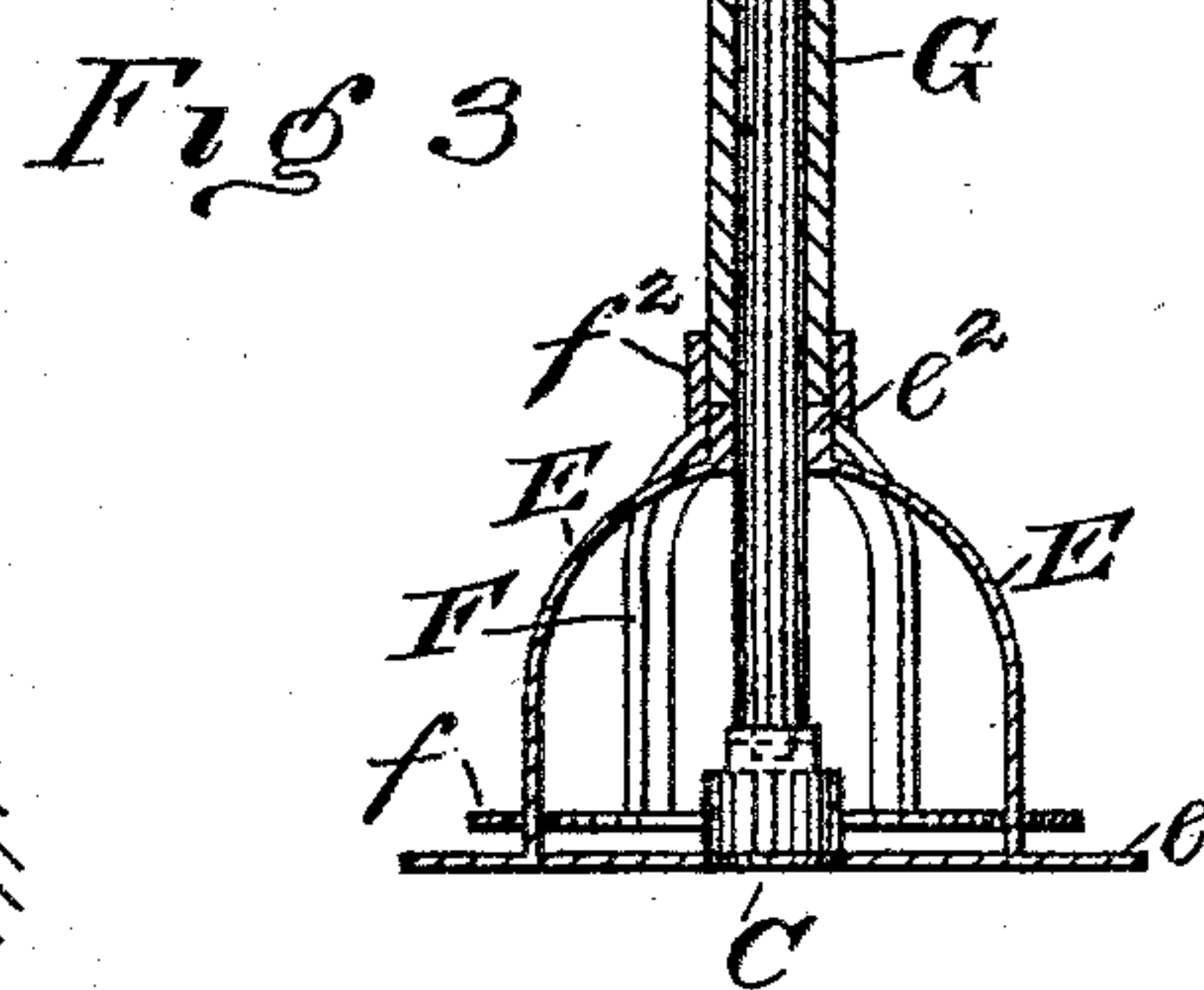
