

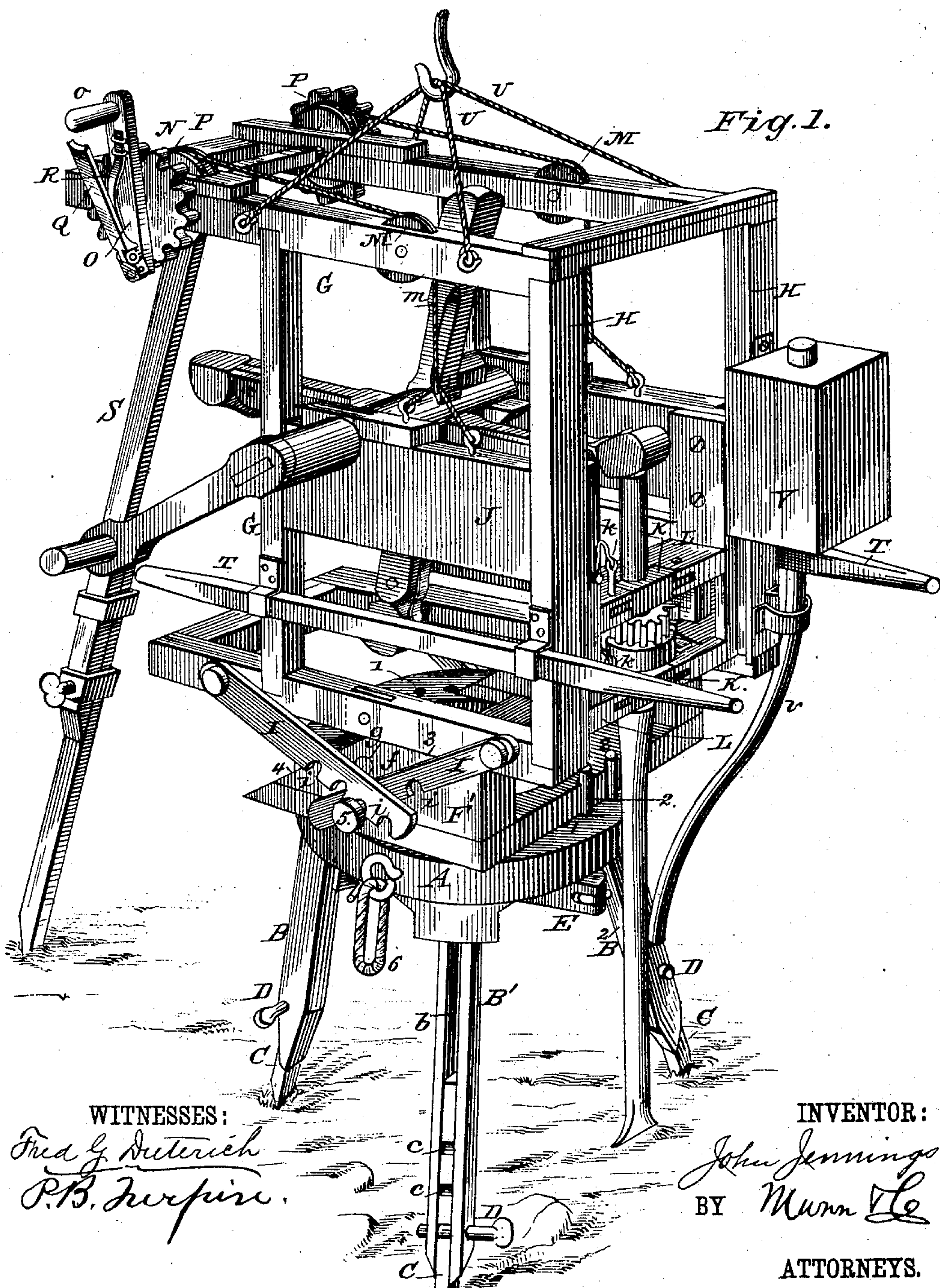
(No Model.)

2 Sheets—Sheet 1.

J. JENNINGS.
ROCK DRILLING MACHINE.

No. 362,089.

Patented May 3, 1887.



