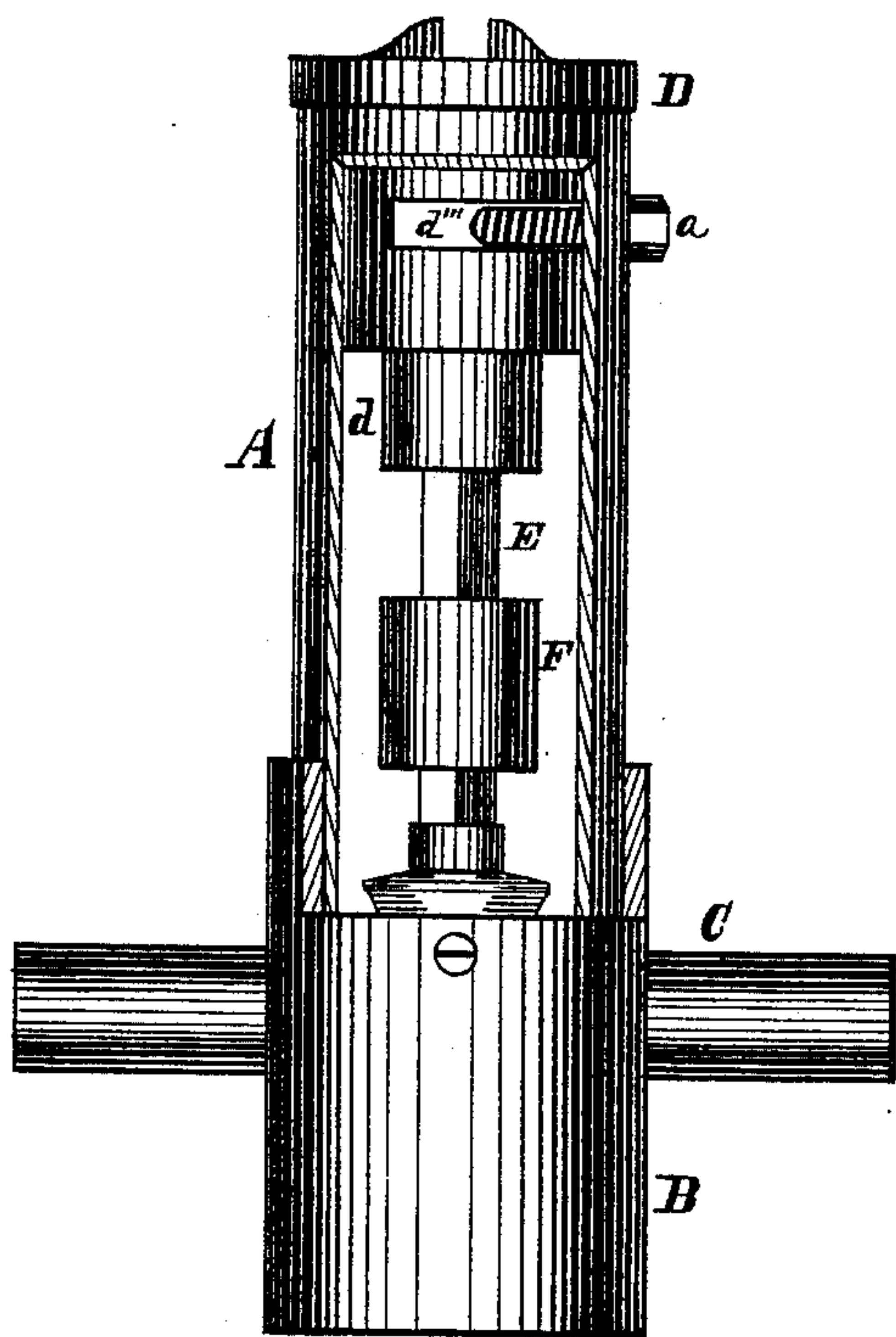


W. RICKETTS.  
Service-Pipe Box.

