

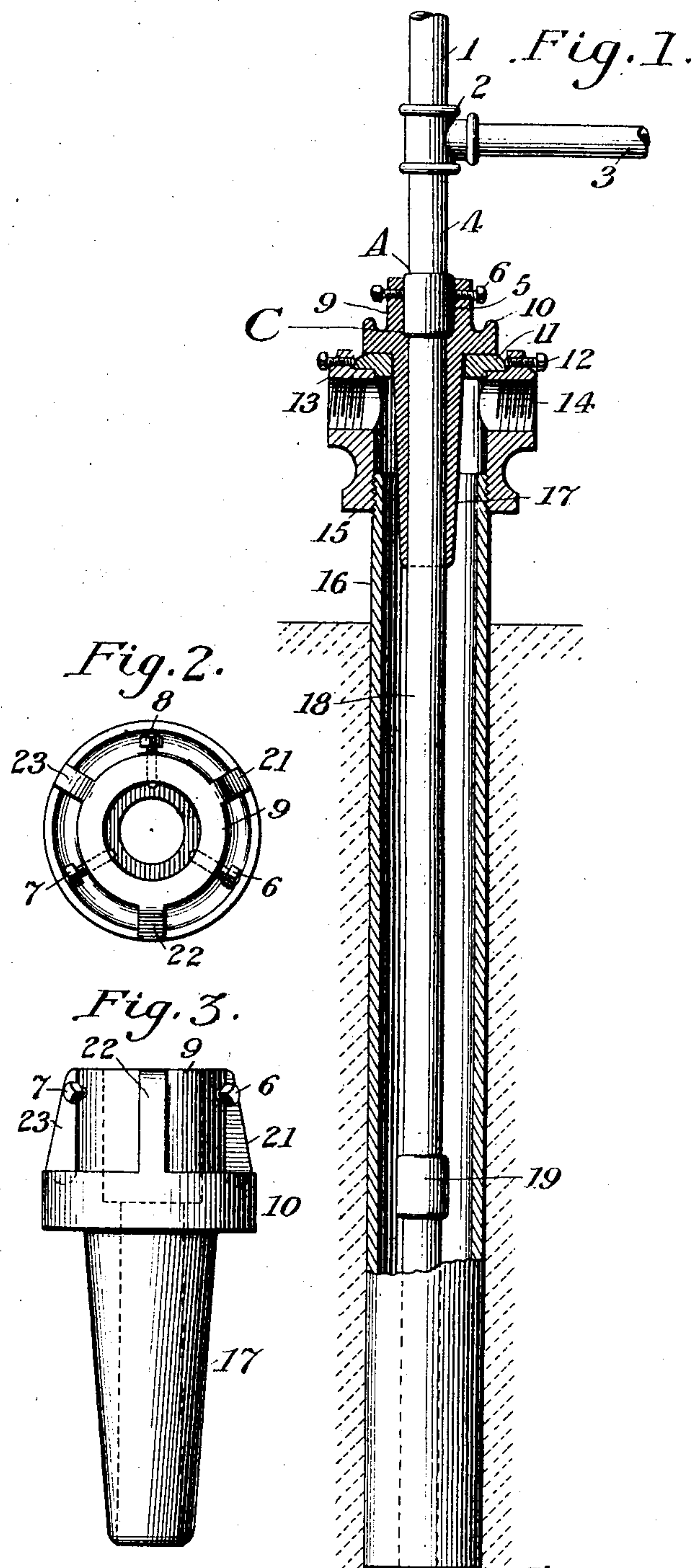
No. 765,169.

PATENTED JULY 19, 1904.

A. H. DINGMAN.  
TUBING SOCKET.

APPLICATION FILED FEB. 13, 1904.

NO MODEL.



Witnesses:

J. S. M. Graw  
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# UNITED STATES PATENT OFFICE.

ALLEN H. DINGMAN, OF DEHAVEN, PENNSYLVANIA.

## TUBING-SOCKET.

SPECIFICATION forming part of Letters Patent No. 765,169, dated July 19, 1904.

Application filed February 13, 1904. Serial No. 193,476. (No model.)

*To all whom it may concern:*

Be it known that I, ALLEN H. DINGMAN, a citizen of the United States, residing at Dehaven, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Tubing-Socket, of which the following is a specification.

This invention is designed to reinforce and protect the top coupling and support that class of tubing used in oil, gas, or Artesian wells in which the joints or sections of tubing are joined or connected by means of threaded couplings or sockets.

