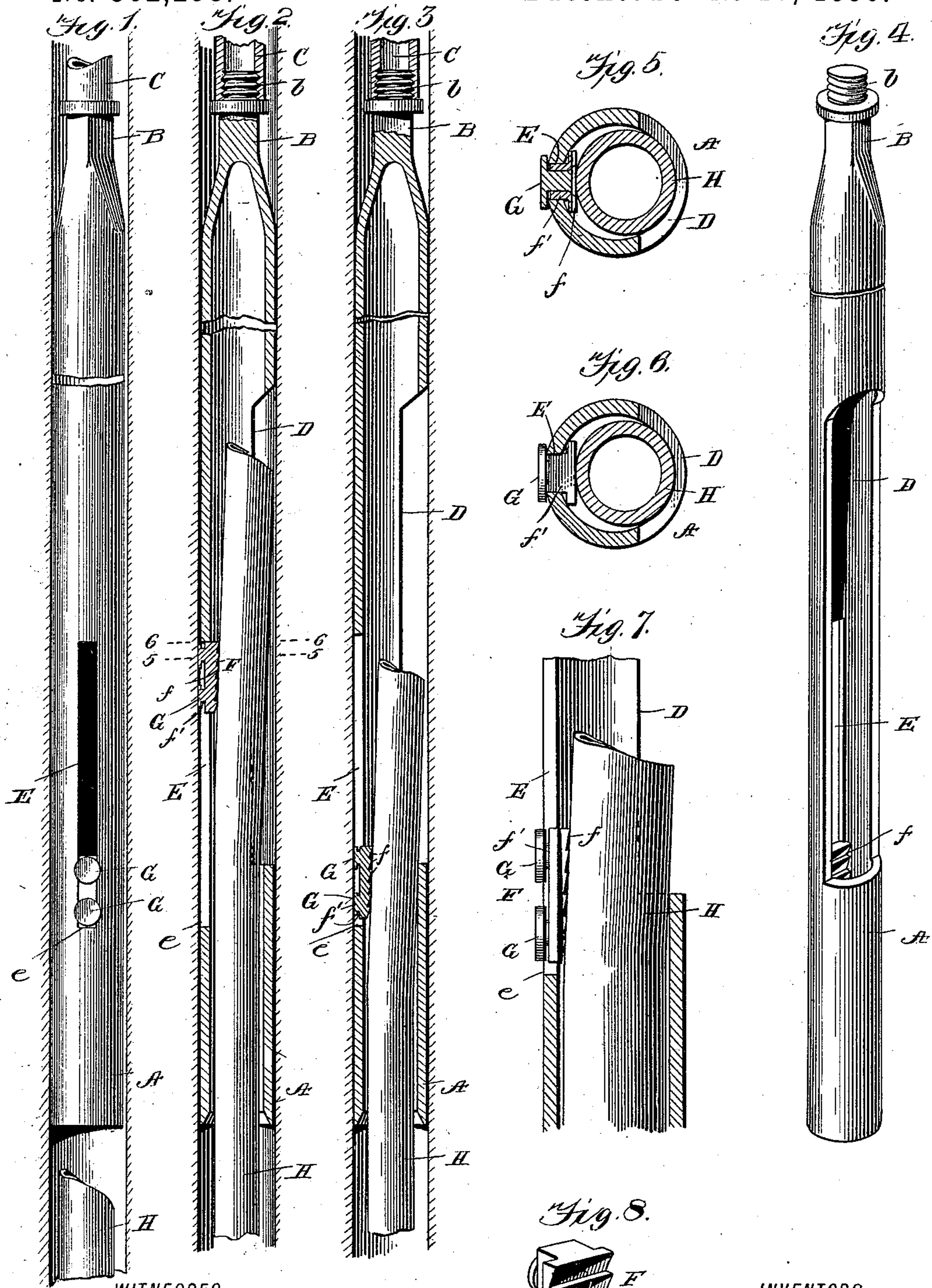


(No Model.)

