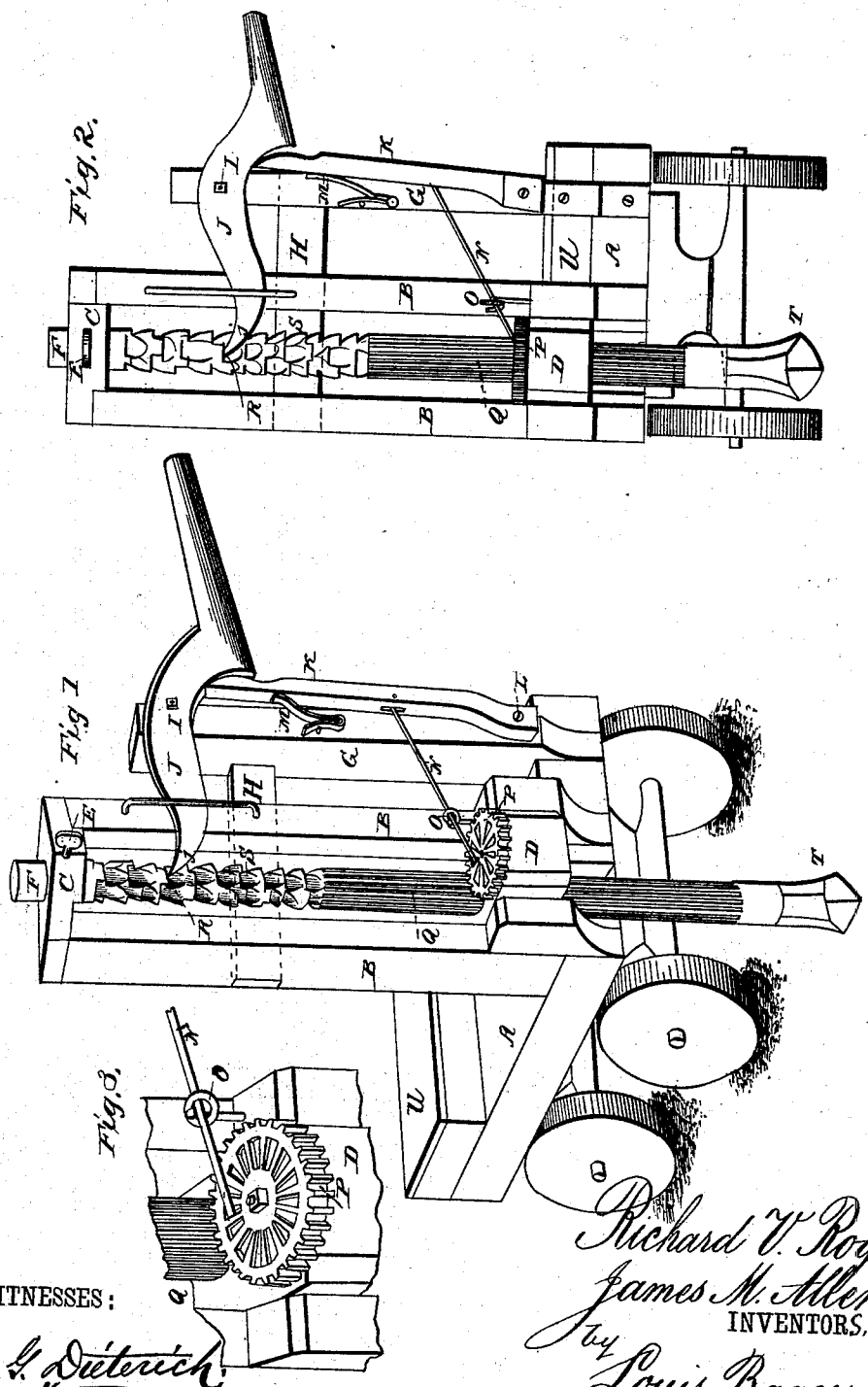
(No Model.)

R. V. ROGERS & J. M. ALLEN.

ROCK DRILL.

No. 274,035. Patented Mar. 13, 1883.



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UNITED STATES PATENT OFFICE.

RICHARD V. ROGERS AND JAMES M. ALLEN, OF LARKINSVILLE, ALA.

ROCK-DRILL.

SPECIFICATION forming part of Letters Patent No. 274,035, dated March 13, 1883.

Application filed November 13, 1882. (No model.)

To all whom it may concern:

Be it known that we, RICHARD V. ROGERS and JAMES M. ALLEN, of Larkinsville, in the county of Jackson and State of Alabama, have invented certain new and useful Improvements in Rock-Drills; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of our improved rock-drill. Fig. 2 is a front elevation of the same, and Fig. 3 is a detail view.

Similar letters of reference indicate corresponding parts in all the figures.

Our invention has relation to rock-drills; and it consists in the improved construction, combination, and arrangement of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A represents the platform, upon which the whole apparatus is mounted.

B B are two uprights, fastened on the front of the platform, and connected at the top and bottom by two cross-pieces, C and D, which form bearings and guides for the drill.

In the upper cross-piece, C, is a set-screw, E, for the purpose of holding the drill fast, when not used, by pressing against the head F of the drill-shaft.

G is another upright, fastened at the front of the platform in line with the two uprights B B, and connected with them by a cross-piece, H.

At the top of the upright G is a bolt, I, on which a lever, J, has its fulcrum. This lever has a double curve, the one at the place where it has its fulcrum and the other where it bears against a lever, K, having its fulcrum at the bolt L on upright G, near the platform. A spring, M, is fastened on the same upright, and acts upon the free end of lever K.

Near the middle of lever K is a rod, N, fastened, which passes through a guide, O, and engages a series of notches, forming a ratchet on the upper surface of a cog-wheel, P. This cog-wheel engages the fluted part Q of the drill-shaft, and turns it partly around by each depression of the outer end of the lever J. The inner end, *j*, of this lever catches into notches R in the upper part, S, of the drill-shaft, and by the end *j* describing a circle-segment, while the drill-shaft moves in a straight line, it will lift the shaft up until the end *j* of the lever slips out of the notch and allows the drill to drop.

The bit T may be of any desired construction, and is fastened in the lower end of the fluted part of the drill-shaft.

By the foregoing description, taken in connection with the accompanying drawings, the working of our rock-drill will be easily understood. By depressing the handle of lever J it will engage one of the lower notches and lift the drill-shaft, at the same time pressing on the free end of the lever K, which turns the cog-wheel P partly around by the action of the rod N, which, again, turns the drill-shaft. When the end *j* of lever J slips out of the notch the drill drops, and the spring M presses lever K back, which raises lever J, and the machine is ready again for another stroke.

On the back part of the frame A may be placed a box, U, for storing extra bits and other parts of the drill, tools, blasting material, &c., which at the same time counterbalances the drill and uprights on the front part of the frame.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

1. In a rock-drill, the combination of the drill-shaft F, having upper notched part, S, and lower fluted part, Q, with the pivoted operating-lever J, and notched cog-wheel P, operated by arm K and rod N, as and for the purpose shown and set forth.

2. In a rock-drill, the combination of the frame A, having uprights B B and cross-piece C D, forming bearings for the drill-shaft, lever J, pivoted on upright G, having spring M, and arm K, provided with rod N, cog-

wheel P, having notches on the upper surface, and the drill having the head F, notched part S, fluted part Q, and suitably-constructed bit T, all constructed and combined substantially as and for the purpose shown and set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

RICHARD VINCON ROGERS.
JAMES MADISON ALLEN.

Witnesses:
ALLAX MCCORMACK,
D. O. AUSTIN.