The further object of my invention is to prevent the top coupling or joint from being broken off by accident, which drops the tubing and causes serious damage to the well. This frequently happens when the superstructure or derrick is blown down and wrecked in a storm. Therefore to accomplish this object I provide a larger socket without threads and suitably designed to fit closely around the tubing and the top coupling inclosing the same and further adapted to fit the top of the casing-head and support the weight of the tubing, as hereinafter more fully described.

In the drawings, Figure 1 represents a vertical cross-section of the top of an oil, gas, or Artesian well with my tubing-socket in position as intended. Fig. 2 is a top view or plan of the socket, and Fig. 3 is a vertical perspective.

This tubing-socket is preferably made of malleable iron or other suitable material, and consists of a cylindrical body or bowl 9, Figs. 1, 2, and 3, of a corresponding size to inclose the tubing-coupling 5 and provided on the sides with two or more set-screws 6 7 8, which screw through the top 9 of the socket, engaging with and binding the tubing-coupling 5 firmly therein.

To the bottom of the bowl 9, Figs. 1, 2, and 3, is a suitable flange 10, which is cast as an integral part thereof and serves as a base on which the socket rests or is supported in the top of the hole (well) through a ring 11, Fig. 1, in the top of the casing-head 13, which head is screwed onto the casing 16. Two or more vertical ribs 21 22 23, Figs. 1, 2, and 3,

further connect the base 10 with the bowl 9 to insure greater strength.

Extending downward from the base 10, Figs. 1 and 3, and preferably cast as an integral part thereof, is a tapering cylindrical body 17, which incloses a part of the tubing 18 just under the top coupling 5, Fig. 1, and which serves to hold the tubing 18 perfectly in line with the coupling 5 and prevents vibration in the threads.

Into the top of the coupling 5, Fig. 1, is screwed some pipe and connections 1 2 3 4 for conducting away from the well such fluid as is produced or raised through the tubing 18. These connections, together with the casing-head 13 and a part of the casing 16, extend above the surface of the ground and into the superstructure or derrick. It is therefore to be seen that by this arrangement the entire weight of the tubing 18 is brought to bear on the bottom of the coupling 5, as at C, Fig. 1, which without my tubing-socket makes this the weakest point in the tubing, and in a position most exposed to accident and that any considerable lateral strain brought to bear on the connections 1 2 3 4, such as when the superstructure or derrick is blown down in a storm or otherwise wrecked, invariably causes the tubing to break off in the bottom of the coupling 5, Fig. 1, at which point the tubing is supported, thus causing the tubing to drop in the well.

With my tubing-socket in position, as shown in Fig. 1, inclosing the top coupling 5 and a part of the tubing 18, to which the coupling 5 is attached, and holding the said coupling and tubing in a relatively solid and rigid position prevents any possibility of vibration or other movement in either the coupling or tubing separately, and so prevents them from being broken apart, as otherwise invariably happens in the event of an accident, as hereinbefore described.

The socket is provided with a shoulder C, Fig. 1, on which rests the bottom of the coupling 5, so that the socket supports the weight of the tubing 18. Should a considerable lateral strain, as heretofore described, be brought to bear on the connections 1 2 3 4 with my



safety tubing-socket in position as represented, Fig. 1, the pipe would be broken off in the top of the coupling 5, as at the point A, and the coupling 5 would remain intact 5 with the tubing in the socket in position as represented, and no serious damage to the well could result, as the tubing could not drop.

Therefore what I claim as my invention and new and original, and wish to protect by United 10 States Letters Patent, is—

1. A tubing-socket, consisting of a cylindrical bowl, adapted to surround or inclose a tubing-coupling and provided with two or more set-screws passing through the top of 15 the said bowl of the socket and engaging and firmly binding the said coupling within the bowl of the socket substantially as described.

2. A tubing-socket consisting of a cylindrical bowl, adapted to inclose a tubing-coupling and provided with a circular flange or 20 base cast as an integral part thereof and fur-

ther attached to the said bowl by three vertical ribs or webs joining the sides of the bowl with the adjacent side of the base substantially as described. 25

3. A tubing-socket consisting of a cylindrical bowl, adapted to inclose a tubing-coupling and provided with a circular base cast as an integral part thereof, and having a reduced cylindrical tapering body also cast as an integral part thereof and adapted to inclose a 30 section of tubing joining the said coupling, thus forming a complete tubing-socket substantially as and for the purpose described.

In testimony whereof I have signed my name 35 to this specification in the presence of two subscribing witnesses.

ALLEN H. DINGMAN.

Witnesses:

SIDNEY H. TOTTEN,  
WILLIAM M. DALGLIESH.