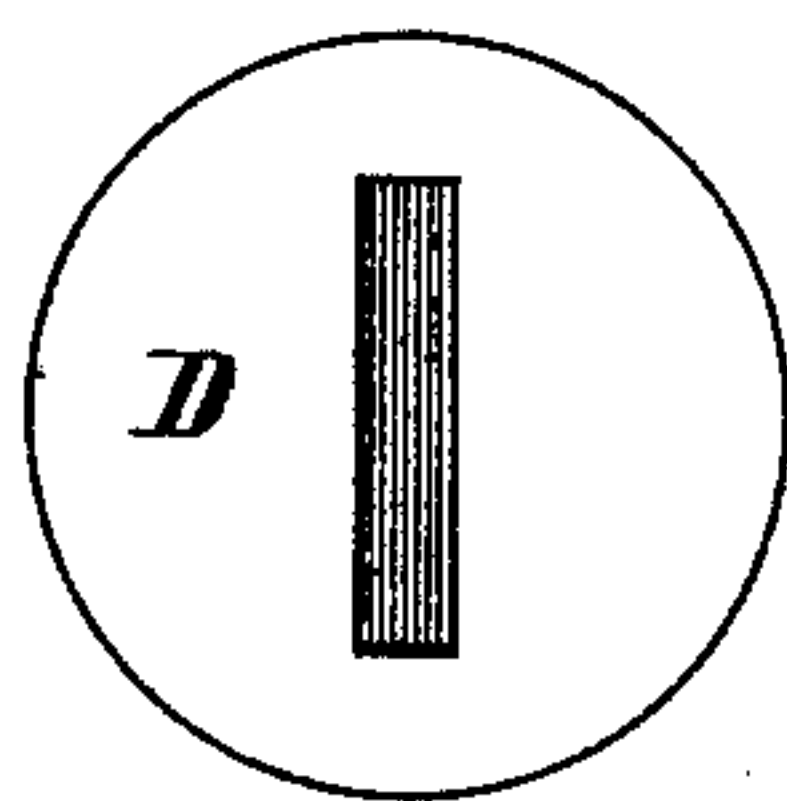
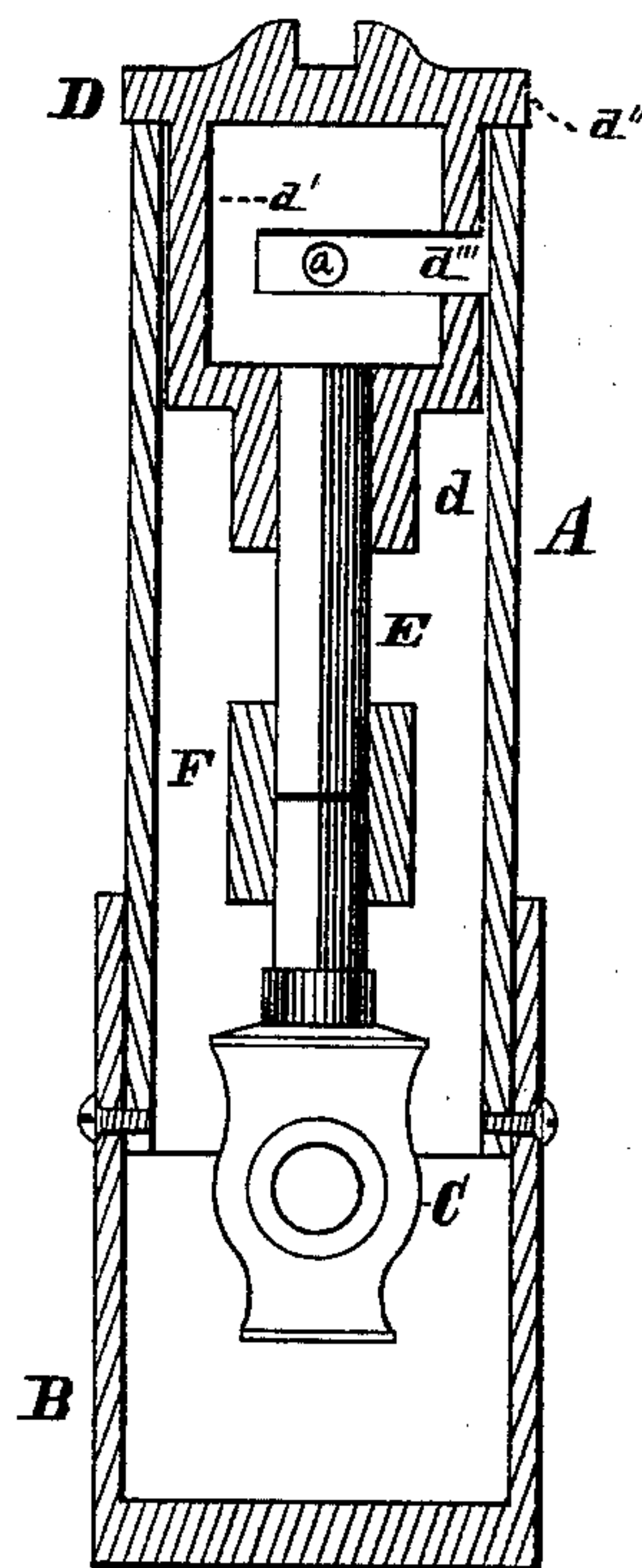
No. 218,136.

