

(No Model.)

S. W. LUCAS.
HOSE COUPLING.

No. 591,136.

Patented Oct. 5, 1897.

Fig. 1.

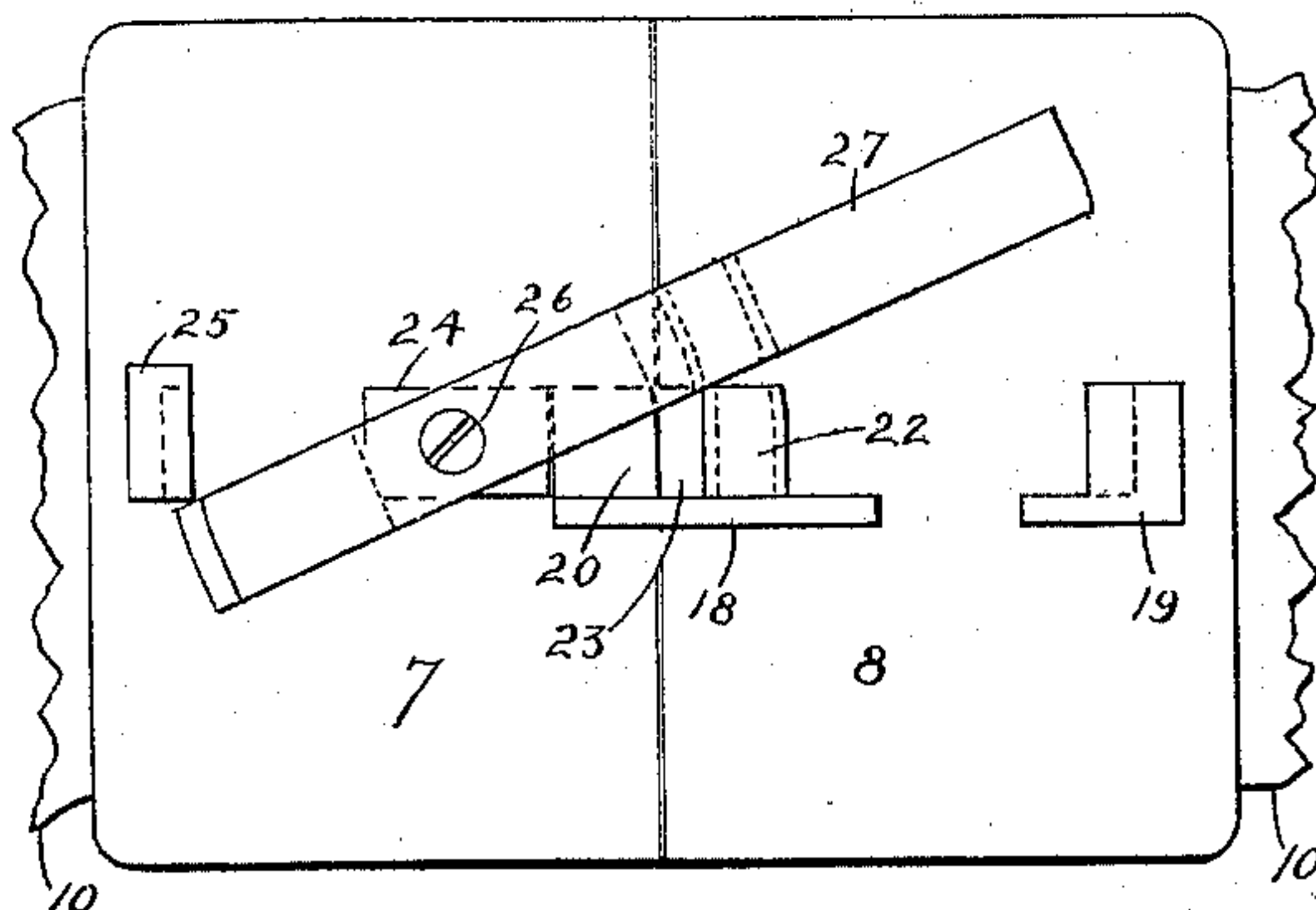


Fig. 2.

