

No. 625,590.

Patented May 23, 1899.

J. H. MURRAY.  
HYDRANT AND HOPPER ROD AND HANDLE.

(Application filed Feb. 29, 1896.)

(No Model.)

FIG. 1.

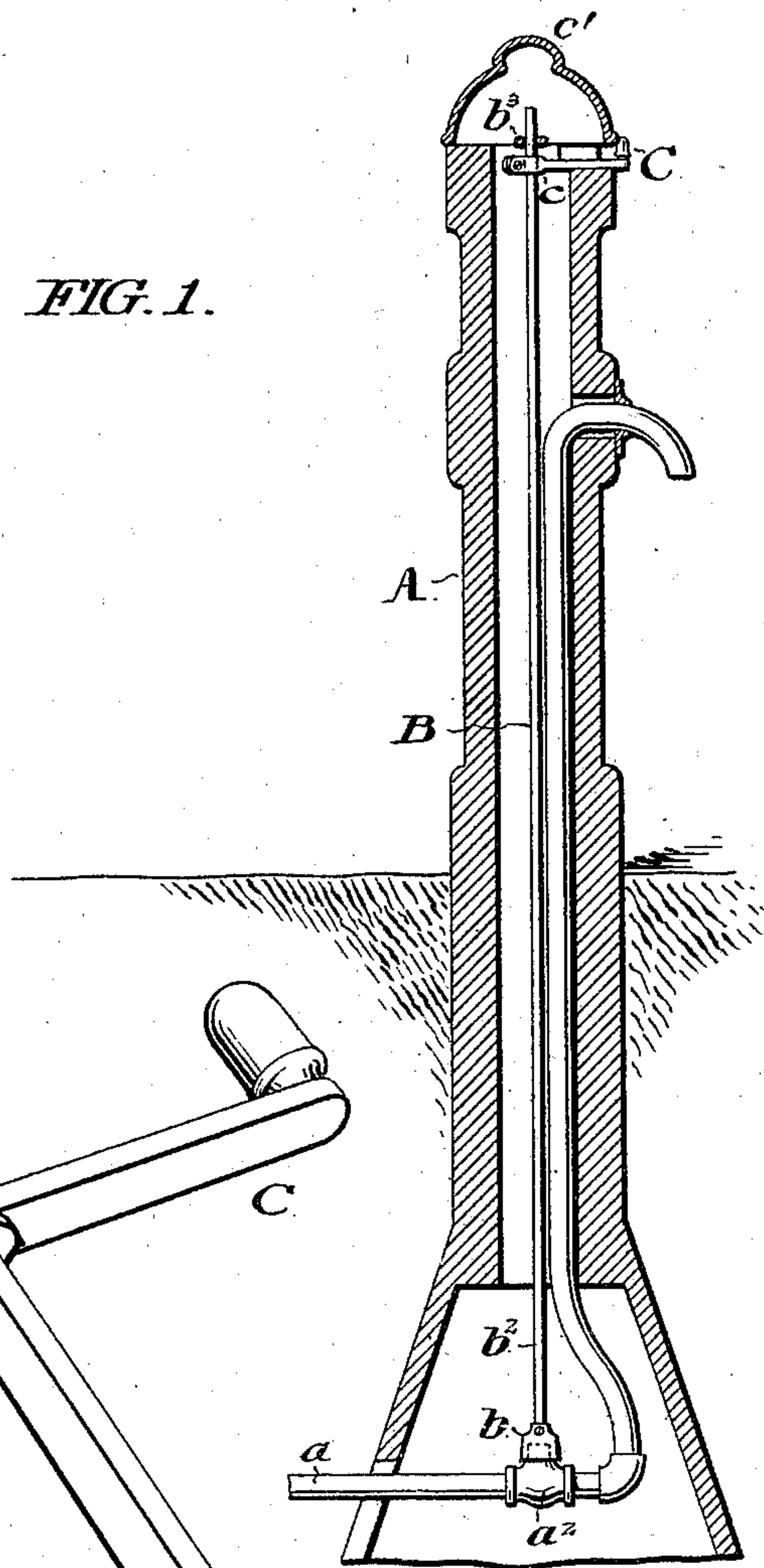


FIG. 2.

