

No. 741,087.

PATENTED OCT. 13, 1903.

C. B. WEIDLOG.
INDICATOR FOR BORING MACHINES.
APPLICATION FILED JAN. 29, 1903.

NO MODEL.

FIG. 4.

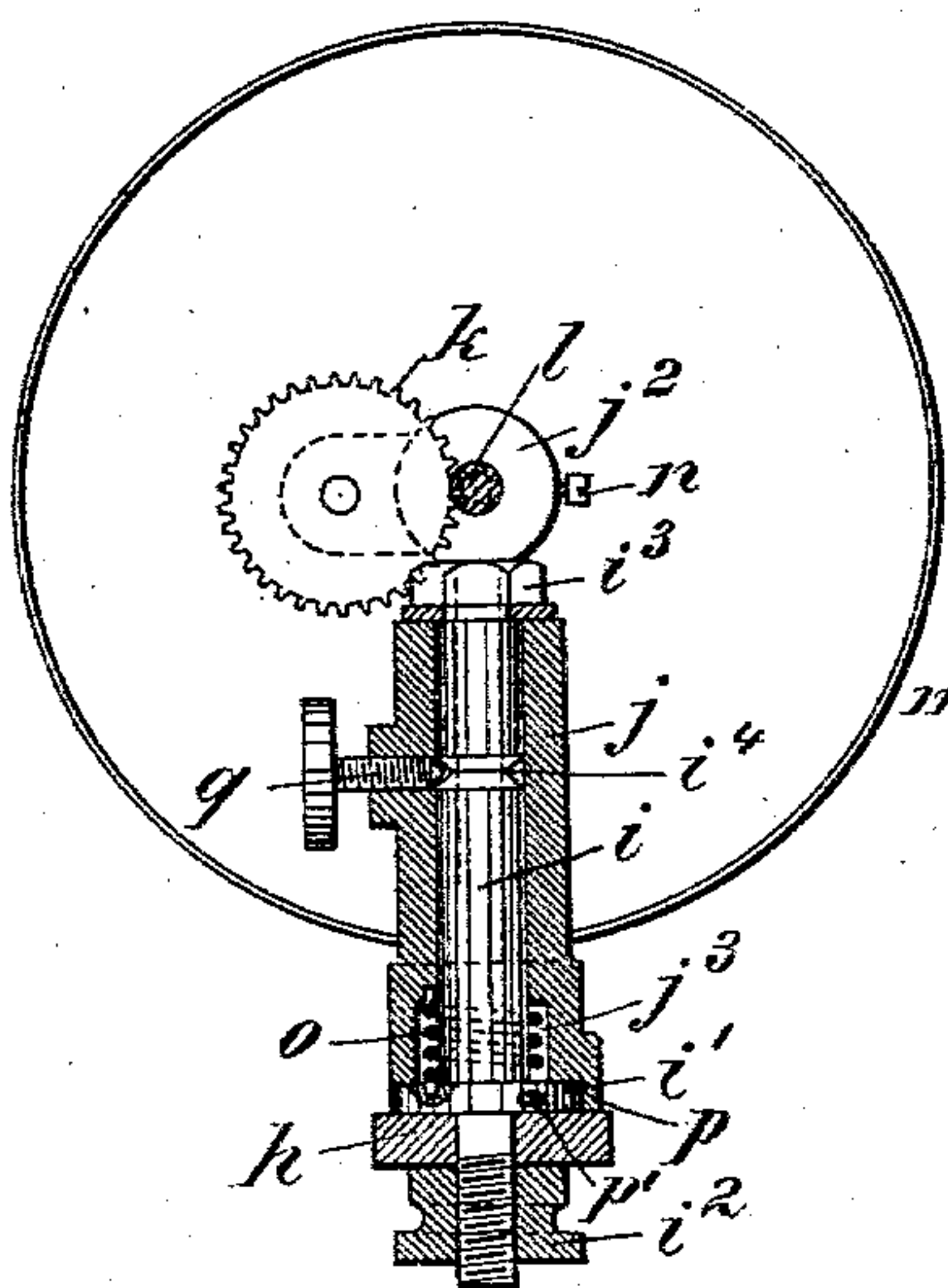


FIG. 1.