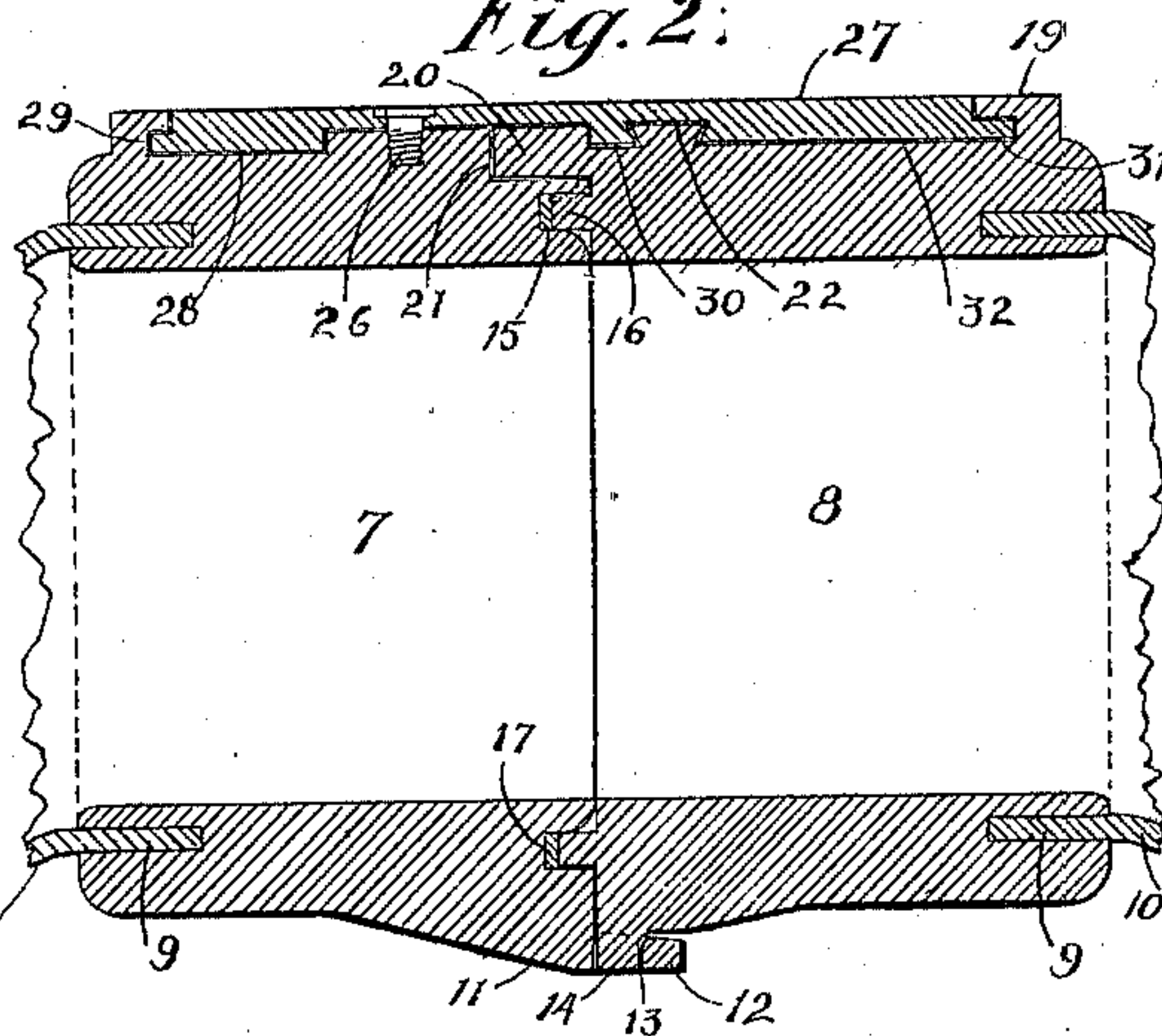


Fig. 3.