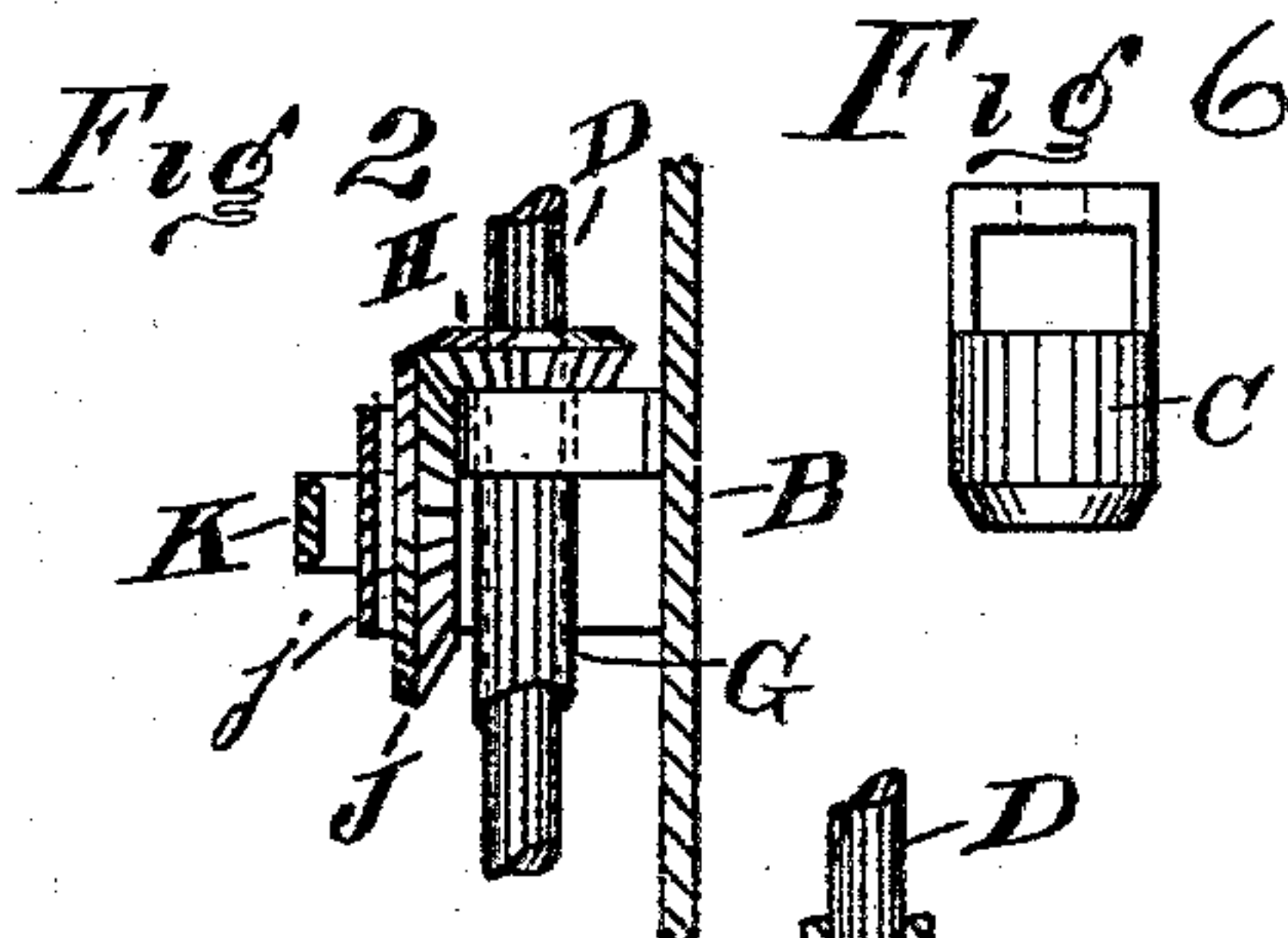
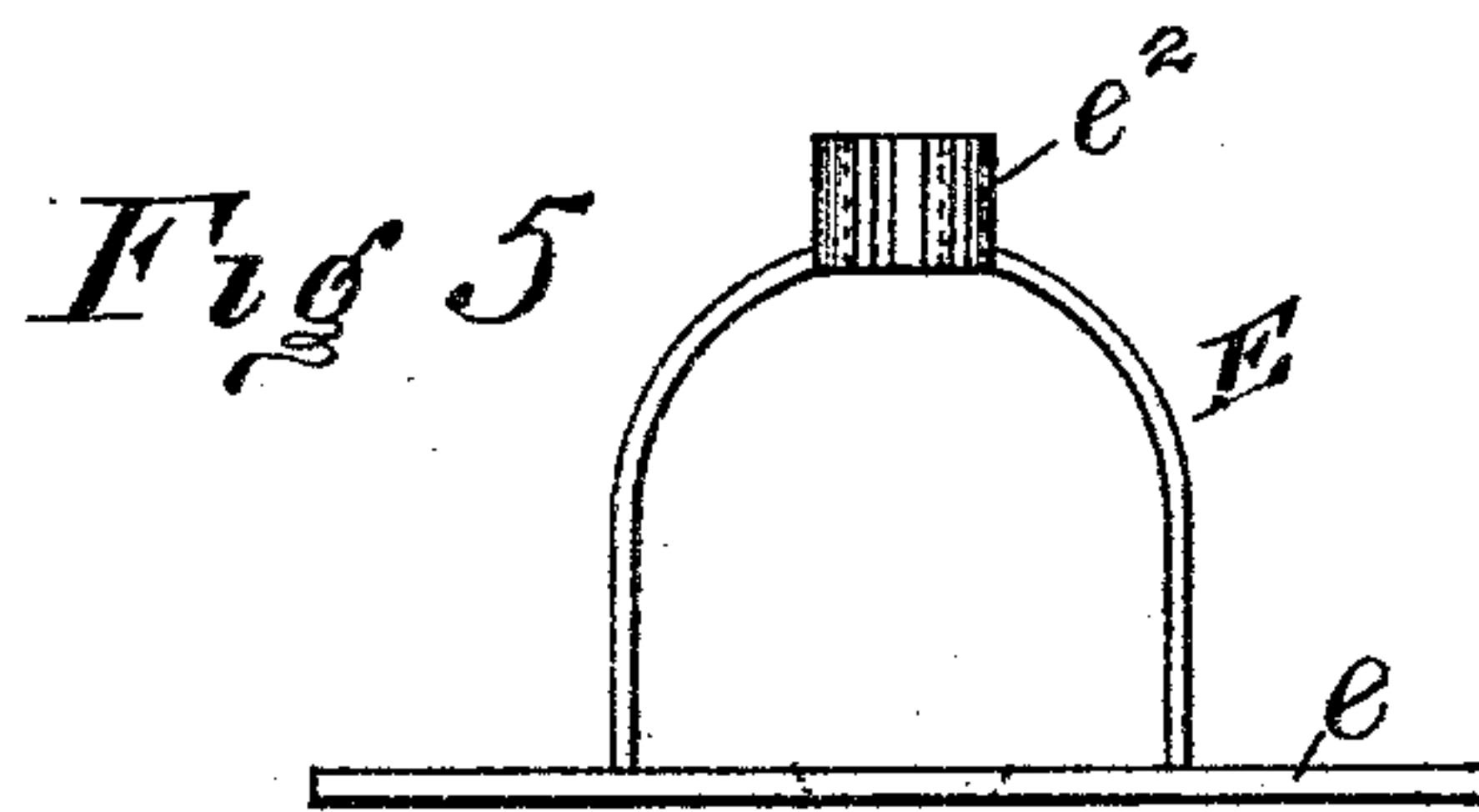
