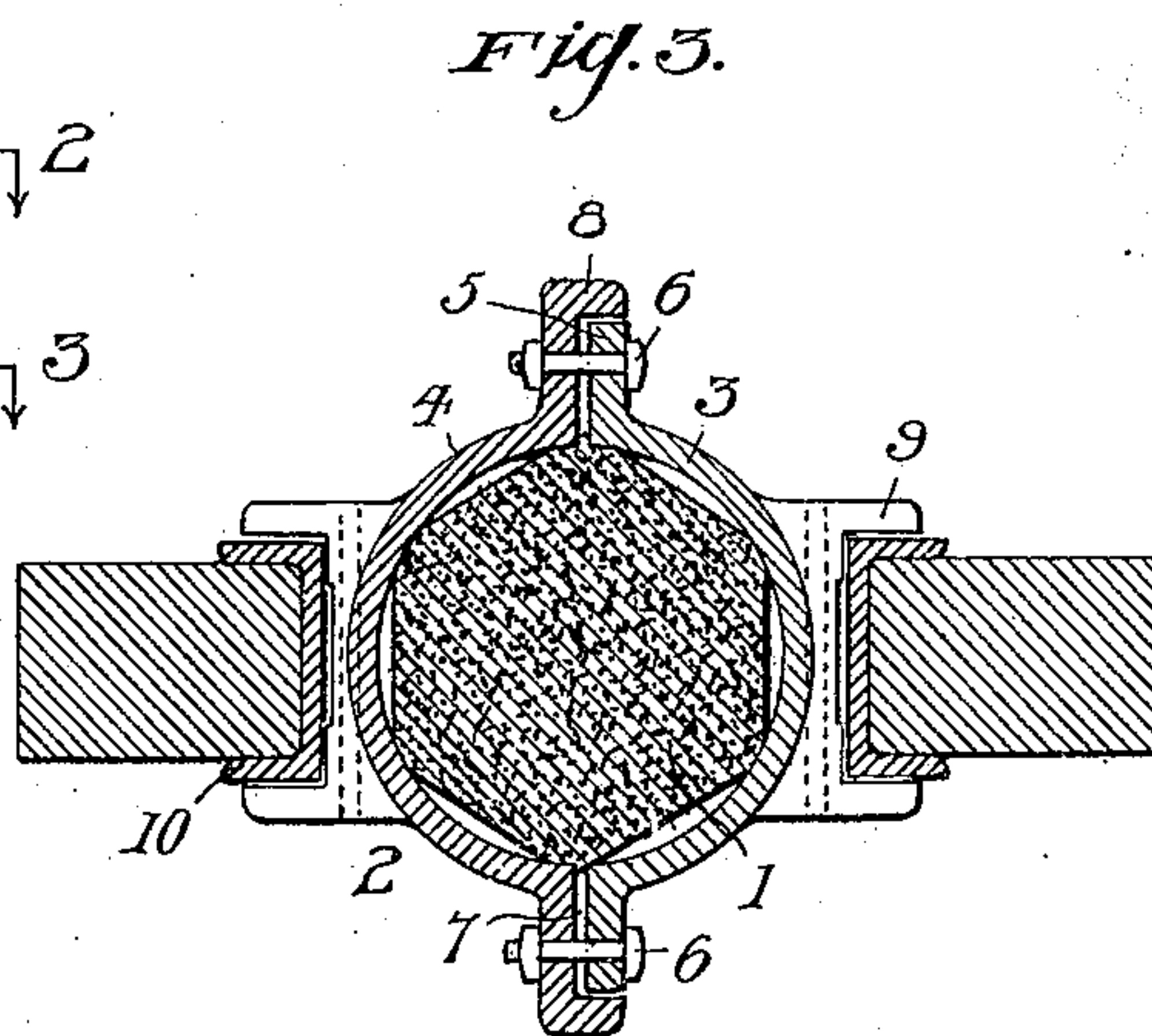
