

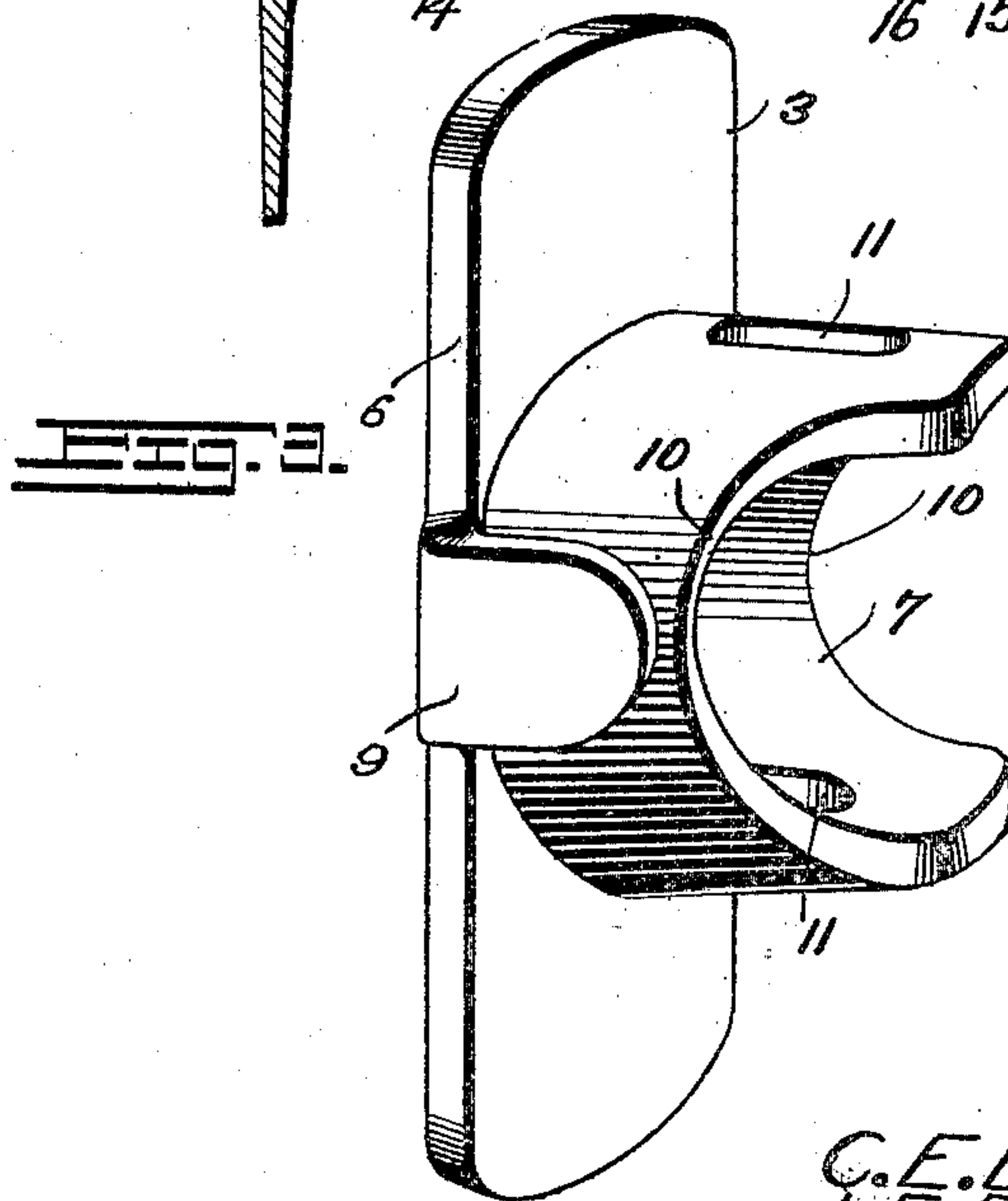
