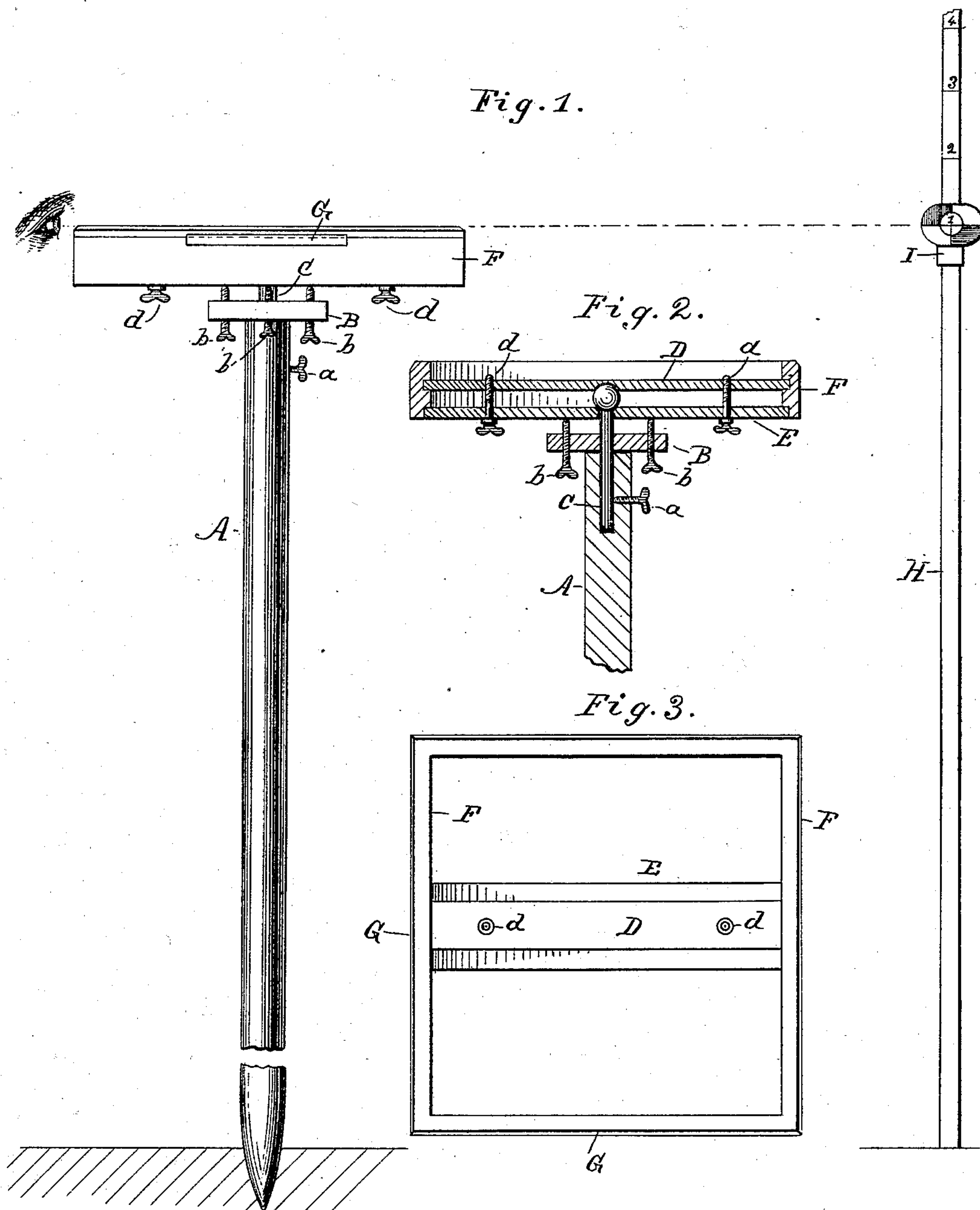


(No Model.)

J. A. McCURRY.  
LEVELING INSTRUMENT.

No. 280,203.

Patented June 26, 1883.



WITNESSES:

Thos. Houghton.  
John C. Kemmer

INVENTOR:

J. A. McCurry  
BY *Manuel L.*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JEFFERSON A. McCURRY, OF WHITESVILLE, GEORGIA.

## LEVELING-INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 280,203, dated June 26, 1883.

Application filed April 17, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JEFFERSON ALEXANDER McCURRY, a citizen of the United States, residing at Whitesville, in the county of Harris and State of Georgia, have invented certain new and useful Improvements in Leveling-Instruments, of which the following is a full, clear, and exact description.

The object of my invention is to provide a leveling-instrument which shall be simple and inexpensive, and at the same time capable of performing all the ordinary functions of the complicated instruments now in use.

My invention consists in the hereinafter-described means for attaining said object.

In the drawings, Figure 1 represents a front elevation of my invention; Fig. 2, a longitudinal vertical central section of same, and Fig. 3 a top view.

My invention is designed more especially for use in terracing, ditching, and other analogous purposes.

A represents the post upon which the leveling-instrument rests, and I prefer to construct it about six feet long and four inches in diameter. Said post bears upon its top a cap, B, which is secured to the post, and is provided upon each of the four sides of the post with a set-screw, *b*. Working within a central opening in said post is a pin, C, which, when the instrument is in use, is held rigidly by the thumb-screw *a* in post A. The upper end of the aforesaid pin C is provided with a hemispherical head, which rests in a socket formed in the stay D, and beneath said stay is a cross-piece, E, through a slot in which the shank of the pin passes. The stay D and cross-piece E are held together by bolts *d*, and their ends are secured in the sides of the frame F of the level. Said frame, when constructed of wood, is preferably about twenty inches square, but when constructed of metal may be much smaller. The lines of the top edges of said frame are made to lie in the same plane, and must be cut lineally accurate. Spirit-levels G are sunk into two adjacent sides of the frame, and two of the opposite sides of the frame are painted preferably black and the other two sides green.

It will be observed that the head of the pin C, in conjunction with the boards D E, form a swivel-joint, in which (when the machine is not in operation) the level-frame may be turned.

H is the pole, on which are tag-marks, and I is the ordinary tag.

The operation of my device is as follows: In terracing, the instrument is set upon the highest point of ground and the set-screws *b* are turned until the spirit-levels in the sides of the frame show said frame to be upon a perfectly-horizontal plane. The pole H is then carried to a distance and tag-mark No. 1 is sighted over the top edges of the frame. The pole is then moved around the hill, and tag-mark No. 1 is continued to be sighted until all the lines are run. Then move tag up to mark No. 2, and move the pole downhill until the tag can be sighted over the edges of the frame, and proceed as before. Afterward move tag-mark up to No. 3, and so on until all the tag-marks have been used.

For laying off drains, one end of the instrument is lowered sufficiently to allow for the desired fall in the drain, and the same operation as above is proceeded with.

For ascertaining the fall of a mill-shoal, set the level (on a horizontal plane) near the shoal. Sight over top of level to the point allowed for backed water. Then place mark on tag-pole when sighted over the frame, and you have the number of feet of fall marked on said pole.

It will be understood that the pole is, as is usual in such cases, marked off in feet and inches.

Having thus described my invention, what I claim is—

A leveling-instrument consisting of the centrally-holed post A, the cap B, the ball-ended pin C, the screws *a b d*, the socketed stay D E, and the spirit-levels G, all substantially as shown and described.

JEFFERSON A. McCURRY.

Witnesses:

H. M. DANILL,  
W. C. LANIER.