Patented Aug. 5, 1879.

*Fig. 1.*

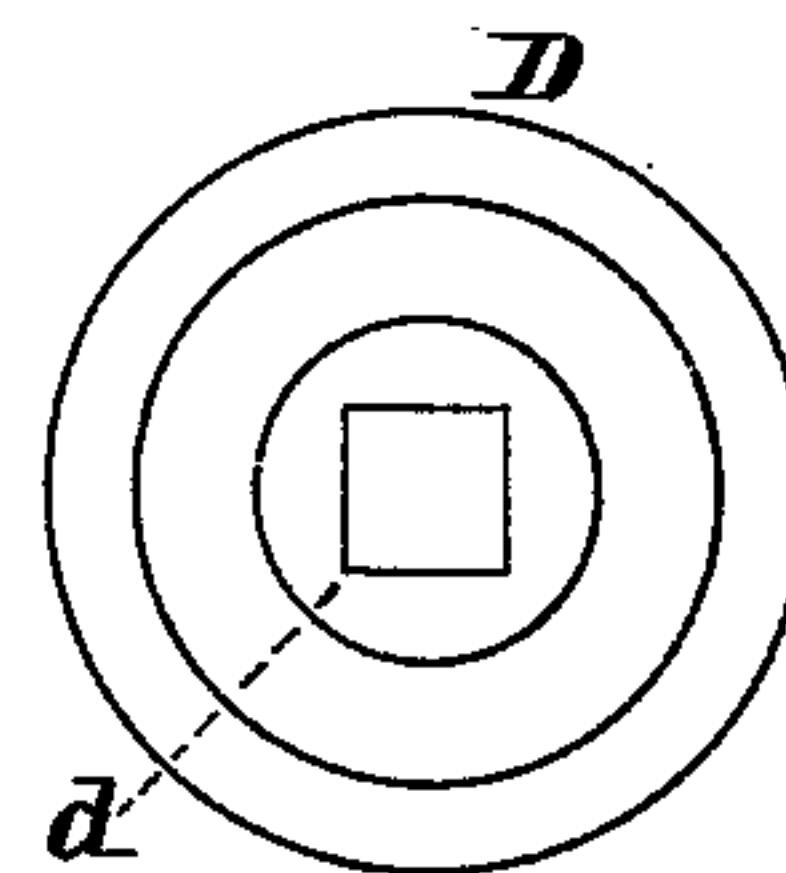


*Fig. 2.*



*Fig. 3.*

*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

WILLIAM RICKETTS, OF CINCINNATI, OHIO.

## IMPROVEMENT IN SERVICE-PIPE BOXES.

Specification forming part of Letters Patent No. **218,136**, dated August 5, 1879; application filed June 17, 1879.

*To all whom it may concern:*

Be it known that I, WILLIAM RICKETTS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Stop-Boxes for Service-Pipes, of which the following is a specification.

In the ordinary construction of stop-boxes for street, yard, or house use on water-service pipes, the cock is placed at the bottom of an iron tube or box, which box is usually long enough to reach below the frost-line in the ground. The top of the box is furnished with a cover, which is usually hinged, and can be opened when necessary. The key of the cock is squared for a long socket-wrench; and when the cock is to be turned the cover of the box is lifted, the wrench inserted into the box, and fitted on the squared end of the key of the cock and rotated as desired.

Several objections are offered to this arrangement: First, the cock is generally located from three to four feet below the surface of the ground, and considerable time and patience are necessary to connect the wrench and key before the cock can be turned; second, the caps of the common stop-boxes are very liable to be removed and lost, and the box filled with dirt and rubbish from the street, and in some instances several hours' time will be required to remove the dirt from the box before the wrench can be used to turn the cock; third, a special wrench fitting the squared end of the key is necessary to turn the cock, and should this be lost or misplaced the cock cannot be turned at all.

