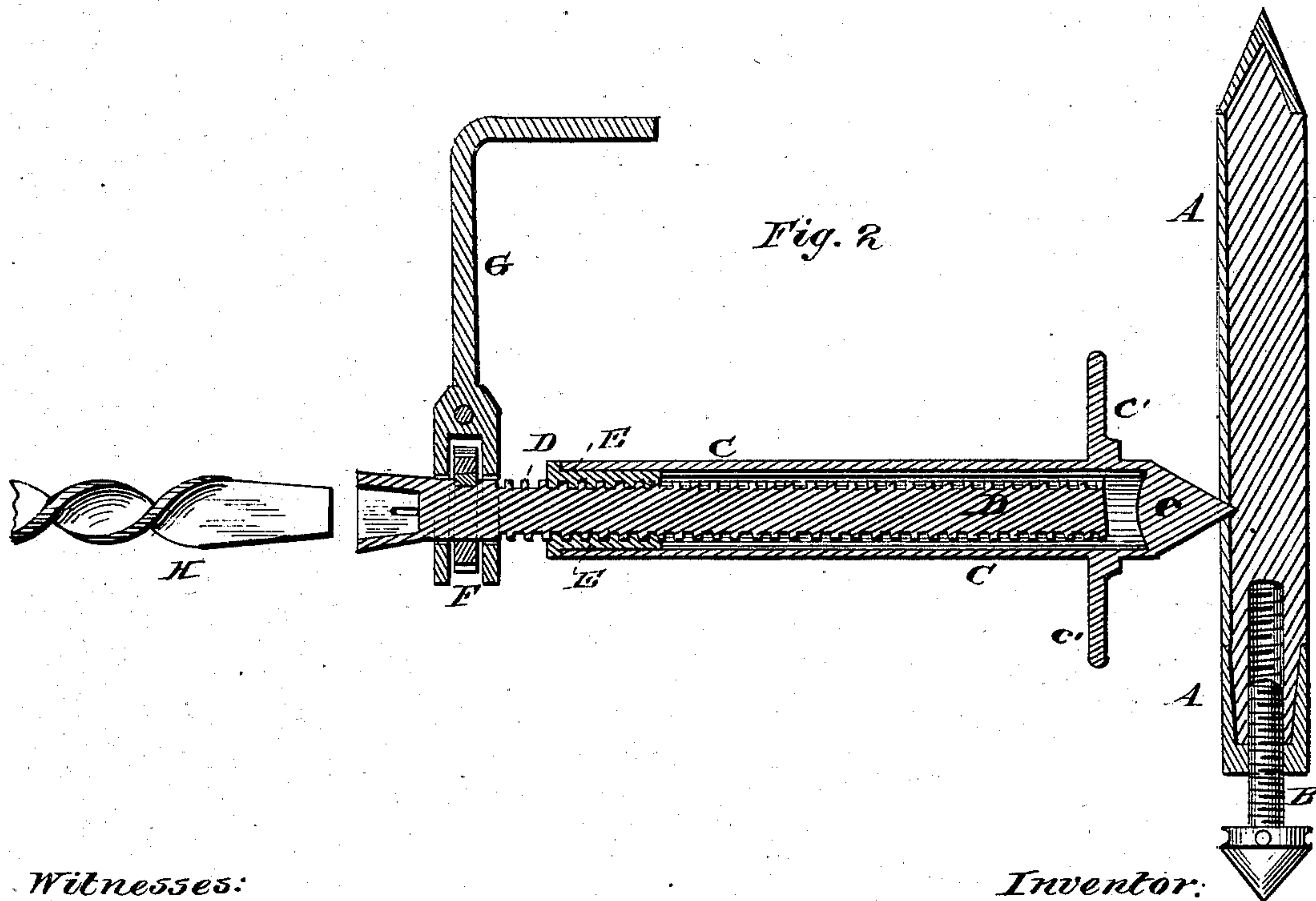
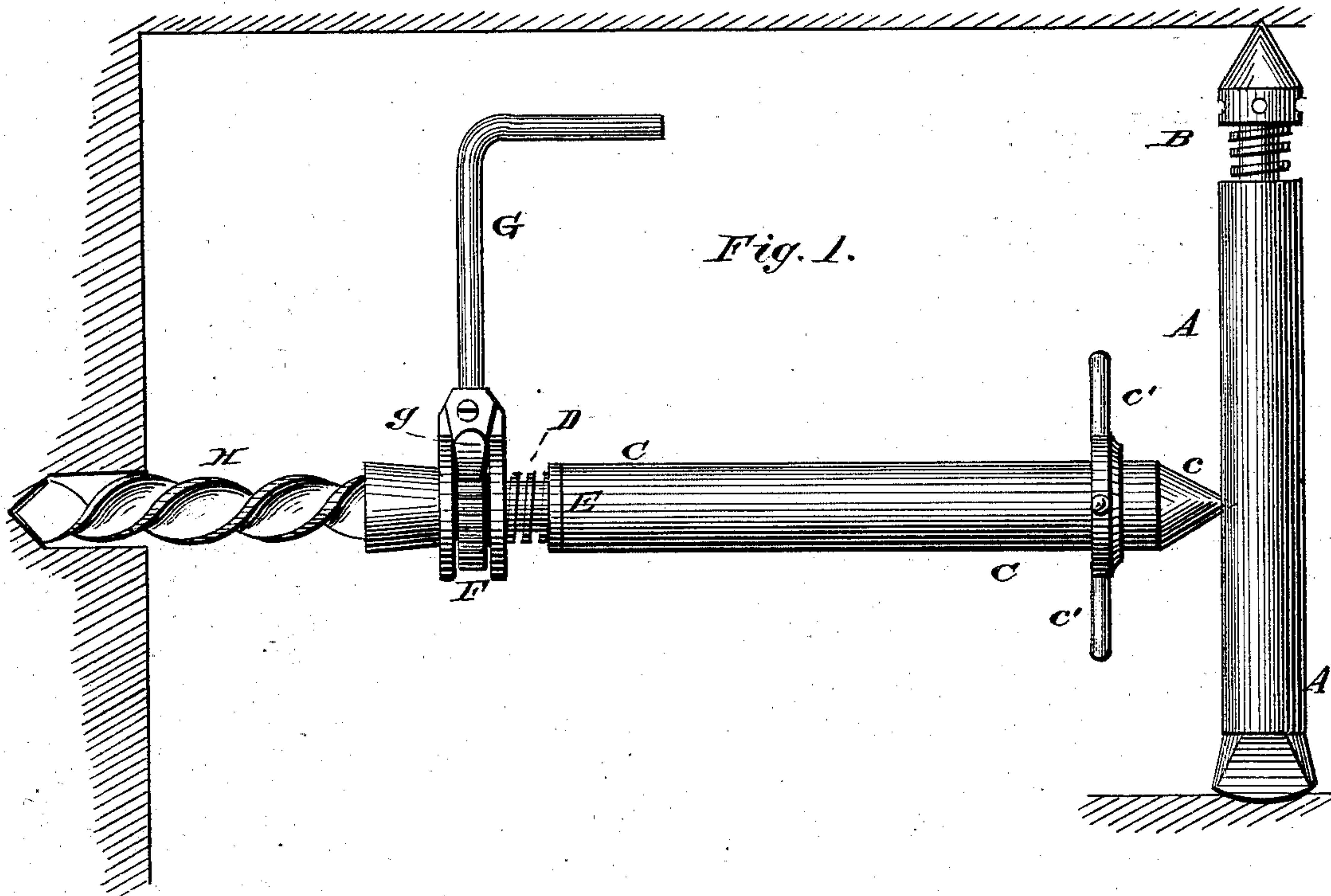