(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

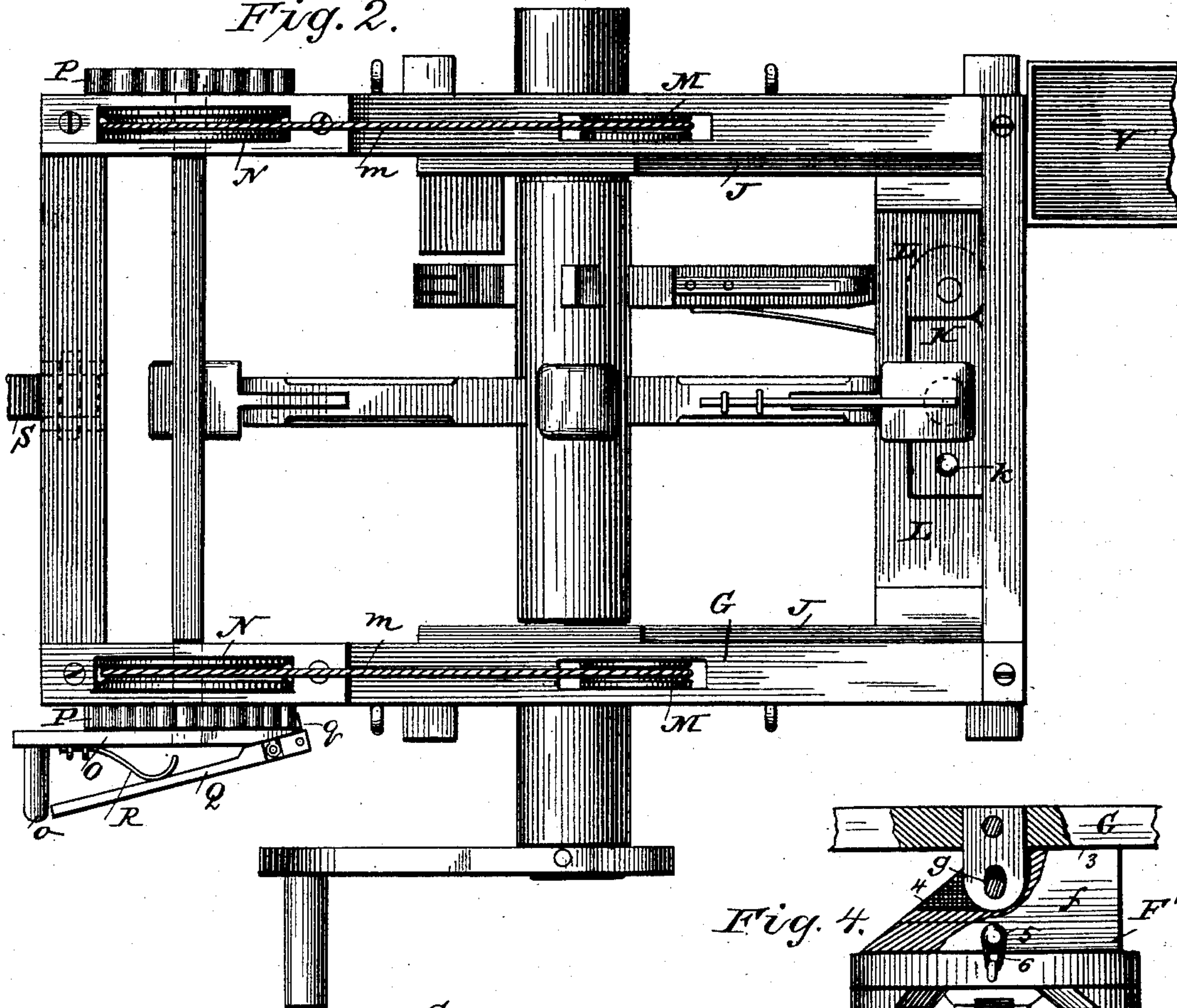


Fig. 4.