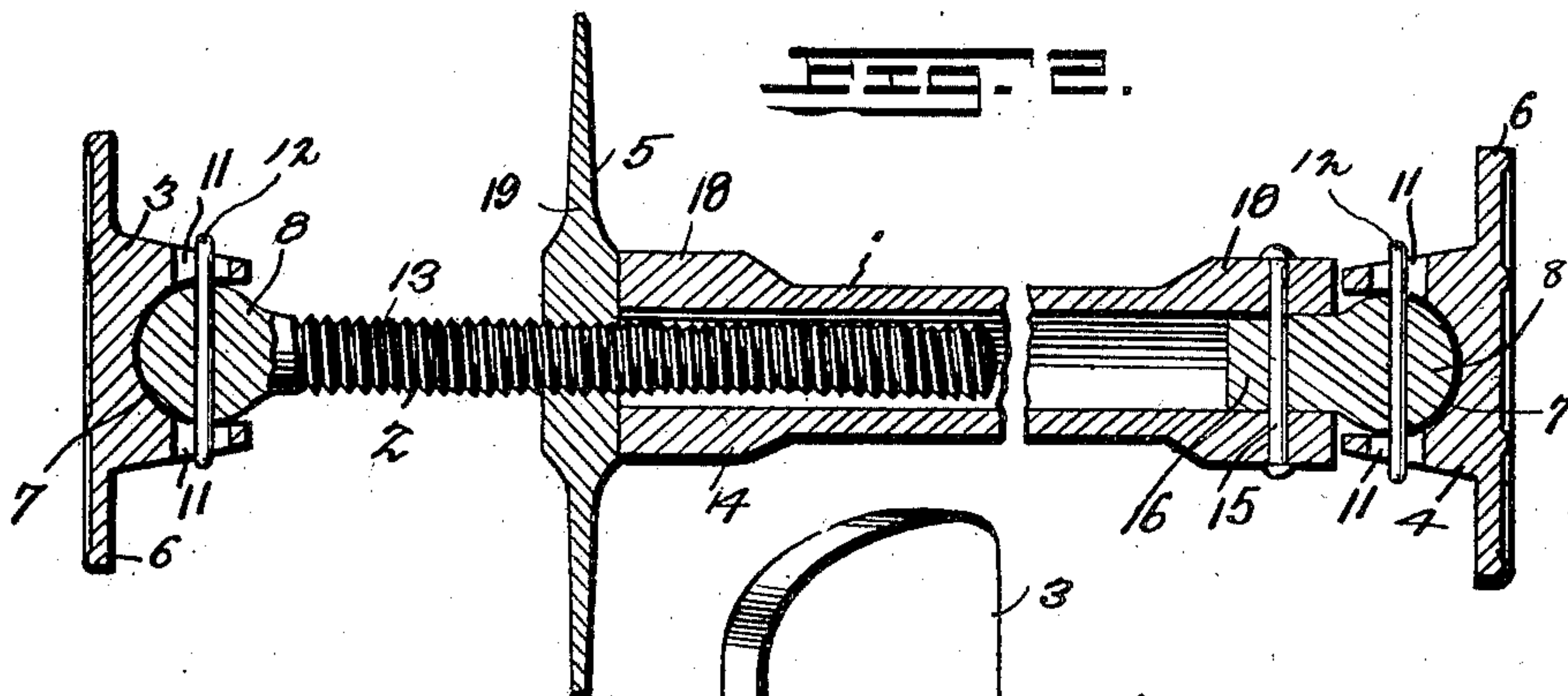