J. W. PENNELL, Jr. & E. D. BRIGGS.  
SUCKER ROD SOCKET.

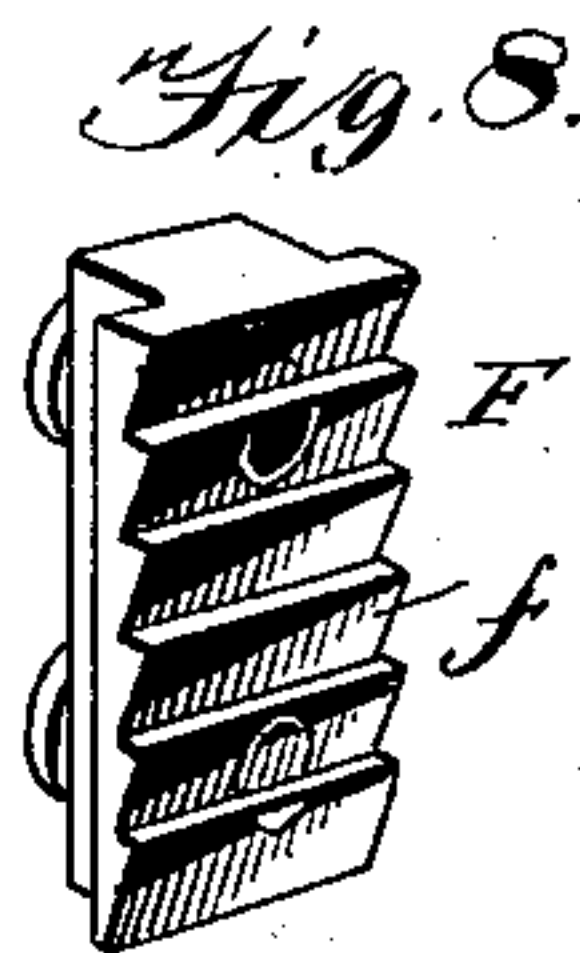
No. 562,238.

Patented June 16, 1896.



WITNESSES:

J. C. Shaw  
J. Edwin Lockett



INVENTORS  
James W. Pennell, Jr.  
BY Edwin D. Briggs,  
O'Meara & Co  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

JAMES W. PENNELL, JR., AND EDWIN D. BRIGGS, OF BAIRDSTOWN, OHIO.

## SUCKER-ROD SOCKET.

SPECIFICATION forming part of Letters Patent No. 562,238, dated June 16, 1896.

Application filed January 28, 1896. Serial No. 577,120. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES W. PENNELL, Jr., and EDWIN D. BRIGGS, residing at Bairdstown, in the county of Wood and State of Ohio, have invented a new and Improved Sucker-Rod Socket, of which the following is a specification.

Our invention is in the nature of an improved device for pulling sucker-rods used in pumping oil from petroleum-wells, and it primarily has for its object to provide a device of this character of a simple and inexpensive construction, which is adapted to freely drop over the broken or disconnected rods and grip the said rods.

Our invention also has for its object to provide a socket-connecting device for the purposes stated which will engage and lift the rod without danger of cutting off the rod, and which is of such shape and construction that it makes the hold on the rod positive to such an extent that rod-sections below the socket can be unscrewed and the socket then pulled out the rod-sections removed and allowed to go down for a new hold.

Furthermore, our invention has for its object to provide a socket device having the clamping devices so arranged as to effect a positive and sure grip on the rod as it drops into the well.

With other objects in view which will hereinafter be made clear, our invention consists in a device for the purposes stated constructed in the peculiar and novel manner first described in detail, and then specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a view illustrating our invention as in use. Fig. 2 is a vertical section of the same, illustrating the position of the grip or lock member immediately after the socket has been dropped to engage the sucker-rod. Fig. 3 is a similar view illustrating the position of the grip or lock after a pulling strain has been applied on the socket. Fig. 4 is a perspective view of the socket. Fig. 5 is a horizontal section taken on the line 5 5 of Fig. 2. Fig. 6 is a similar view on the line 6 6 of Fig. 2. Fig. 7 is an enlarged detail section hereinafter referred to. Fig. 8 is a perspective view of the grip or locking member.