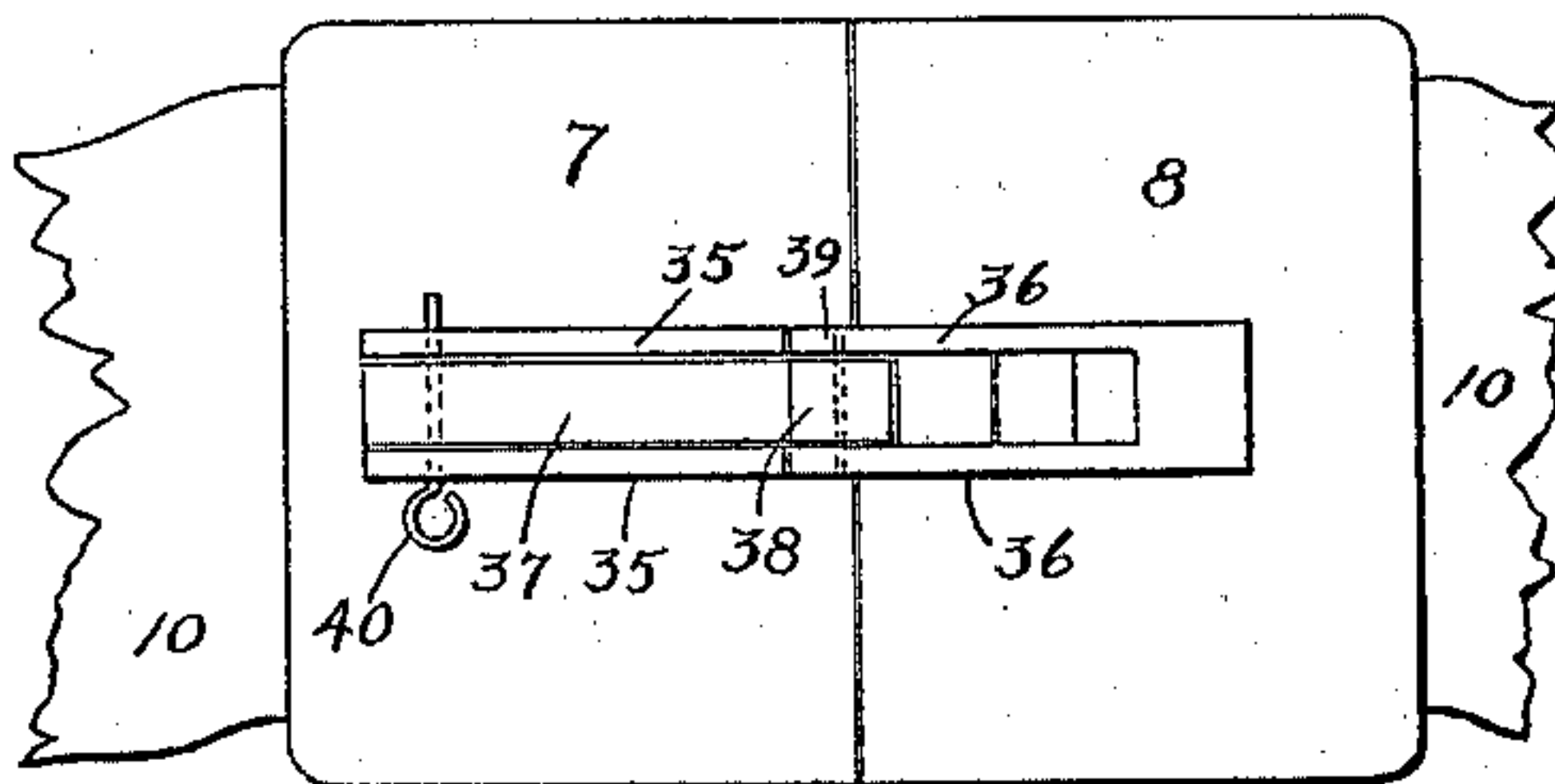


Fig. 4.