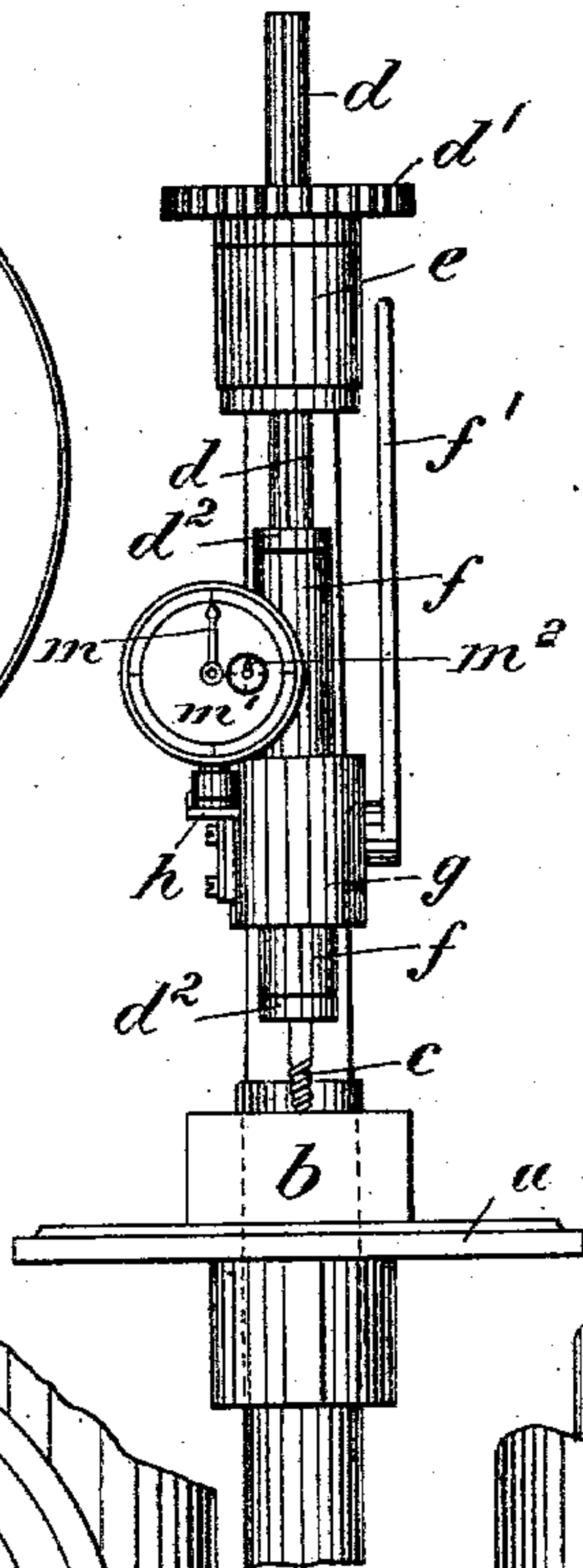


FIG. 5.

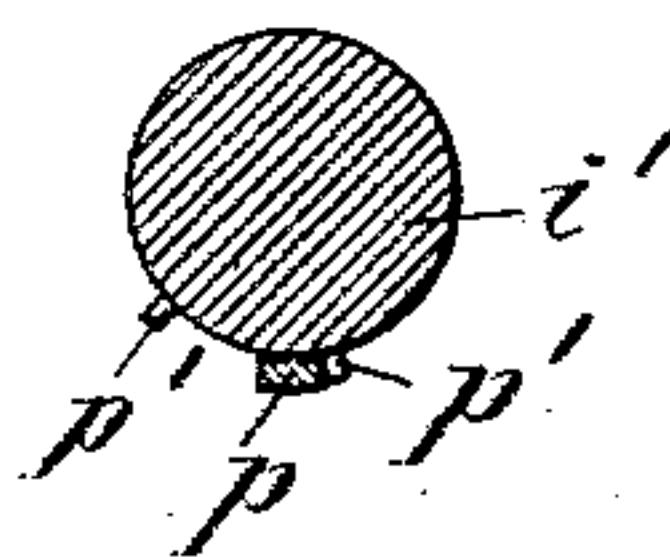


FIG. 2.