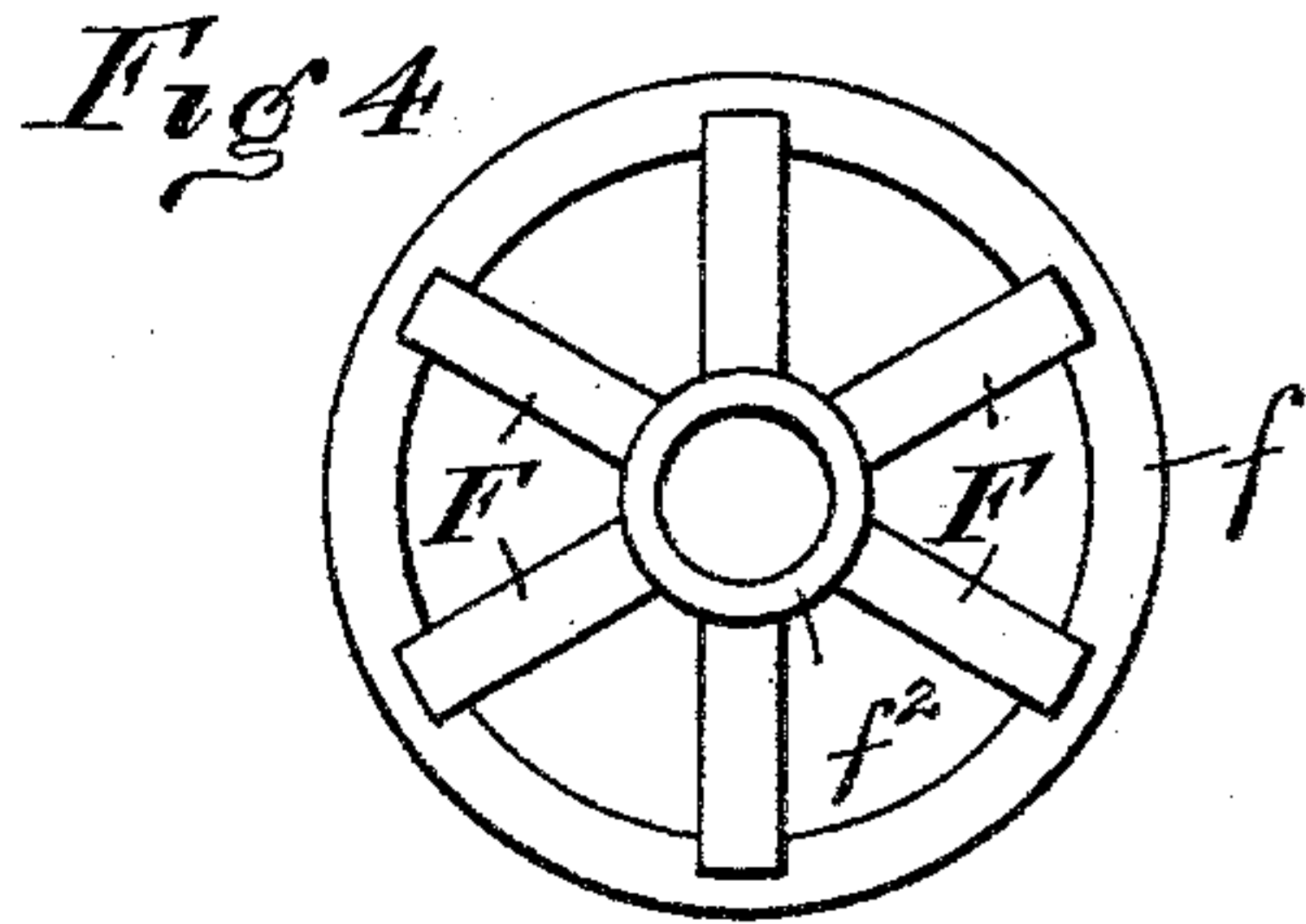