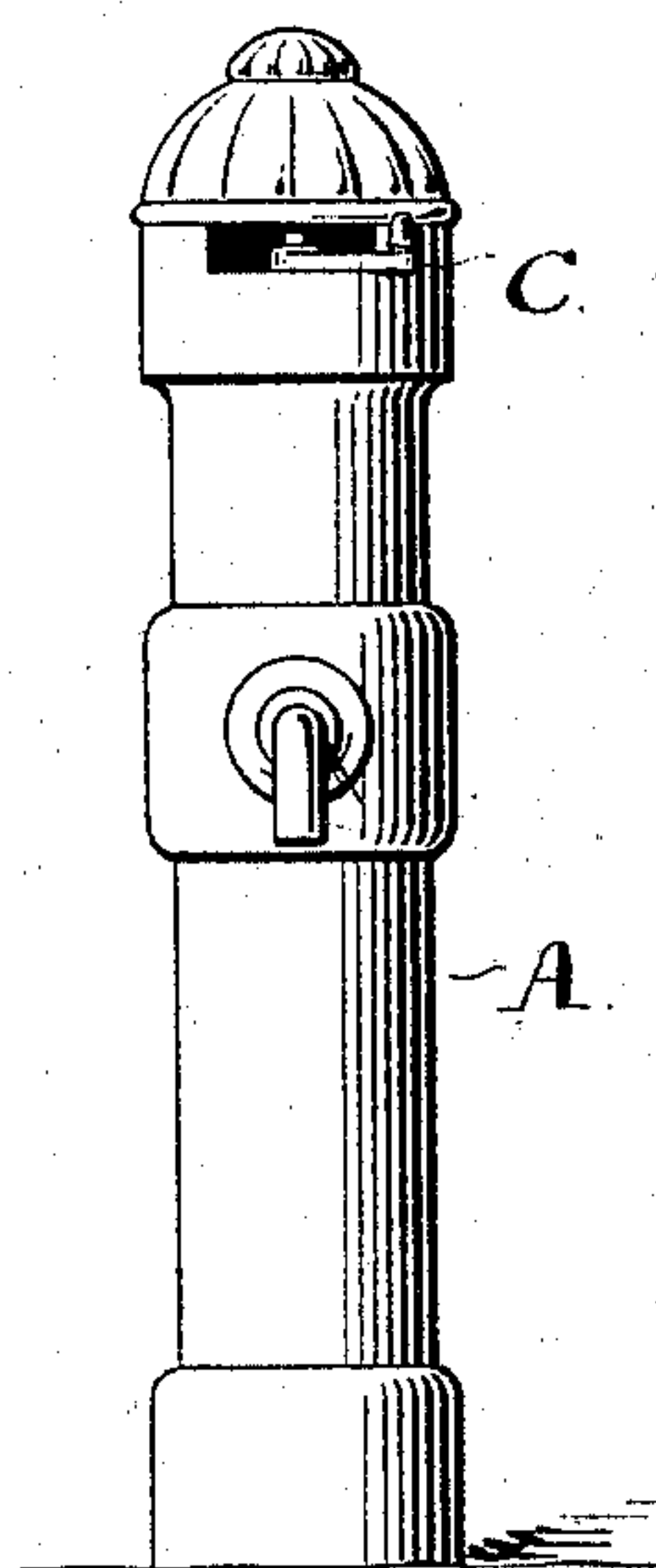
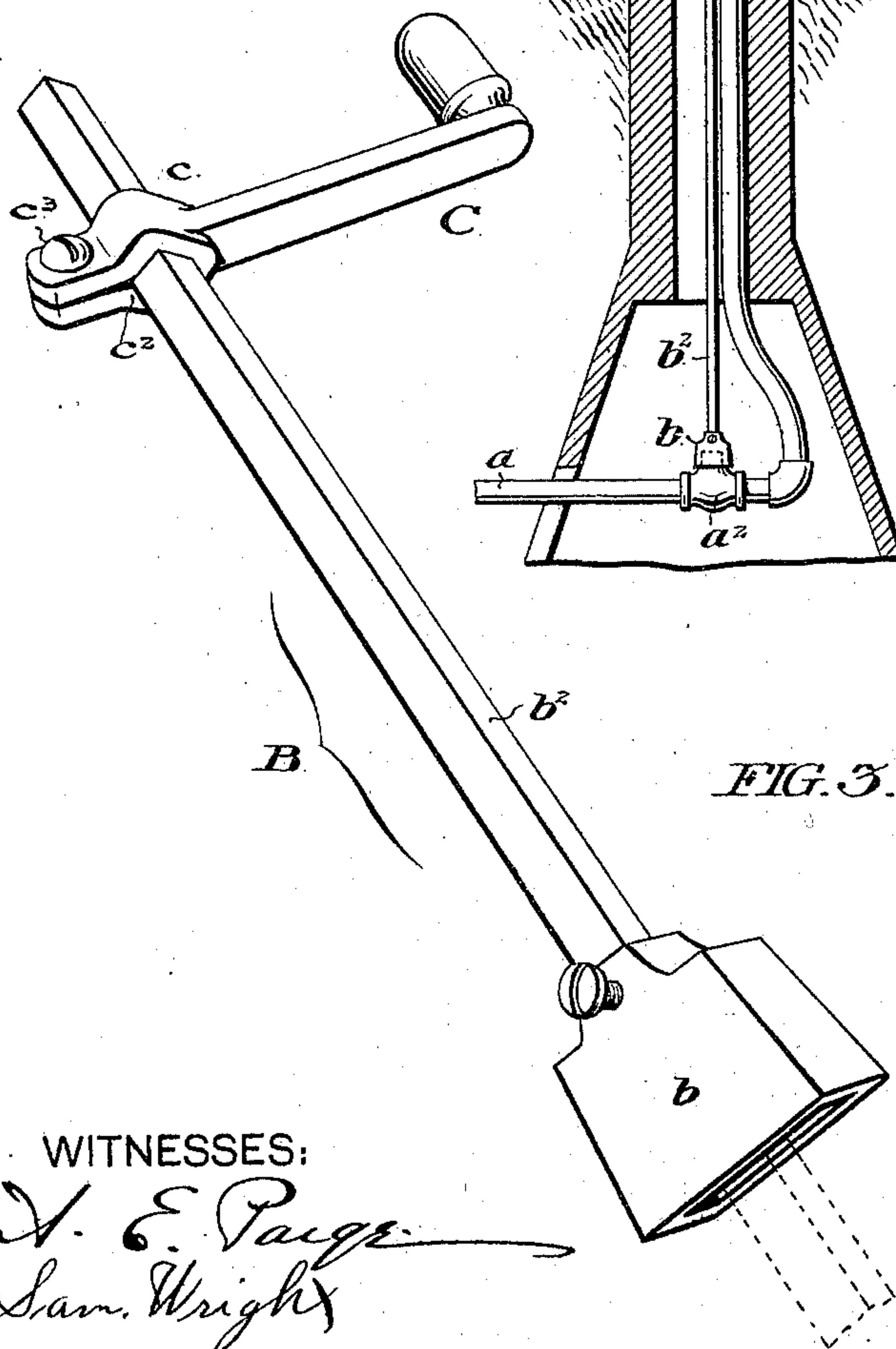