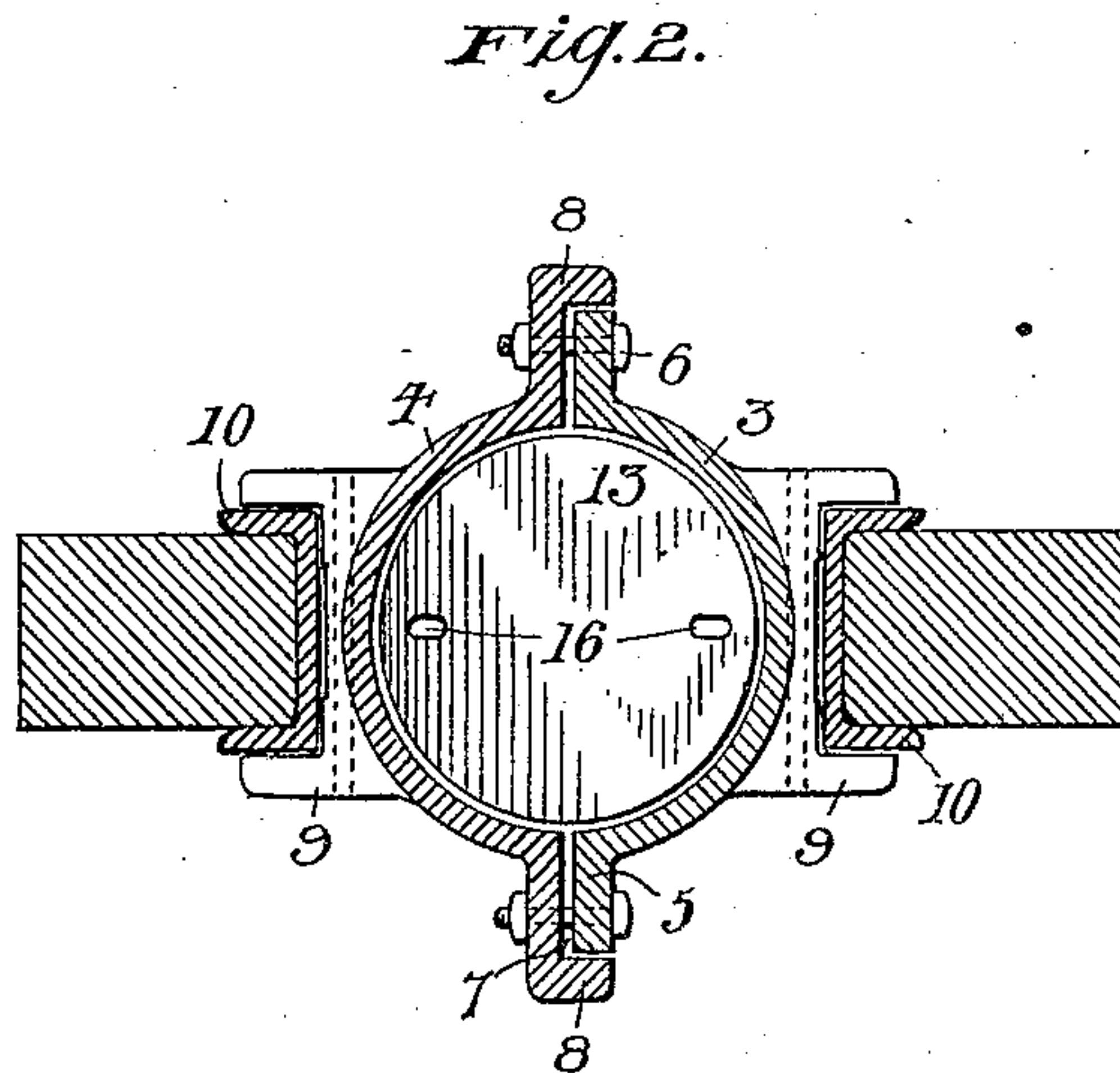
