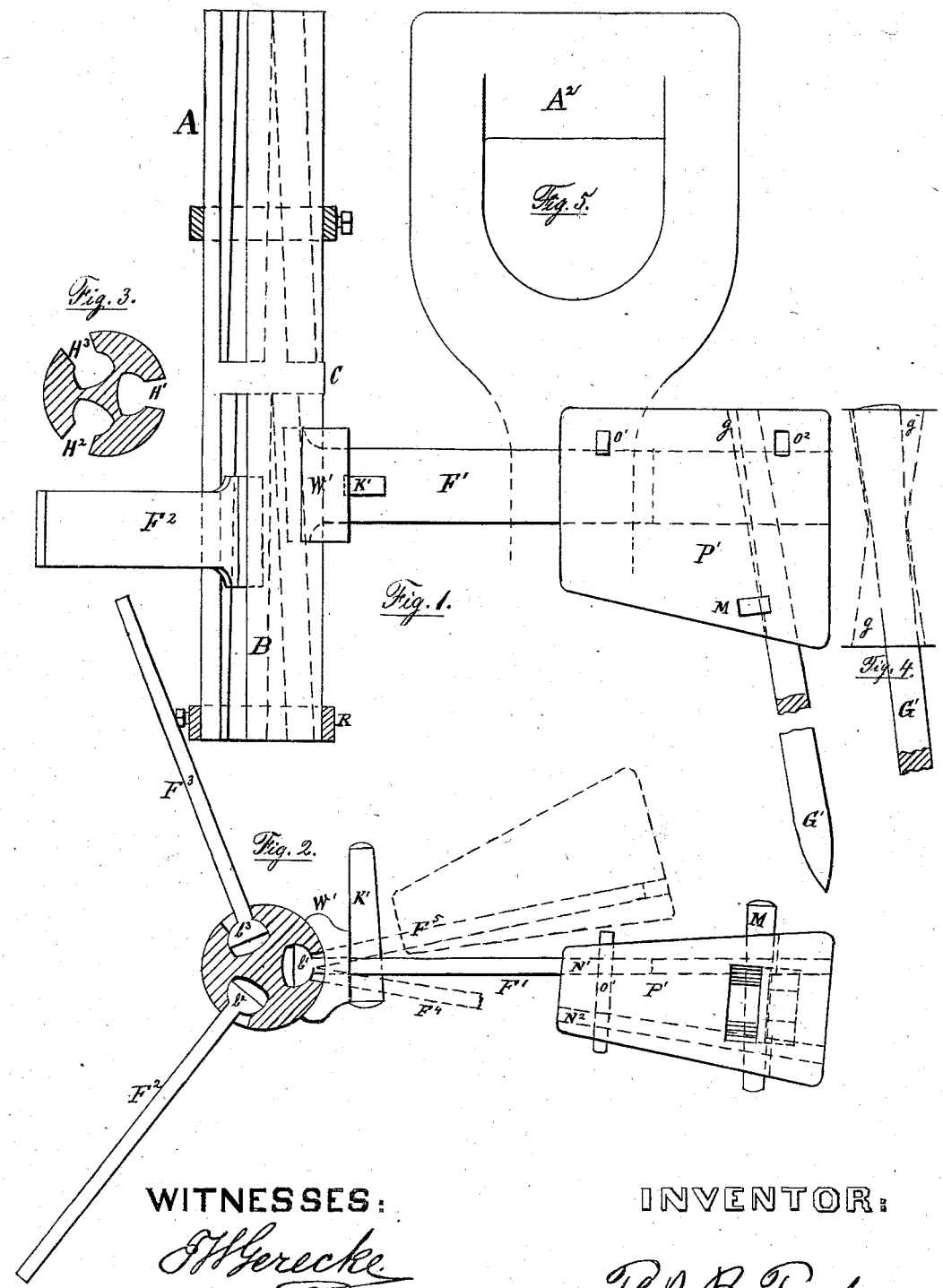
T. B. FORD.

TRIPODS FOR ROCK-DRILLS.

No. 189,853. Patented April 24, 1877



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS B. FORD, OF NEWBURG, NEW YORK.

IMPROVEMENT IN TRIPODS FOR ROCK-DRILLS.

Specification forming part of Letters Patent No. **189,853**, dated April 24, 1877; application filed March 7, 1877.

To all whom it may concern:

Be it known that I, THOMAS B. FORD, of Newburg, in the county of Orange and State of New York, have invented an Improved Tripod, of which the following is a specification:

My invention relates to improvements in tripods, and differs from tripods now in use by being provided with a vertical bar, on which rock-drills and other machines or instruments may be attached, and upon which the machine may be moved in any direction. The vertical bar is provided with longitudinal undercut grooves converging toward their upper ends, in which arms are adjustable and firmly held by means of concave washers fitted to the circumference of the bar, and keys. These arms may be fastened in any part of the grooves. By rounding the outer surface of the projections on the arms, and forming the grooves of a similar shape to receive them, with play in the slots on the surface of the bar, the arms may be moved sidewise for adjustment.

The bar may be made of plain cylindrical form, or with a head of spade-handle shape, or any other desired form, to receive the machine. The weights to steady the tripod are movable radially on the arms, and may be held by keys or set-screws, or may be firmly attached thereto. The points on which the tripod stands are bars pointed at their lower ends, flattened and tapered toward the upper ends, and adjustable in and through slots in the weights by keys or otherwise.

A is the upper part of the bar; B, the lower part; C, its center. The bar may be provided with one or two sets of grooves, H^1 H^2 H^3, increasing in depth from the lower part upward. The arms F^1 F^2 F^3 are flat, with the ends fitting in the undercut grooves, the opening slot in the surface of the bar being wider than the arms, so that the arms can swing in the slots, as indicated by arms F^4 and F^5 in Fig. 2. By driving the key K through the slot in the arm and against the washer W, the arm F is held firmly in the undercuts. P represents one of the weights, of which there is one for each arm, provided with slots N^1 N^2 to receive the arm F^1, on which the weight is adjustable radially, as shown in Fig. 2, drawn in full and dotted lines, and is also reversible. Near one end of the weight is the slot *g g*, to receive the point G′. These are rods pointed at the lower ends, flattened and tapered toward the upper end, and fit loosely in the slots, which increase in size toward both ends to allow the points to swing for the purpose of adjusting them. Said rods may be held by a key or set-screw.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a tripod, a round vertical bar, A B, provided with longitudinal undercut grooves H, in combination with arms F, movable therein, and radially-adjustable weights P and points G, substantially as specified.

2. In a tripod, the radial arms F, vertically adjustable in undercut slots, in combination with the radially adjustable and reversible weights P, with adjustable swinging points G, as specified.

3. In a tripod, a single vertical round bar, A B, with longitudinal undercut grooves, in combination with a horizontal bar, substantially as specified.

THOS. B. FORD.

Witnesses:

T. W. GERECKE,

ALEX. J. BLITT.