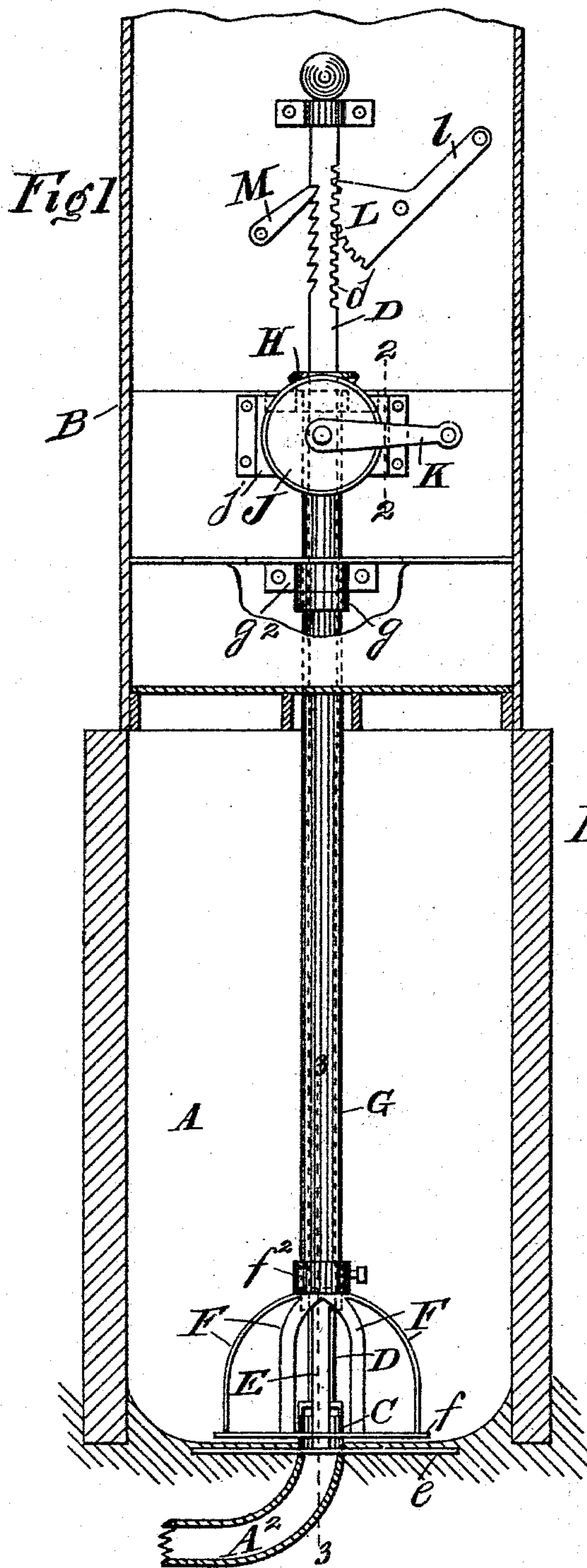