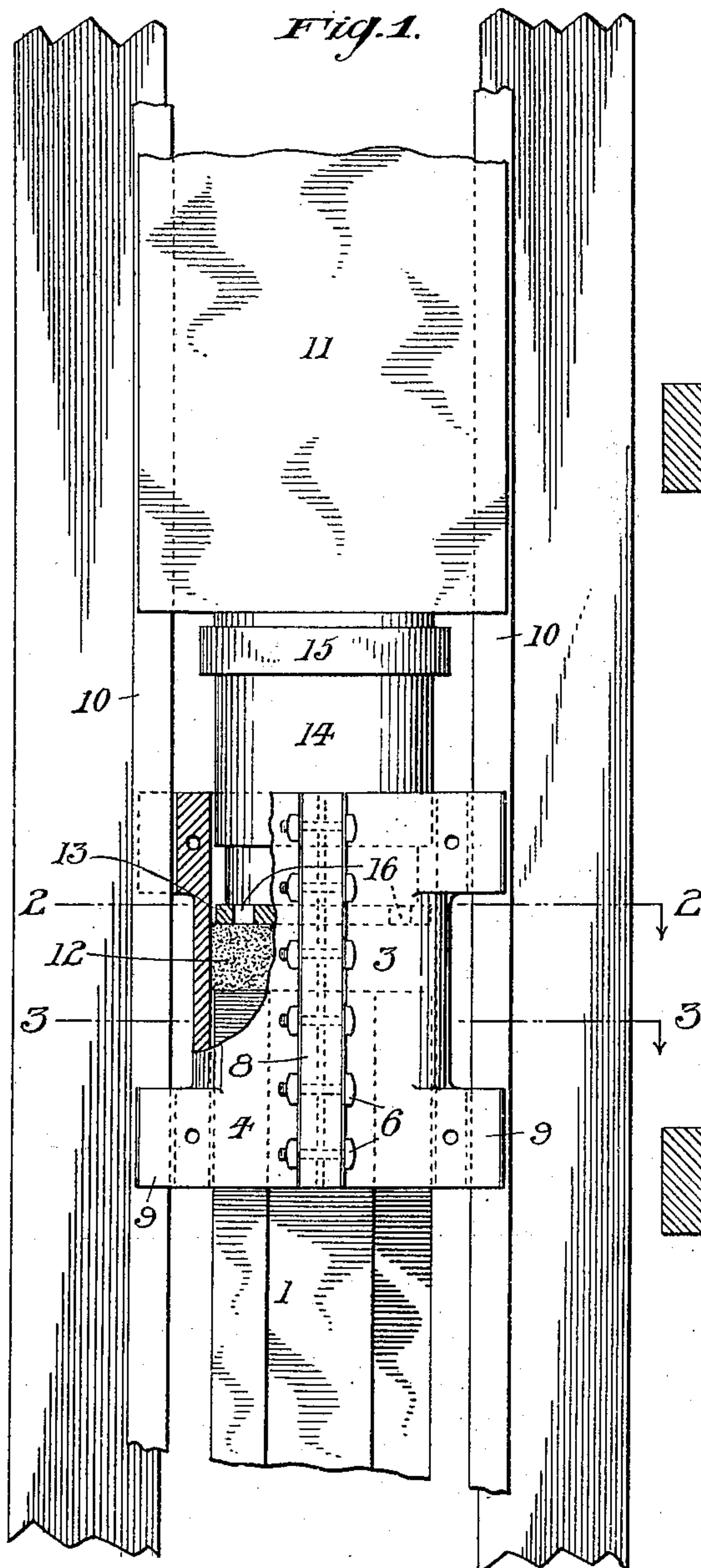