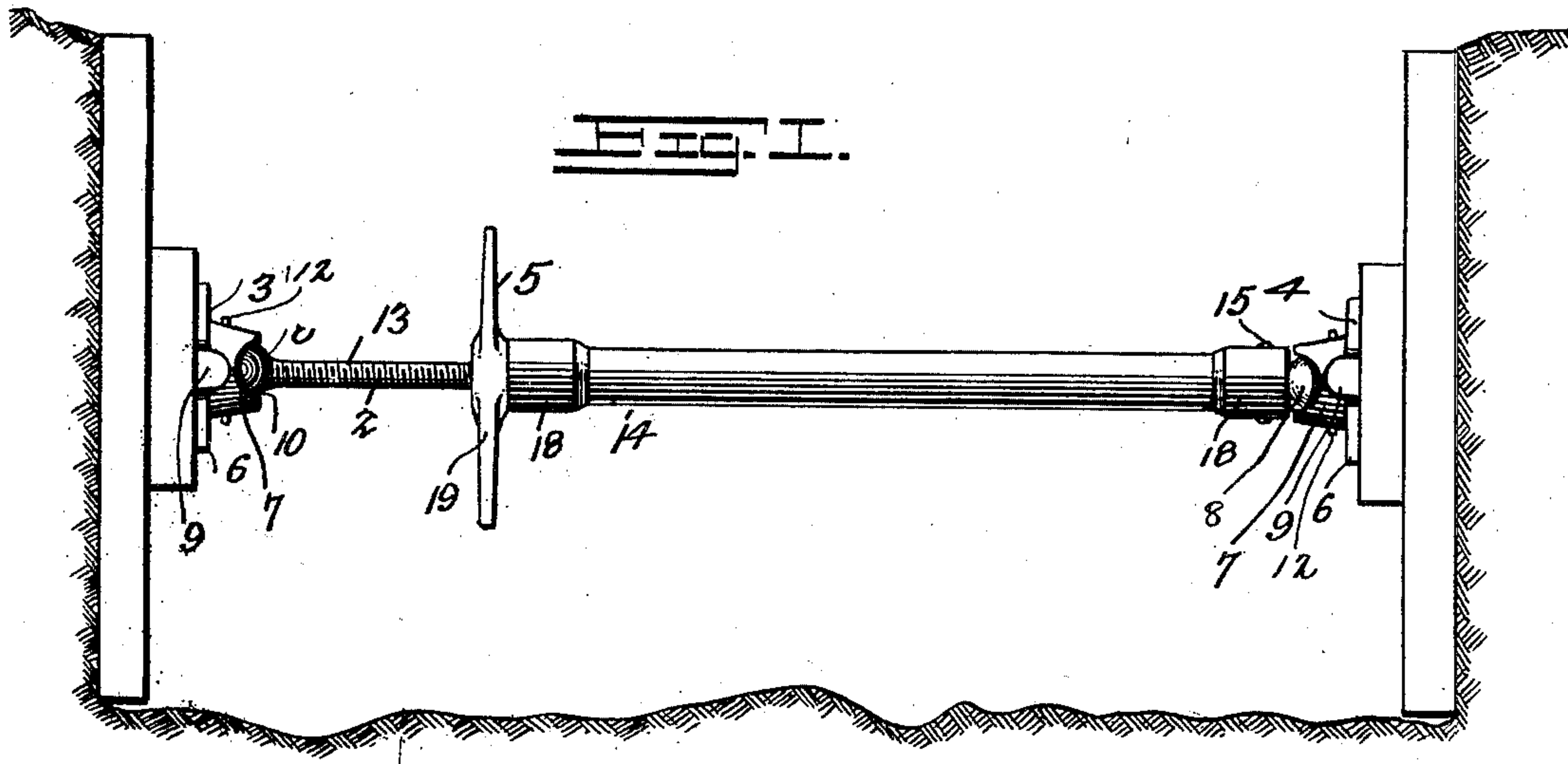
No. 706,807.