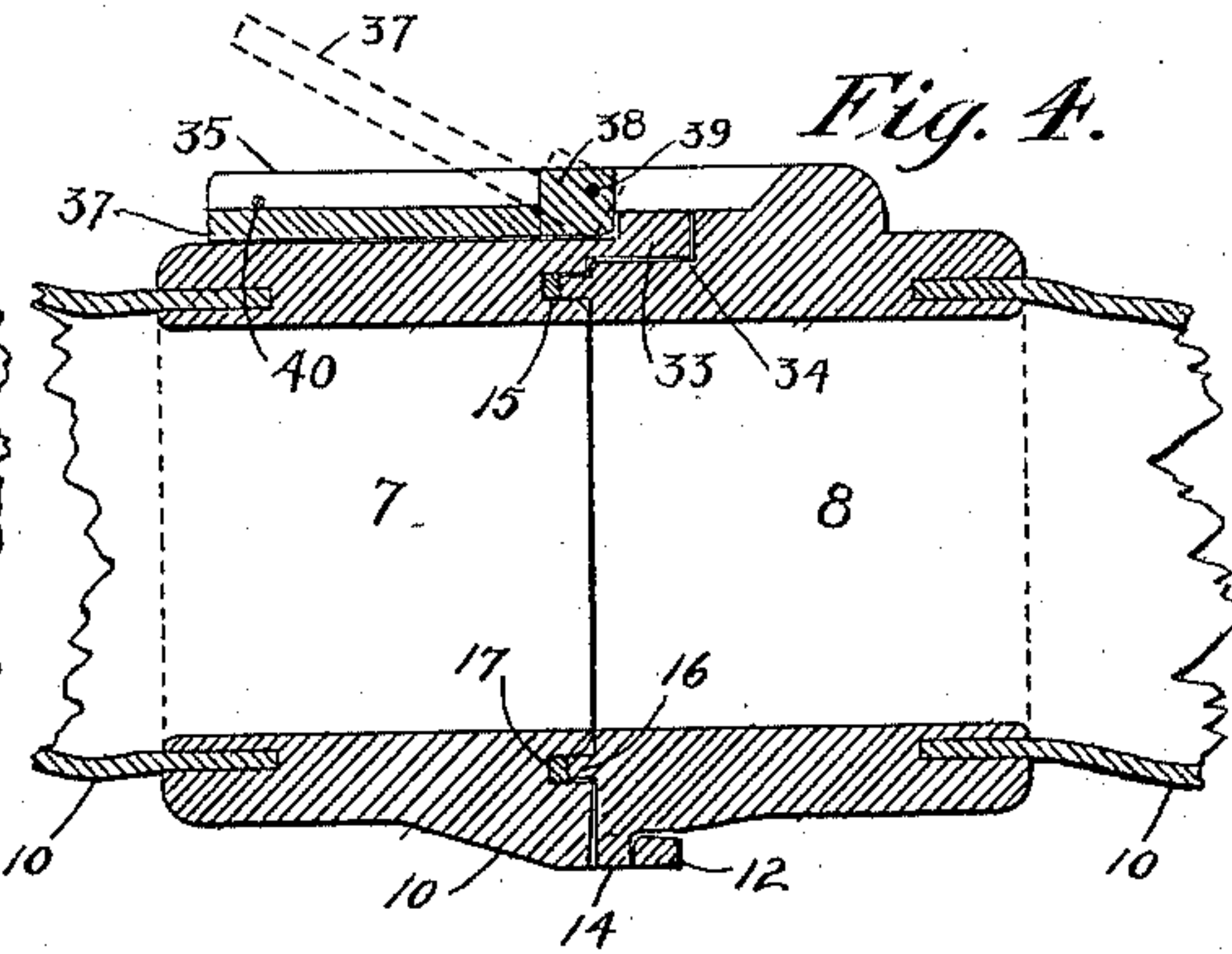


Fig. 5.