R. A. CUMMINGS.
 PROTECTOR FOR PILES.
 APPLICATION FILED JUNE 1, 1908.

917,259.

Patented Apr. 6, 1909.



witnesses:

P. J. Hoffman,
E. Pearl Porter

Robert A. Cummings *Inventor*
By Frank H. Wiles
Attorney

UNITED STATES PATENT OFFICE.

ROBERT A. CUMMINGS, OF BEAVER, PENNSYLVANIA.

PROTECTOR FOR PILES.

No. 917,259.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed June 1, 1908. Serial No. 435,948.

To all whom it may concern:

Be it known that I, ROBERT A. CUMMINGS, a resident of Beaver, in the county of Beaver and State of Pennsylvania, have invented a new and useful Improvement in Protectors for Piles, of which the following is a specification.

This invention relates to protectors for the ends of piles, posts and the like while driving the same.

The invention is particularly adapted for protecting the ends of concrete or similar piles while driving.

The object of the invention is to provide a device of this character which effectually prevents injury to or battering the end of the pile and also one which is adjustable to fit piles of different sizes.

The invention comprises a tubular member arranged to be clamped tightly to the pile so as to not move thereon and projecting beyond the end of the pile to receive a cushion or cushioning material.

The invention also comprises details of construction hereinafter described and claimed.

In the accompanying drawing Figure 1 is an elevation partly in vertical section showing my invention applied to the driving of concrete piles: and Figs. 2 and 3 are horizontal sections taken respectively on the lines 2—2 and 3—3, Fig. 1.

1 indicates the pile being driven, this being shown as a concrete pile hexagonal in cross section, but obviously the device is applicable to piles of any character and of any cross section. The protector comprises a suitable tubular member secured to the pile in any suitable way so as to not move thereon and projecting beyond the end of the pile. As shown, this tubular member or sleeve 2 is made up of two semi-tubular sections 3 and 4 provided on their edges with radial flanges 5 for receiving compression bolts 6 for securing the sleeve sections together. As shown, there is a space 7 between the radial flanges which permits adjustment of the two sleeve members to fit piles of different sizes. The flanges on one of the members are provided with right angle portions 8 projecting across the ends of the flanges on the other member. Preferably this sleeve is provided with lugs 9 for engaging the hammer guides 10, the hammer itself being indicated at 11. These lugs 9 are shown as formed integral with the

sleeve members, but obviously they may be separate therefrom and bolted or otherwise secured thereto.

The sleeve members are tightly clamped to the pile by drawing up the compression bolts 6 so that said sleeve is immovably secured to the pile. It projects beyond the end of the pile, as shown in Fig. 1, so as to provide a socket or space for receiving the cushion or cushioning material. The latter is shown as comprising some suitable finely divided material, such as sawdust 12, filled into the sleeve on top of the pile, and covered by the metal plate 13 upon which rests a block 14, preferably of oak wood and which receives the hammer blows. The block 14 is preferably reinforced by a ring or ferrule 15, and the plate 13 is provided with one or more holes 16 for the insertion of a bar for removing the plate. The block 14 has a loose fit in the sleeve as shown.

In use the sleeve 2 moves with the pile and has no movement independently thereof so that it does not fly up and down under the shock of the blows, and therefore practically all injury to the end of the pile is avoided. The block 14 receives the blows of the hammer and as it has a loose fit in the sleeve the force of the blow is transmitted directly to the top of the pile and none of the stress of the blow falls upon the sleeve.

By means of the device described a pile can be repeatedly driven without serious injury to its end. The device can be readily attached to the pile and is so constructed that it can be attached to piles of different sizes within limits.

Various changes can be made in the device without departing from the spirit of the invention. For instance, various other arrangements than those shown for effecting the adjustment of the device will readily suggest themselves.

What I claim is:

1. A protector for piles, comprising a tubular member constructed to be secured immovably to the pile and project beyond the end thereto, and a cushion in said tubular member and confined by the projecting end thereof.

2. A protector for piles, comprising a tubular member constructed to be immovably secured to the pile and project beyond the end thereto, said member being adjustable to

piles of different sizes, and a cushion in said tubular member and confined by the projecting end thereof.

3. A protector for piles, comprising a tubular member arranged to be immovably secured to the pile and project beyond its end thereto, adjustable means for securing said member to the pile, and a cushion in said tubular member and confined by the projecting end thereof.

4. A protector for piles, comprising a tubular member constructed to be immovably secured to the pile and project beyond the end thereto, lugs on said member for engaging the hammer guides, and a cushion fitting loosely in said tubular member and confined by the projecting end thereof.

5. A protector for piles, comprising a tubular member arranged to be secured to the pile and project beyond the end thereto, loose cushioning material in said tubular member, and a follower block resting on

said loose cushioning material and loosely fitting said tubular member.

6. A protector for piles, comprising a tubular member constructed to be immovably secured to the pile and project beyond the end thereto, and a wooden block having a loose fit in said tubular member.

7. A protector for piles, comprising a tubular member arranged to be secured to the pile and project beyond the end thereto, a cushion of finely divided material in the projecting end of said tubular member, a plate resting on said finely divided material, and a wooden block loosely fitting said tubular member and resting on said plate.

In testimony whereof, I have hereunto set my hand.

ROBERT A. CUMMINGS.

Witnesses:

JOHN S. CORT,
F. W. WINTER.