Patented Aug. 12, 1902.

C. E. & J. E. DIXON.  
DITCHING JACK.

(Application filed Jan. 13, 1902.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

CHARLES E. DIXON AND JOHN E. DIXON, OF PITTSBURG, PENNSYLVANIA.

## DITCHING-JACK.

SPECIFICATION forming part of Letters Patent No. 706,807, dated August 12, 1902.

Application filed January 13, 1902. Serial No. 89,544. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES E. DIXON and JOHN E. DIXON, citizens of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Ditching-Jack, of which the following is a specification.

This invention relates to ditching-jacks.

The objects of the invention are to improve the shoe by constructing the same in such manner as to permit of its being struck heavy blows by a sledge-hammer without danger of injury, to simplify the manner of assembling the ball with the shoe, to construct the sleeve in such manner as to prevent splitting or mashing from long-continued use, and, generally, to provide a novel, simply-constructed, and thoroughly-efficient form of ditching-jack.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a ditching-jack, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the scope of the invention.

In the drawings, Figure 1 is a view in side elevation, showing the ditching-jack as it appears when positioned in use. Fig. 2 is a view in longitudinal section. Fig. 3 is a perspective detail view of one of the shoes.

The device of the present invention comprises a sleeve 1, a screw-stem 2, two shoes 3 and 4, and an armed nut 5 to be turned against the sleeve 1 to effect lateral extension of the jack. The shoe comprises a base 6 of any desired length, arranged centrally of which is a socket or bearing 7 to be engaged by a ball 8 either of the screw-stem or the sleeve, as the case may be, it being understood that the shoe at each end of the jack is

identically the same in construction. The socket, which is circular in plan, is approximately of the diameter of the width of the face, and projecting laterally from the base at the center of each side of the socket is a lug or boss 9, which is designed to present a surface to be struck by a sledge-hammer in effecting setting of the shoe. All of the parts of the shoe are to be formed integral, and by the provision of the lugs 9, which, as will be apparent, materially thickens the sides of the socket, all danger of mashing in the walls thereof will be obviated, so that free movement of the ball will at all times be assured. The sides of the socket are cut away in a semi-circle, as at 10, to permit the requisite lateral movement of the ball, and the top and bottom portions of the socket are each provided with an elongated slot 11, that extend at right angles to the face of the shoe and are adapted to receive the terminals of a pin 12, that holds the ball assembled with the shoe and to permit the ball to have the requisite vertical movement. The pin is to be rigidly assembled with the ball, and thus held against accidental loss, so that separation of the shoe from the ball will be obviated. The connection between the ball and each shoe is the same, so that an explanation of one will serve for both. The ball 8 is provided with a screw-threaded stem 13, that is adapted to project within a sleeve 14, secured by a bolt 15 to an extension 16 of the other ball, the said sleeve having its ends reinforced, as at 18, to prevent mashing or splitting, due to lateral pressure in use. The screw-stem carries an armed nut 19, which is adapted to bear against one end of the sleeve and by being turned upon the screw-stem to force the members of the jack apart laterally, thus to effect clamping in position.

In the operation of the device the pins 12 will permit the requisite lateral or vertical adjustment of the shoes, as required, but will positively prevent either the screw or the sleeve turning independently of their respective shoes, so that positive extension of the jack will result when the arm-nut is turned, as will be obvious and readily understood by reference to Fig. 2.



It will be obvious that, if preferred, the slots 11 may be disposed at the sides of the shoe; but as this would necessitate orificing, and thus weakening the lugs 9, the arrangement shown will generally be preferred.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character specified, the combination with shoes having lateral impact lugs and sockets provided with transversely-alined slots, of two adjustable parts or sections having their outer ends provided with balls to engage the sockets, and pins rigidly associated with the balls and projecting through the slots.

2. In a device of the character specified, the combination of the shoes having lateral impact lugs and sockets and transversely-alined slots, a sleeve and a screw carrying balls engaging the sockets, pins rigidly asso-

ciated with the balls and projecting through the slots, and a nut engaging the screw.

3. In a device of the character specified, the combination with the shoes having sockets, of a screw carrying a ball associated with one socket, a sleeve having its ends circumferentially enlarged for the purpose of reinforcement and carrying a ball engaging the other socket, and a nut carried by the screw.

4. As a new article of manufacture, a shoe for ditching-jacks provided with impact-lugs extending beyond the base of the shoe and with a socket provided with alined slots.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

CHAS. E. DIXON.

JOHN E. DIXON.

Witnesses:

ALBERT RABENSTEIN,  
A. S. STANDISH.