FIG. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES HENRY MURRAY, OF PHILADELPHIA, PENNSYLVANIA.

## HYDRANT AND HOPPER ROD AND HANDLE.

SPECIFICATION forming part of Letters Patent No. 625,590, dated May 23, 1899.

Application filed February 29, 1896. Serial No. 581,409. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES HENRY MURRAY, a citizen of England, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Hydrant and Hopper Rods and Handles; 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.

The invention relates to improvements in hydrant and hopper rods and handles.

It is well known that in climates where the ground freezes to any considerable depth the freezing is apt to heave upward the hydrant-casings, and the service and hydrant pipes being exempt from that effect, the former being below frost-line and the latter out of contact with the soil, the relation of the hydrant-casing to the said pipes is disturbed, being hove up more or less relatively thereto. This often causes the operating-handle of the hydrant to bind in the slot of the casing and renders the hydrant temporarily inoperative. To remedy this, it has heretofore been proposed to make the valve-operating stem in two sections, either telescoped one within the other or connected by a coupling in which the sections are adjustable, or to make the casing in two sections one adjustable upon the other; but these devices are more or less complex and involve considerable mechanical labor in their use.

My object is to secure the requisite adjustments with the utmost simplicity of construction and ease of operation.

With this and other objects in view the invention consists in certain novel features and combinations of parts to be hereinafter described and claimed.

The invention is illustrated in the accompanying drawings, forming part of this specification, and wherein like letters of reference indicate corresponding parts in the several views, in which—

Figure 1 is a view in central vertical longitudinal section of a hydrant, showing one embodiment of the invention applied. Fig. 2 is a fragmentary view of the upper portion of the casing, and Fig. 3 is a detail view in perspective of the handle and rod.