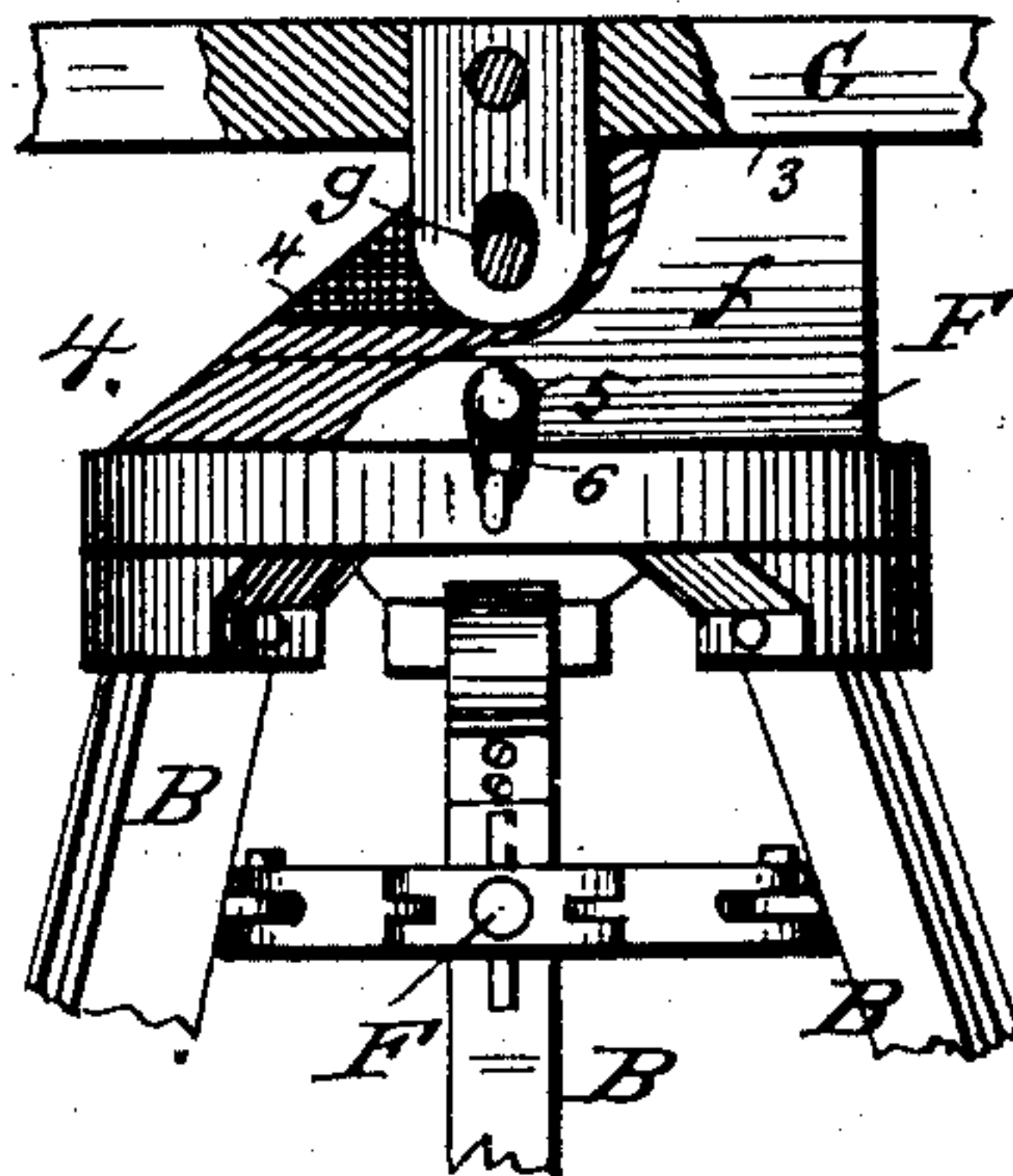
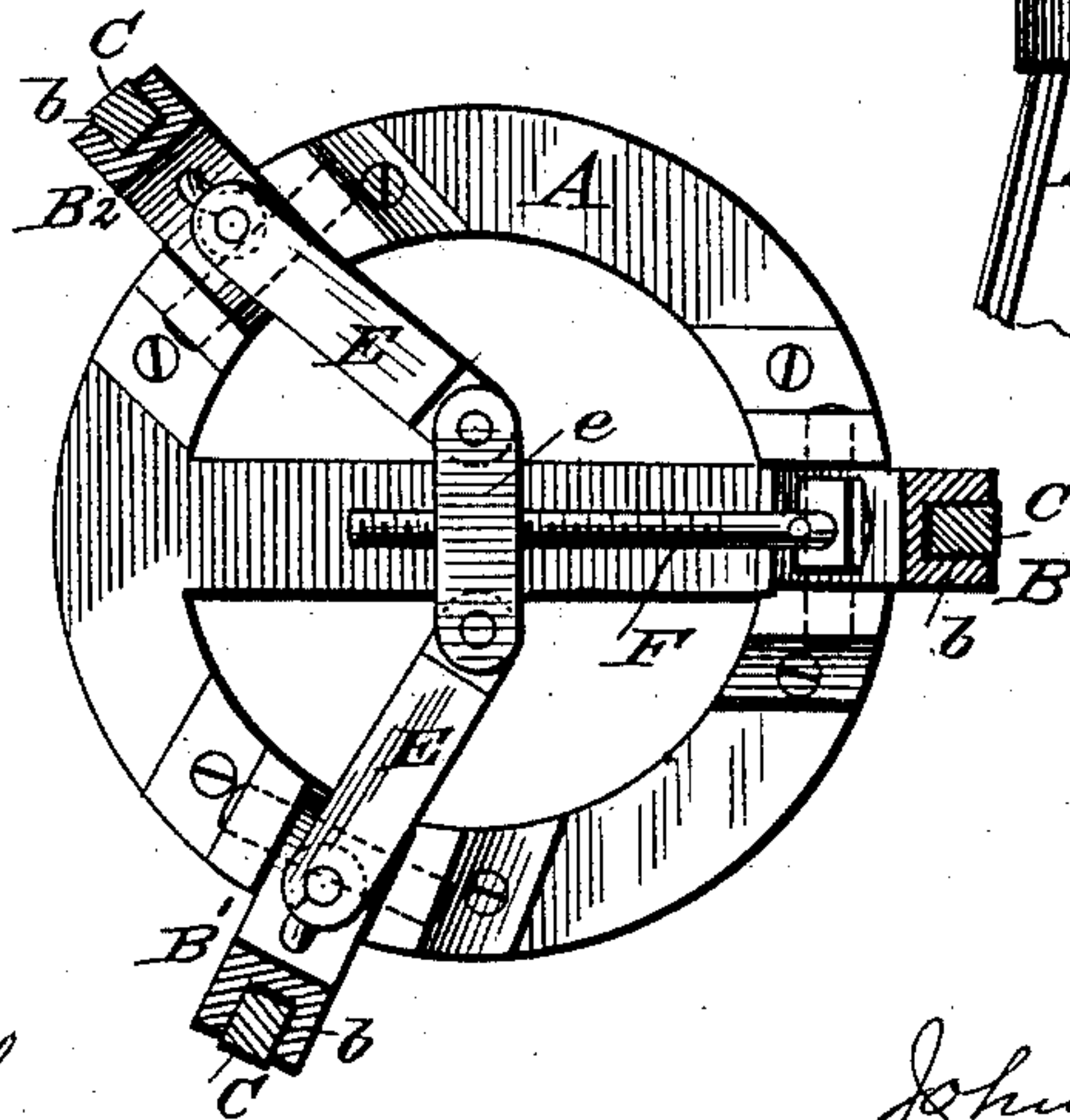