(No Model.)

J. H. FERGUSON.
Rock and Coal Drilling Machine.

No. 239,324.

Patented March 29, 1881.



Witnesses:

Fred. G. Dietrich
P. C. Dietrich

Inventor:

John Hart Ferguson
PER Erwin C. Allen atty

UNITED STATES PATENT OFFICE.

JOHN H. FERGUSON, OF DAYTON, TENNESSEE.

ROCK AND COAL DRILLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 239,324, dated March 29, 1881.

Application filed February 9, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. FERGUSON, a citizen of Great Britain, residing at Dayton, in the county of Rhea and State of Tennessee, have invented certain new and useful Improvements in Rock and Coal Drilling Machines; 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, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a side view, and Fig. 2 is a vertical sectional view.

This invention relates to certain new and useful improvements in rock and coal hand-drilling, more especially adapted to thin seams or small headings; and the invention consists in novel features of construction and combination of parts, all as will be hereinafter fully described, and specifically pointed out in the claims.

In the drawings, A represents a standard, having an adjusting standard-screw, B, fitting in one end thereof, and through the medium of which said standard can be adjusted to suit the height and width of seams or headings, and by which the drilling mechanism can be fastened or held to its work.

The drilling mechanism is composed of a hollow box, C, formed of gas-pipe and of any desired length, for the reception of the drilling screw-shaft D, which passes through and is fed by a screw-nut, E, fitting in the open end of said box C, the opposite end of said box being closed by a pointed plug, c, adapted to engage with the standard A, as clearly shown in Fig. 1. The nut E is adapted to release the drilling screw-shaft D when desired, so that it can be run back into the box C without screwing, thus saving time in the operation of the machine. The box C is provided with a handle or hand-wheel, c', by which it and the screw-nut E are held stationary or allowed to turn, as may be required, to regulate the feed of the drilling screw-shaft D, according to the hardness of the rock or shale being drilled.

F represents a ratchet-wheel mounted upon

and keyed to the drilling screw-shaft D, and with which a spring-pawl, g, connected to an operating crank-handle, G, engages, and through the medium of which the drilling screw-shaft is operated.

The drill H is fitted into a tapering socket in end of drilling screw-shaft similar to the manner of securing the drill and removing it from the drilling screw-shaft, as set forth in another application of mine bearing even date with this case.

This machine is intended principally for small seams or headings, where there is but little room and the work to be done is not so hard, and it is very simple in its construction and effective in operation, and, not weighing over thirty pounds, can be easily carried, set up, and operated by boys, while its cost of construction is such as to bring it within the reach of all miners, and the work that can be accomplished with it far excels hand-drilling both in rapidity and effectiveness.

Instead of using the adjustable standard for securing or holding the machine to its work, it can be fastened from side to side, or by any ordinary props which are used in the mines.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hand-drilling machine, the combination, with the drilling screw-shaft D, of the hollow box C, provided with the handle c', and screw-nut E, fitted in the end thereof, and through which said drill-shaft D passes and is fed, substantially as and for the purpose herein shown and described.

2. The herein-described hand-drilling machine, composed of the hollow box C, having pointed end c, handle c', and screw-nut E, fitted in the end thereof, and drilling screw-shaft provided with drill H, and ratchet-wheel F, and operating-crank having spring-pawl g, all constructed and arranged to operate substantially in the manner specified.

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

JOHN HART FERGUSON.

Witnesses:

Dr. GEO. SCOTT,
W. B. BENSON.