In its practical construction our improved socket is made of steel, brass or any other suitable metal and preferably seven feet long for a purpose presently explained, and such socket is made tubular with its lower end A flared so as to readily slip over the ends of broken or disconnected rod-sections, while the upper end terminates in a reduced solid portion B, having a screw-boss *b*, whereby the socket can be conveniently secured to a lift rod or tube C, as shown.

At one side the socket has a large slot or opening D, extending vertically, and on the diametrically opposite side it has a narrow slot E, which extends a short distance below the lower end of the opening D, as indicated by *e*, and upward to a point about midway the opening, as most clearly shown in Fig. 2.

F indicates what we term a "slip member," which forms a grip or lock, and which consists of a wedge T-shaped in cross-section; and provided on its inner face with serrations or ratchet-teeth *f*, which incline downward, as shown most clearly in Fig. 7, by reference to which it will be seen the thick end of the wedge member is at the top. The shank portion *f'* of the slip F fits and is held to slide in the slot E, and held from displacement by two or more rivets G, the heads of which overlap the edges of the slot E. (See Fig. 5.)

The manner in which our improved socket operates and the advantages of its peculiar and novel construction are best explained as follows: When the socket is dropped to engage the end of the rod H, (see Fig. 1,) the slip F will be at the lower end of the socket E. Now as the lower end of the socket passes over the rod H, the said rod will push the slip F up to the position shown in Fig. 2, it being manifest that as the said slip F stops its upward movement at a point about midway the length of the opening D, it will serve to force the upper end of the rod outward, which will then spring away into the opening D and pass by the slip F. Now by pulling upward on the socket, the slip F will be pulled down in the slot E and gradually wedge the rod H in the lower tubular end of socket. The tighter the pulling strain on the socket the more positive will be the grip on the rod, the slip F, when drawn down at or near the lower end