(No Model.)

C. H. HIGGINS.
CATCH BASIN.

No. 515,681.

Patented Feb. 27, 1894.



Witnesses
J. C. Lemon
Chas. J. Ruffin.

Inventor
Charles H. Higgins
per O. M. Hill
Attorney

UNITED STATES PATENT OFFICE.

CHARLES H. HIGGINS, OF ELMWOOD PLACE, OHIO.

CATCH-BASIN.

SPECIFICATION forming part of Letters Patent No. 515,681, dated February 27, 1894.

Application filed September 2, 1893. Serial No. 484,658. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. HIGGINS, a citizen of the United States, residing at Elmwood Place, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Catch-Basins, of which the following is a specification, reference being had to the accompanying drawings.

My invention is designed for use in a basin having a sewer or waste-pipe connection, the primary object of my said invention being to provide an efficient device to prevent the waste-pipe from becoming clogged in the act of draining said basin, as will more fully hereinafter appear.

In the accompanying drawings:—Figure 1, is a view in elevation of my invention in an operative position, showing the preferred form and construction of mechanism for operating same. Fig. 2, is a section taken on dotted line 2, 2, of Fig. 1, looking toward the left hand. Fig. 3, is a sectional view taken on dotted line 3, 3, of Fig. 1. Fig. 4 is a top view of the outer rotatable shield which surrounds the waste-pipe valve, said shield being detached from its operating tube. Fig. 5, is a view in side elevation of the inner stationary shield around which said outer shield is adapted to rotate. Fig. 6 is a view in elevation of the valve detached from its pull-rod.

In the accompanying drawings, A, represents a basin and A² represents the waste-pipe for same. B, represents an out-house surmounting said basin, the latter and said out-house being sectioned. C, represents the waste-pipe valve, the latter being attached to a pull-rod, D, as shown.

I will now proceed to describe the preferred construction of my invention as illustrated in the drawings.