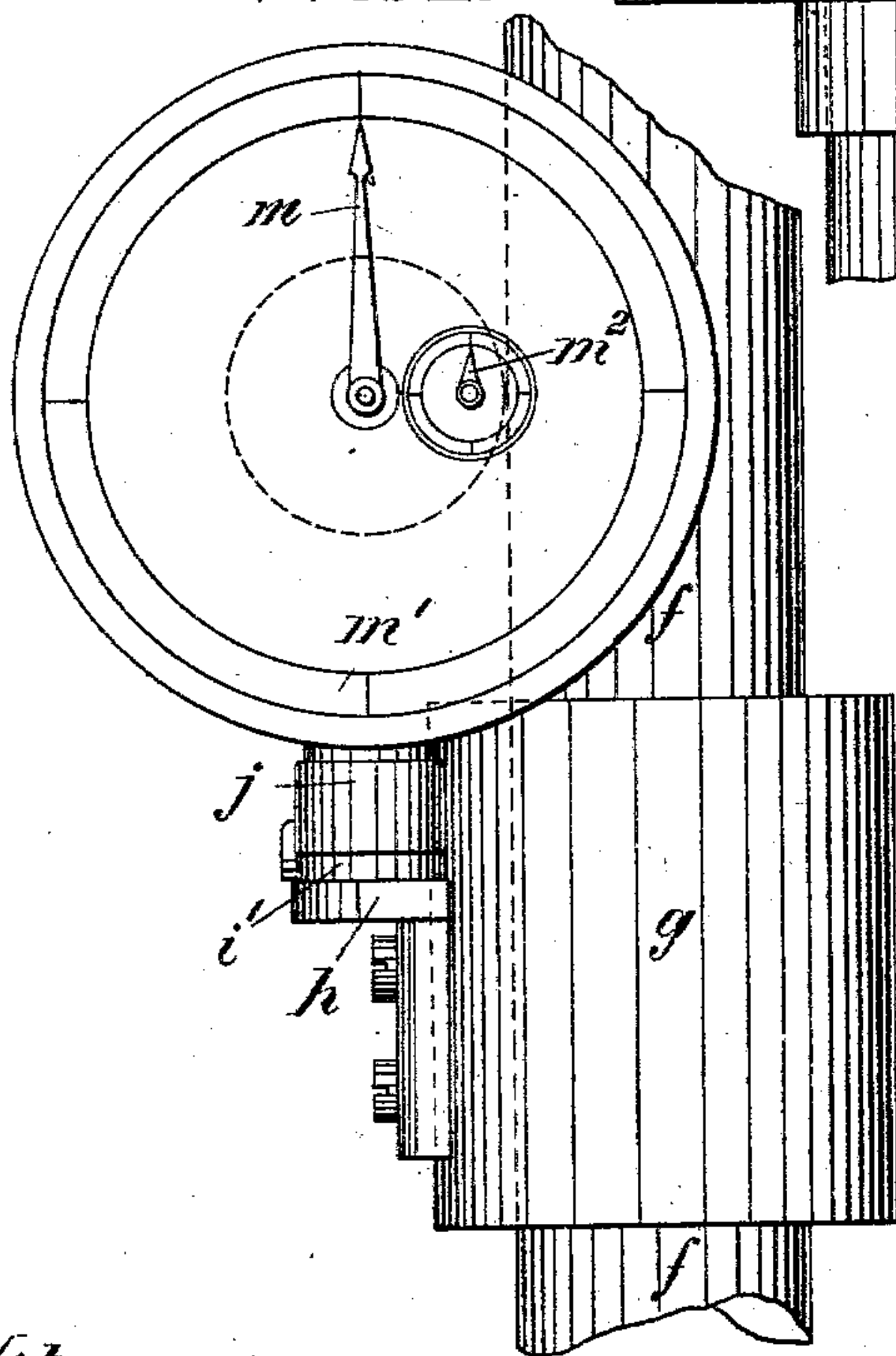