In the drawings, A represents the casing of a hydrant,  $a$  the service-pipe, and  $a^2$  a controlling-valve interposed at the point of connection with the hydrant-pipe.

The valve-key B comprises a rod  $b^2$  of length suitable to its embodiment and preferably of uniform cross-section throughout its length. This rod is provided at its lower extremity with a socket member  $b$ , adapted to fit both the ordinary headed rotary plug of the valve  $a^2$  and the end of the polygonal rod  $b^2$ , to which it is secured by a set-screw. (See Fig. 3.) The rod  $b^2$  is mounted for rotation in the guide  $b^3$  in the upper part of the casing A.

C represents a handle having its inner end split and socketed, as at  $c^2$ , to receive the rod and being provided with a screw  $c^3$ , by means of which the split extremities may be drawn together to securely clamp the handle at any point upon the rod.

C' is a cover to the top of the casing, made hollow and convex to provide an interior cavity, into which may extend an upper portion or end of the rod  $b^2$ , that in case of excessive heaving of the casing by the frost the upper end of the rod may not be left without a bearing in the guide  $b^3$ , and the handle C, which in such case will be temporarily bound and held fast in the slot in the casing, may be readily readjusted on the rod for operation, as before.

Heretofore the hydrant-rod has been made of one-half-inch iron, tapered square at the end to receive the handle; but the taper being often imperfect the handle readily works loose. Continued wear results in destroying the connection between the handle and rod and necessitates repair, which ordinarily consists in employing wedges, which are driven into the terminal socket of the handle and serve, temporarily, to restore the rigidity of the connection. In use it is found that the hydrant valve or cock becomes worn, and the stem wears partially out of the key-socket, and to remedy this the rod must be removed and retapered, if its length will permit, or a new one substituted. These and many other defects are obviated by the clamp-handle, since its position may be readily changed, and by reason of its adjustability it will always project at a right angle from the rod and, being self-retaining, will not work loose or sag.



When repairs have to be made, it has been necessary to remove the handle and rod, cross-stay, and top of hydrant, so as to release the socket from the valve. This difficulty is ob-  
 5 viated by the adjustable socket being allowed to slide up the rod. The same advantages apply to hopper water-closets, as the water-supply is controlled the same as in hydrants. The adjustable feature of the handle is here  
 10 particularly useful, as the length of rod required is very indefinite.

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

1. In combination with a hydrant-casing  
 15 having a hollow cap permitting relative vertical movement of the valve-rod and the casing, a rotary-plug valve, a rod operatively connected with said rotary plug at one extremity, and of uniform polygonal cross-section as to  
 20 a substantial portion of its other extremity, an operating-handle having a polygonal socket fitted to said rod, and means to secure said handle-socket upon said rod in adjustable relation with said valve, substantially as set  
 25 forth.

2. In combination with a hydrant-casing having a hollow cap permitting relative vertical movement of the valve-rod and the casing, a rotary-plug valve, a rod provided at one  
 30 extremity with a socket fitted to detachably engage the said rotary plug, said rod being of uniform polygonal cross-section as to a substantial portion of its other extremity, an op-

erating-handle, a bifurcated polygonal socket in said handle adapted to fit said rod, and  
 35 means to contract said handle upon said rod in adjustable relation therewith, substantially as set forth.

3. In combination with a hydrant-casing having a hollow cap permitting relative ver-  
 40 tical movement of the valve-rod and the casing, a rotary-plug valve, a rod of uniform polygonal cross-section throughout its length, provided at one extremity with a socket member, fitted to said rod and to the plug of said  
 45 valve, means to fix said socket member upon said rod, an operating-handle provided with a contractible polygonal socket fitted to said rod, and means to contract said handle-socket upon said rod substantially as set forth. 50

4. In combination with a hydrant-casing having a hollow cap permitting relative vertical movement of the valve-rod and the casing, a rotary-plug valve in the bottom of said casing, a valve-rod of polygonal cross-section,  
 55 an operating-handle upon said rod at the top of said casing, and means for securing said rod in vertical adjustable relation with said handle, substantially as set forth.

In testimony whereof I affix my signature 60 in the presence of two witnesses.

JAMES HENRY MURRAY.

Witnesses:

A. E. PAIGE,

G. HERBERT JENKINS.