E, represents a stationary shield support, the plate *e* of which is preferably embedded within the bottom of the basin, said support consisting of two or more ribs connecting said plate with the top bearing *e*², which latter is hollow and through which the pull-rod, D, passes, as shown. Surrounding this stationary shield support, is an outer shield made up of ribs, F, the latter being connected at bottom to the circular ring, *f*, and at top to the sleeve, *f*², the whole forming a conical shaped figure. Within the sleeve *f*² is

connected one end of the tube, G, to the top of which is attached a pinion H, which latter meshes with the beveled gear, J, as shown, the latter being suitably journaled in a support, as plate *j*. This tube is preferably provided with a collar, *g*, which engages beneath the bearing, *g*², as shown, to prevent any elevation of said tube when the gears are operated,—a suitable crank, K, being shown for imparting a rotary movement to gear, J.

As more clearly shown in Fig. 3, it will be seen that the lower end of tube G rests upon the top of bearing *e*², and that the pull-rod, D, is passed through said bearing and tube, said pull-rod being provided at top with a suitable device for elevating it when it is desired to empty the basin, in the manner presently to be described. When constructed as shown, one side of rod D, near its top, is provided with teeth *d*, with which the teeth on segment L engage, the latter having a crank extension, *l*.

M, represents a pawl which is adapted to engage with suitable notches in rod D, when it is desired to hold the latter in an elevated position for any considerable length of time, in the act of draining the basin.

The operation of my invention is quite simple and effective. When desired to clean and drain the basin of its accumulation of foul matter, it is preferred that the operator first rotate the conical shield, F, which is done through the medium of tube G, pinion H, gear J and crank, K, which rotation will cause the solid matter to become thoroughly mixed with the liquid, at which time the valve C is elevated by giving the crank *l* a partial downward rotation, which movement, through the medium of the toothed segment and teeth upon the rod D, will elevate the latter to which said valve is attached,—the pawl M holding said rod in its elevated position. The operator continues to rotate the shield while the accumulated matter within the basin is being drained off through pipe, A²; and, as all matter must pass through said rotating shield and the stationary shield support, E, the solid matter will be thoroughly disintegrated, thus insuring its safe passage through the waste-pipe.

The advantages of my invention consist in the means afforded for disintegrating the

solid matter and mixing it with the liquid matter, said means being cheap of manufacture, and reliable in operation.

It is well known that when the accumulation within a catch-basin stands for any length of time, there will form a crust upon the surface, which is very impure; and, unless said crust is broken up and carried off with the liquid matter, said basin will become very foul and breed germs of disease. This very dangerous condition is removed by the use of my invention, in the manner afore-stated.

While it is preferred to employ the pinion H, gear J and crank K for rotating the tube, and the toothed segment, L, for elevating the pull-rod, any other well-known equivalent mechanism may be employed for accomplishing their several functions.

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

1. In a catch-basin, the combination of the stationary ribbed shield E having a bearing e^2 , outer shield F, tube G, valve C and rod D, said shield F being connected to said tube which latter is revolubly connected to said bearing, the valve being connected to said rod, which latter passes up through the tube G, and suitable operative mechanism for rotating said tube and for elevating said rod, substantially as set forth.

2. In a catch-basin, the stationary shield consisting of plate e having ribs E attached

thereto the top of said ribs terminating in a bearing e^2 , an outer shield overlapping said inner shield, said outer shield being attached to a tube G, the latter being revolubly mounted upon said bearing, valve C and rod D to which latter said valve is attached, said rod passing through said tube, and suitable geared mechanism for rotating the latter, for the purposes set forth.

3. In a catch-basin constructed substantially as set forth with a stationary shield and an outer revoluble shield, the valve C, rod D having teeth d thereon near its top portion, and a toothed segment L adapted to engage with said teeth, and suitable operative mechanism for revolving said outer shield, substantially as specified.

4. In a catch-basin, the stationary ribbed shield E terminating at top in a bearing e^2 , valve C, rod D, tube G and an outer shield, the latter consisting of ribs F turned inward at top and connected to a sleeve f^2 which latter is attached to the lower end of said tube, said tube engaging said bearing, the valve being attached to said rod the latter passing through said tube, and suitable operative mechanism for rotating the latter and for elevating the rod, substantially as specified.

CHARLES H. HIGGINS.

Witnesses:

O. M. HILL,

CHAS. J. RUFFIN.