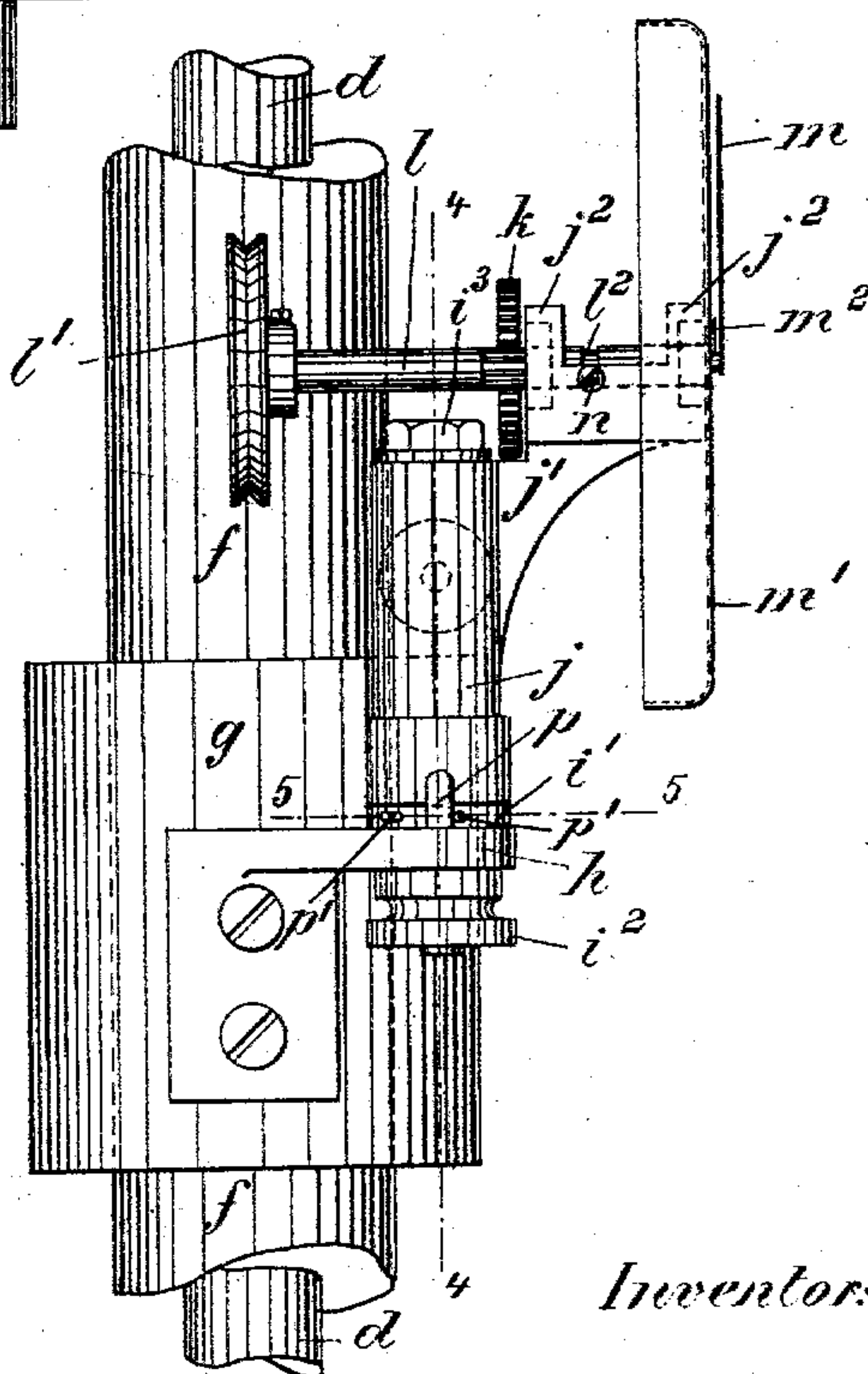