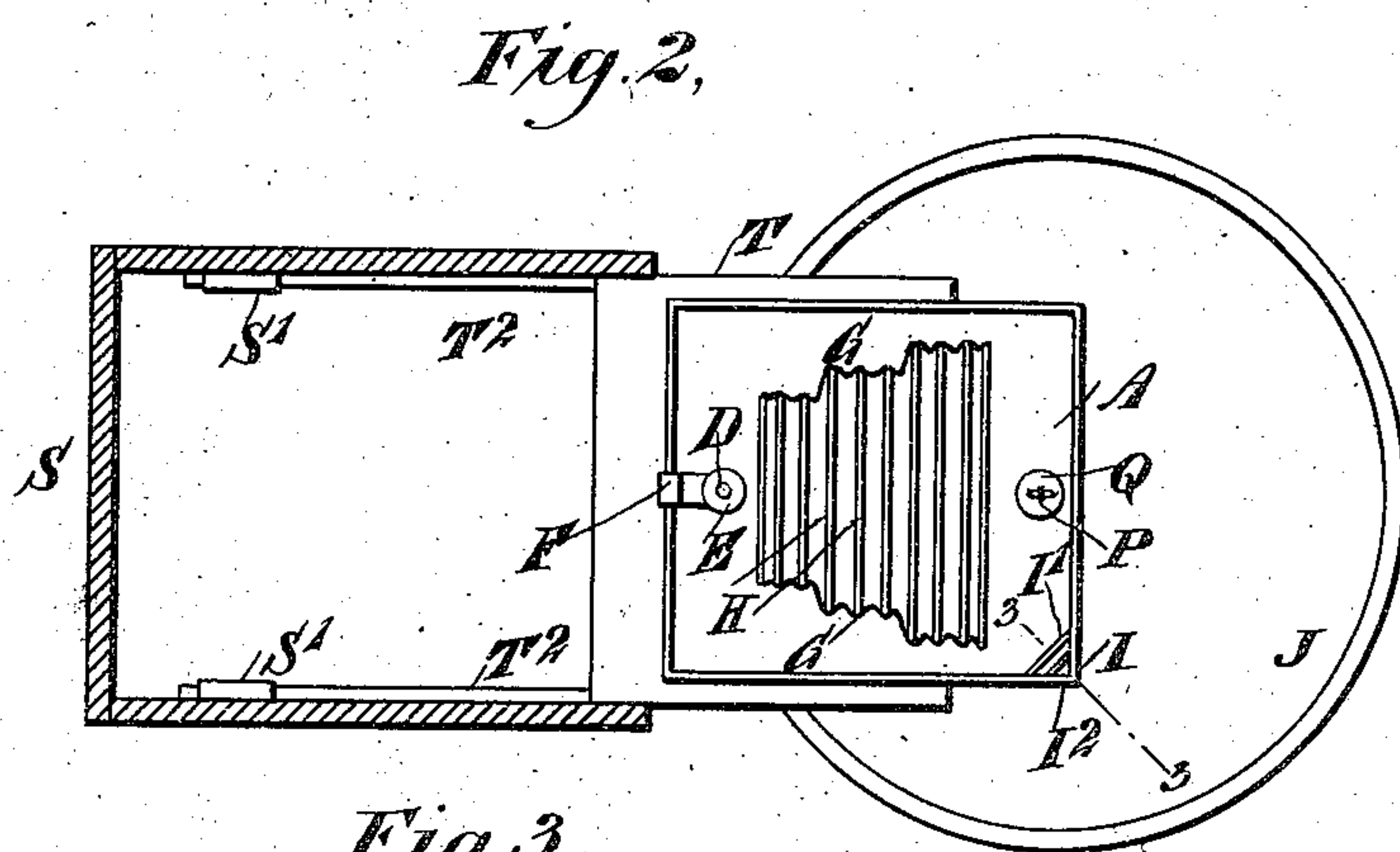
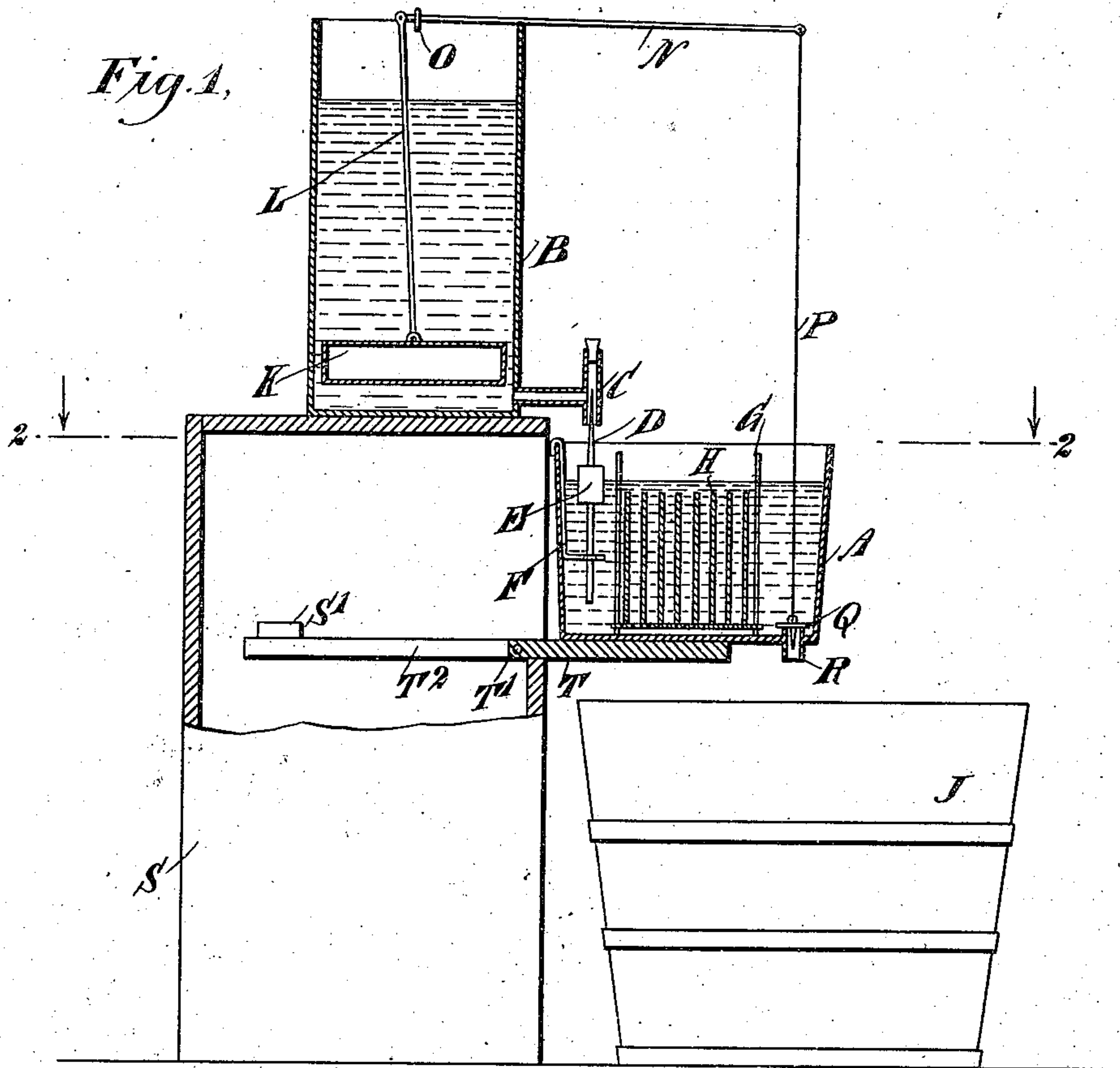