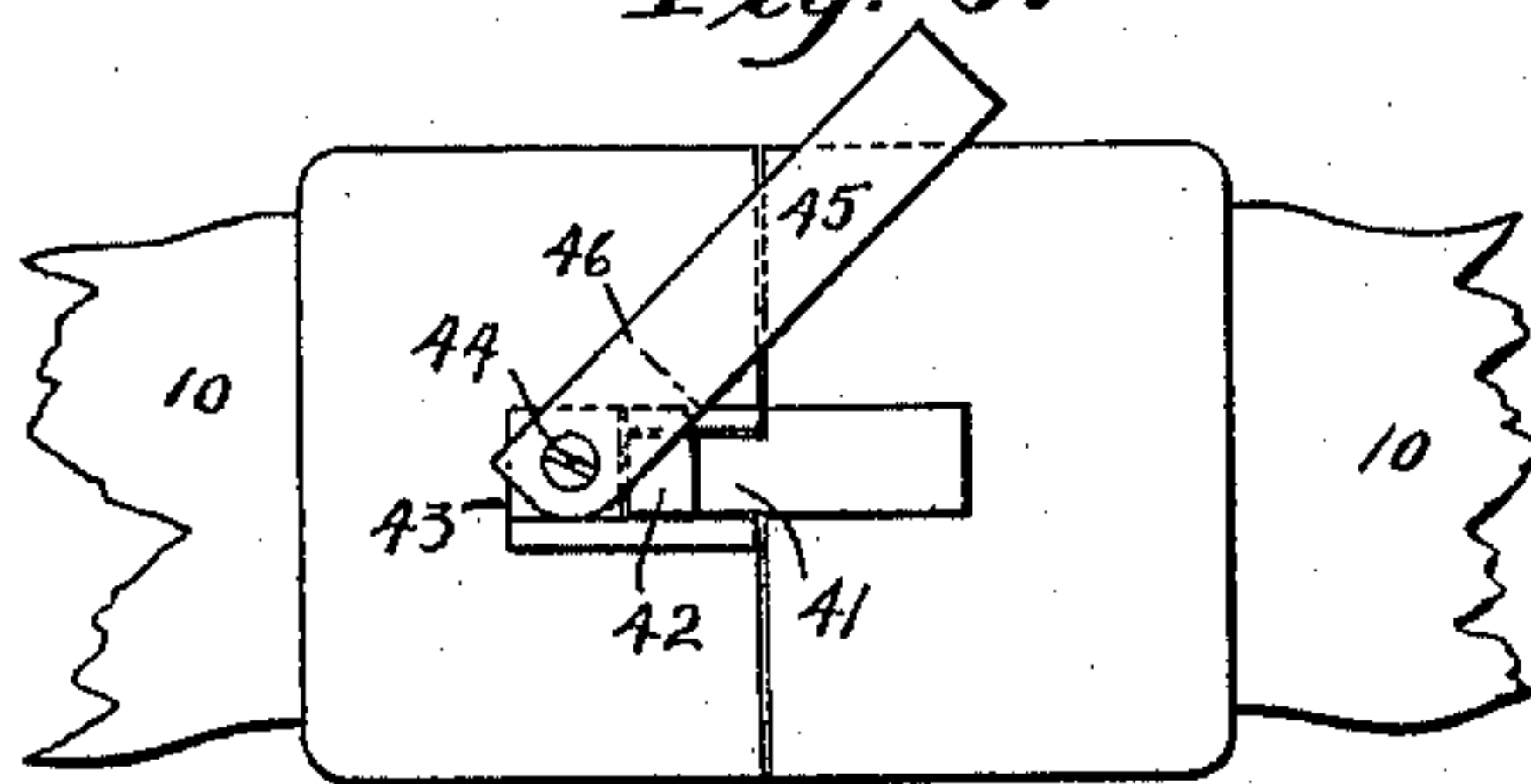
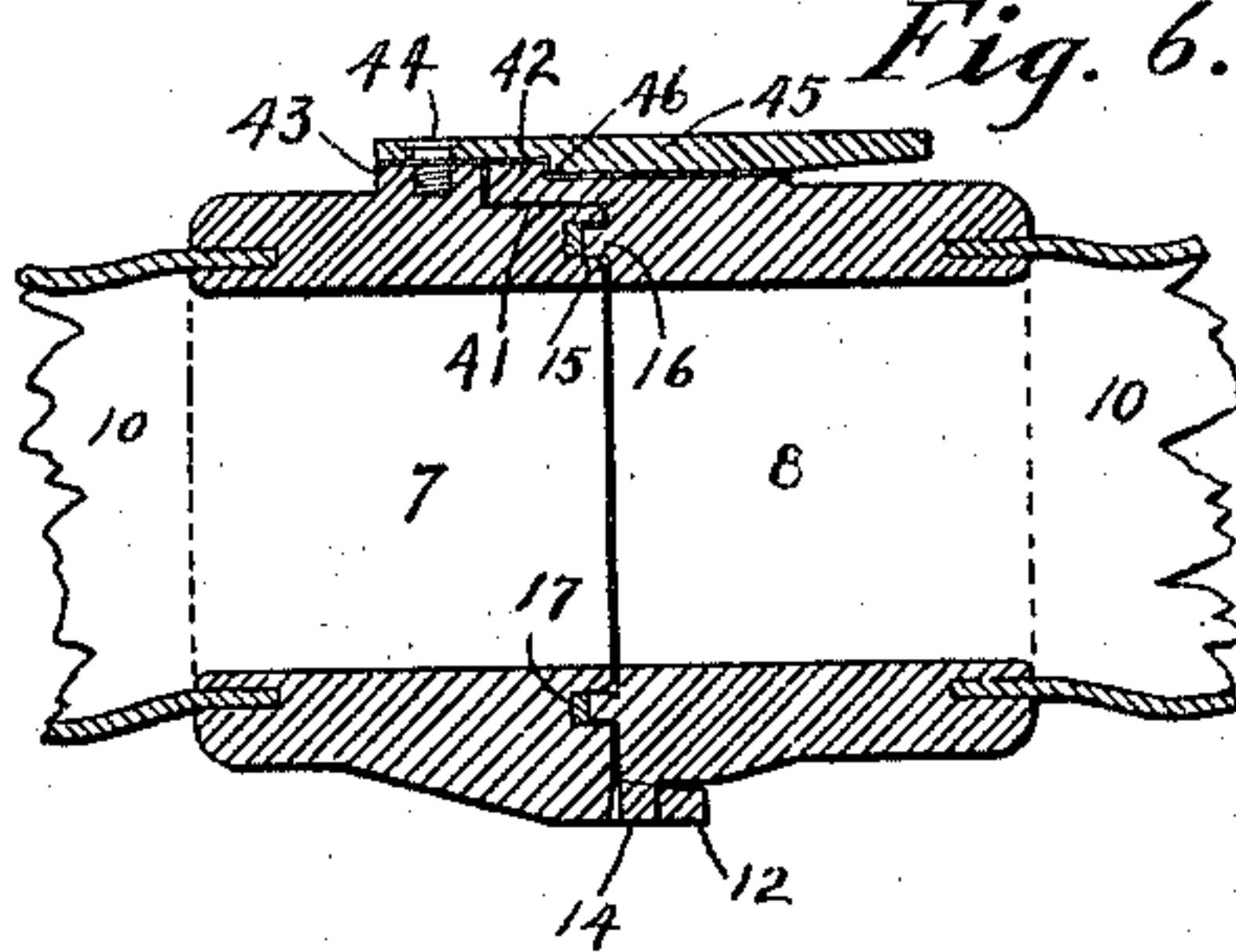