FIG. 3.



Witnesses:
Allen Jumper.
William Schuly.

Inventor:
Carl B. Weidlog
by his attorney
Frank B. Briesen

UNITED STATES PATENT OFFICE.

CARL B. WEIDLOG, OF SAG HARBOR, NEW YORK.

INDICATOR FOR BORING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 741,087, dated October 13, 1903.

Application filed January 29, 1903. Serial No. 140,967. (No model.)

To all whom it may concern:

Be it known that I, CARL B. WEIDLOG, a citizen of the United States, and a resident of Sag Harbor, Suffolk county, State of New York, have invented certain new and useful Improvements in Indicators for Boring-Machines, of which the following is a specification.

This invention relates to an improved indicator by means of which the depth to which a work-piece has been pierced by the bit of a boring or drilling tool may be accurately ascertained.

In the accompanying drawings, Figure 1 is a front view of the head of a boring-machine embodying my invention; Fig. 2, an enlarged front view of the indicator; Fig. 3, an enlarged end view thereof; Fig. 4, a vertical section on line 4 4, Fig. 3; and Fig. 5, a horizontal section on line 5 5, Fig. 3.

The letter *a* represents the table of a boring or drilling machine that supports the work-piece *b*.

c is the boring or drilling tool, secured to a spindle *d*, which is rotated by gear-wheel *d'*, supported by tubular head *e*. The spindle *d* is axially movable within the gear-wheel and is rotated by the same through the engagement between a feather and groove. The lower end of spindle *d* is embraced by a vertically-movable non-rotatable sleeve *f*, mounted between a pair of collars *d''* of spindle *d* and guided within a tubular bearing *g* of the machine-frame. The sleeve *f* is lowered or raised by a hand-lever *f'* during or after the drilling operation, so as to advance the bit or withdraw it from the work-piece.

From the bearing *g* there projects a fixed bracket *h*, upon which is supported a post *i*, having a collar *i'* and clamped to the bracket by means of a lower nut *i''*. The post *i* is surrounded by an oscillating hub *j*, which is held against vertical displacement by an upper nut *i'''*. To the hub *j* there is secured by an arm *j'* a bearing *j''*, which extends at right angles to the hub. The bearing *j''* constitutes the support for a shaft *l*, which carries at one end a friction-roller *l'*, adapted to impinge against sleeve *f*, so as to be rotated by the same. At its other end the shaft *l* carries a pointer *m*, which plays over a dial *m'*, fast on bearing *j''*. If desired, a second pointer *m''*

may be rotated by shaft *l* through reducing-gear *k*, such second pointer being used for larger work-pieces. An axial displacement of shaft *l* is prevented by a pin *n*, which engages a circumferential groove *l''* of shaft *l*.

The bore of the hub *j* is enlarged at its lower end to form a chamber *j'''*, adapted for the reception of a spring *o*, which engages the hub *j* at one end and the collar *i'* of post *i* at the other end. This spring has a tendency to normally hold the hub *j* in such a position that the roller *l'* is pressed with sufficient force against sleeve *f* as to be rotated by the same through frictional contact. The play of the hub is limited by a finger *p* of hub *j*, that projects between a pair of stops *p'* of collar *i'*.

In order to enable the operator to withdraw the pulley *l'* from sleeve *f* and to thus put the indicator out of action, I provide the post *i* with a circumferential groove *i''*, which is engaged by a clamp-screw *q*, tapped into hub *j*.

In use the bit is first lowered upon the work-piece and the pointer is set at the zero-mark of dial *m'*. The tool being now rotated through gear-wheel *d'* is simultaneously lowered by depressing the handle *f'* of sleeve *f*. The sleeve will in the manner described take along pulley *l'*, so as to move the pointer in a ratio corresponding to the depth of the hole bored. In this way the operator can ascertain at any time the progress and completion of the boring operation.

What I claim is—

In an improved indicator for boring-machines, a boring-spindle and a surrounding vertically-movable sleeve, combined with a fixed bracket, a post projecting upwardly therefrom, a spring-actuated hub surrounding the post, a bearing carried by the hub, a shaft rotatable in the bearing, a friction-wheel on the shaft adapted to engage the sleeve, and a pointer operatively connected to the shaft, substantially as specified.

Signed by me at Sag Harbor, Suffolk county, State of New York, this 26th day of January, 1903.

CARL B. WEIDLOG.

Witnesses:

WILLIAM FOSHAG,
R. E. RICHARDS.