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN JENNINGS, OF CAÑON CITY, COLORADO, ASSIGNOR TO KITTIE C. JENNINGS, OF SAME PLACE.

ROCK-DRILLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 362,089, dated May 3, 1887.

Application filed July 13, 1886. Serial No. 207,941. (No model.)

To all whom it may concern:

Be it known that I, JOHN JENNINGS, of Cañon City, in the county of Fremont and State of Colorado, have invented a new and useful
5 Improvement in Rock-Drilling Machines, of which the following is a specification.

This invention relates to rock-drilling machines, and to that class of such machines represented in my Patent No. 342,605, bearing
10 date May 25, 1886.

The present invention consists in certain features of construction and novel combinations of parts, as will be described.

In the drawings, Figure 1 is a perspective
15 view of my machine, parts being broken away. Fig. 2 is a top plan view of same, parts being broken away; and Figs. 3 and 4 are detail views.

The platform A is provided with legs B, B',
20 and B², forming a tripod. These legs are pivoted at their upper ends to the platform, and are provided with longitudinal grooves *b*, in which fit the feet C. I form these feet with notches *c*, and provide pins D, passed through
25 openings in the legs and engaging said notches, so the feet C may be adjusted to enable the adjustment of the tripod to the ground-surface on which the machine rests.

The legs B' B² are connected by links E E
30 and the nut-bar *e*. This nut-bar is pivoted at its ends to the links E E, and the latter are pivoted to the legs B' B². A screw, F, is journaled to the leg B and threaded through the nut-bar *e*. By turning this screw the legs may
35 be adjusted together or apart and secured in any suitable adjustment, as will be seen.