(No Model.)

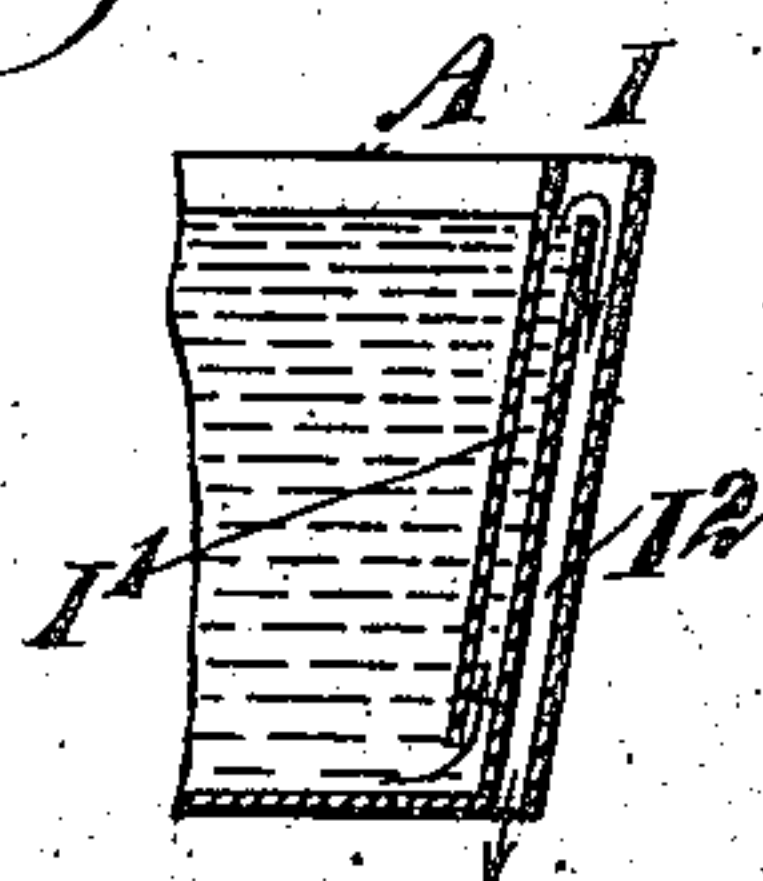
G. R. PERKINS.  
PHOTOGRAPHIC WASHING TANK.

No. 562,239.

Patented June 16, 1896.



*Fig. 3.*



WITNESSES:

Edward Thorpe  
H. G. Hovatt

INVENTOR

G. R. Perkins

BY

Wm. E. Perkins

ATTORNEYS.