My invention has for its object the construction of a stop-box for street and house service-pipe that will be free from the objections noted above.

This I accomplish in the following manner: The box and service-cock are constructed as heretofore; but instead of the usual frame and hinged cap at the top of the box, I make the cap cylindrical, with a barrel projecting into and loosely fitting the cylindrical box. The cover or cap is provided with a rim or flange, resting on the top of the box, and furnished with parallel projecting cheeks on the upper surface, between which the wrench or rod to turn the cock is inserted, and the cover revolved through a quadrant of a circle.

The construction of the cap with parallel cheeks, or with a recess or socket for a plug-wrench, dispenses with a special wrench, as any small rod of iron or a fire-poker can be used to rotate the cap. Into the side of the barrel of the cap a slot is cut, into which projects a stop-pin screwed through the box to limit the motion of the cap. The lower end of the cap is furnished with a square socket to receive the end of a rod of square iron, and a similarly-squared coupling at the lower end of the rod connects the stem and the key of cock.

It will thus be seen that the key of the cock and the revolving cap are securely connected by the stem and the squared coupling, and that the rotation of the cap is accompanied by a corresponding rotation of the cock. The stop-pin in the side to limit the rotation of the cap also prevents the removal and loss of the cap by accident or intent, as the stop-pin can only be reached by removing the earth from around the box.

In the accompanying drawings, Figure 1 is an elevation of my improved stop-box for service-pipes with a portion of the box cut away, showing the internal arrangement of cap, stem, coupling, and cock. Fig. 2 is a sectional elevation. Fig. 3 is a plan of the revolving cap, showing a recess or depression in the upper surface for a plug-wrench; and Fig. 4 is a plan of the under side of the rotating cap.

Similar letters of reference indicate similar parts.

A is the usual cylindrical stop-box, with a detachable bottom, B. C is the service-cock, located at the bottom of the box. The key of the cock is squared and fitted to the squared coupling F. D is the revolving cap, with squared socket end *d*, barrel *d'*, loosely fitting the box A, annular rim or flange *d''*, and quadrantal slot *d'''*. *a* is the stop-pin threaded into the side of the box, and projecting through the slot *d'''* in the barrel *d'* of the revolving cap D. E is the stem, of square iron, fitted to the coupling F and socket *d*.

It is not essential that the stem E, socket *d*, and coupling F be square, as shown, as any other form of hole in the socket and coupling and any other cross-section of stem will answer as well. Round iron may be used for the stem E, and the ends squared to fit the



holes in socket and coupling, and round holes in the socket and coupling may be used, and the round stem secured thereto by cross pins. The upper edge of the box A should be squared with the axis of the box, and be reasonably smooth to permit of the easy rotation of the cap D. The box should be sunk into the ground until the upper surface of the cap is flush with the surface of the ground, and when used for street service, and subject to contact with the wheels of heavily-loaded wagons, the cap D should be made heavier than for house or sidewalk use, and should be furnished with the recess or socket for a plug-wrench instead of the parallel projecting cheeks.

I do not wish to limit my invention to stop-boxes for water-service pipes, as it is applicable to gas-service pipes, and for many other purposes, which will suggest to the intelligent mechanic.

I do not wish to be confined to the quadrantal slot in the revolving cap and the stop-pin projecting into the slot as a means of limiting the rotation of the cap, as this may be accomplished in other ways without depart-

ing from the principle of my invention; but I prefer the construction as shown.

Having described my invention, what I claim is—

1. In stop-boxes for service-pipes, the revolving cap D, with quadrantal slot  $d'''$ , in combination with the box A and stop-pin  $a$ , for the purpose and as described.

2. In stop-boxes for service-pipes, the revolving cap D, with socket  $d$ , stem E, and coupling F, in combination with the service-cock C and box A, for the purpose and as described.

3. In stop-boxes for service-pipes, the revolving cap D, with quadrantal slot  $d'''$ , stop-pin  $a$ , stem E, and coupling F, in combination with the service-cock C and stop-box A, for the purpose and as described.

In testimony whereof I have hereunto set my hand this 13th day of June, 1879.

WILLIAM RICKETTS.

Witnesses:

JOHN W. HILL,

COLLIN FORD, Jr.