The platform A is provided near its edge with perforations 1 to receive the pin 2, which secures the turn-table F' at any suitable point.
40 This turn-table is pivoted centrally to the platform, and is provided with side ribs or frames, *f*, formed with flat horizontal faces 3 and inclined faces 4. Studs 5 project laterally from the turn-table F', and are arranged to be
45 engaged by loops or rings 6, secured to the platform, in order to lock the turn-table from turning when so desired, as in lowering the device in a shaft.

On the turn-table I pivot at *g* the frame G,

which is provided with guides or ways H for
50 the drill-carriage.

To the lower end of the frame G, I pivot one end of the rack-bars I, which have notches *i*, fitted to engage the studs 5, and thereby secure the frame at any adjustment on the pivots *g*.
55 It will be noticed that the frame G in its horizontal position rests flat against faces 3 of ribs *f*, and in its extreme inclined position rests against faces 4, by which construction the rack-bars are relieved in large part of the strain
60 they would otherwise bear. The guides H are adapted to receive the drill-carriage J, which is supported and movable longitudinally in said ways. The devices for driving and feeding the drill may be similar to those shown for
65 such purposes in my former patent above referred to.

In order to secure the drill proper to the carriage, I provide pivoted latch-bars K and pins
70 *k*, by which it is retained in its bearings in cross-bars L of such carriage.

To the frame G, above the carriage, I journal guide-rollers M, and cords *m*, being secured to the carriage, pass over said pulleys, and thence to the windlass N, to which they are
75 fixed. This windlass is journaled to the frame G, and is adapted at its opposite end to receive the crank-arm O and handle *o*, by which it is turned.

On the frame G, I secure concentric with the
80 windlass the rack or racks P, forming a part of the detent for securing such windlass, and by it the carriage when so desired. The crank and handle may be suitably adapted for connection with the windlass.
85

To the arm O is pivoted a pawl, Q, which is provided with a pin, *q*, to engage rack P, and is actuated normally into engagement with said rack by a spring, R, as shown. The free end of the pawl moves close to handle *o*, so that
90 the hand in grasping such handle will adjust and retain the pawl out of engagement with the rack.

To the upper rear end of the frame G, I pivotally secure the back brace, S, which is preferably formed in adjustable sections, as shown.
95 Handles T may be provided, by which the machine may be moved when on surface work.

To facilitate the raising and lowering of my machine in shafts, I provide it with loops U, secured at or near its upper end, which may be engaged by the hook of the windlass-rope, 5 as will be understood from Fig. 1.

A water can and pipe, V v, are suitably supported for use when desired.

My machine will be found especially useful in drilling vertically downward, or approximately so, and in such instance the drill-carriage may be lowered at intervals, or be left to fall by gravity, as may be found necessary or desirable.

Having thus described my invention, what I 15 claim as new is—

1. The combination of the drill-carriage having a drill and means for supporting and operating the same, the frame having guides or ways for said carriage, the guide-rollers M, 20 journaled to the upper part of the frame at the opposite sides thereof, the windlass journaled to the frame, the cords secured to the opposite sides of the carriage, extended thence up over pulleys M and attached to the windlass, and a detent, substantially as set forth. 25

2. The combination of the platform, the drilling devices supported thereon, the legs B B' B², pivoted at their upper ends to said platform, the links E E, pivoted at one end, one

to each of legs B' B², the nut-bar pivoted to 30 and connecting links E, and the screw journaled to leg B and threaded through the nut-bar, substantially as set forth.

3. The combination, with the platform, the turn-table having studs 5, and the frame 35 mounted thereon and provided with the drill-carriage, of the loops 6, connected with the platform and movable into engagement with studs 5, substantially as set forth.

4. The combination, with the turn-table 40 having studs 5 and provided with ribs or frames f, having faces 3 and 4, of the frame G, provided with the drill-carriage and pivoted to the turn-table, whereby it may rest against faces 3 or 4, substantially as set forth. 45

5. The combination, with the frame and the drill-carriage movable therein, of the windlass journaled to said frame and having a crank arm and handle, a rack secured to said frame concentric with the windlass, and a spring- 50 actuated pawl having a pin arranged to engage the rack and pivoted to the crank-arm, with its end movable alongside the crank-handle, substantially as set forth.

JOHN JENNINGS.

Witnesses:

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