Fig. 6.



WITNESSES

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SEYMOUR W. LUCAS, OF MERIDEN, CONNECTICUT.

HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 591,136, dated October 5, 1897.

Application filed January 6, 1897. Serial No. 618,111. (No model.)

To all whom it may concern:

Be it known that I, SEYMOUR W. LUCAS, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Hose-Couplings, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to coupling devices for flexible hose and other pipes; and the object thereof is to provide an improved device of this class which is simple in construction and operation and by means of which the separate sections of flexible hose may be quickly and easily connected.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a plan view of one form of my improved coupling device for pipes; Fig. 2, a central vertical longitudinal section thereof; Fig. 3, a plan view of a modified form of construction; Fig. 4, a central vertical longitudinal section thereof; Fig. 5, a plan view of another modification, and Fig. 6 a central vertical longitudinal section thereof.

In the drawings forming part of this specification the separate parts of my improvement are designated by numerals of reference throughout the several views, and in the practice of my invention, reference being made to Figs. 1 and 2, I provide a coupling device which consists of two similar tubular heads 7 and 8, each of which is provided at its outer end with a deep annular groove 9, into which the ends 10 of the separate sections of hose to be connected are inserted and secured in any desired manner.

In the construction shown in the figures referred to the coupling-head 7 is provided on its under side with a depending shoulder or projection 11, which is provided with an outwardly-directed keeper 12, in which is formed an opening 13, and the coupling-head 8 is provided on its under side with a depending lug or projection 14, which is adapted to enter said opening, and one of the coupling-heads is also provided at its inner end with a deep annular groove which is designed to receive an annular flange or rim 16, formed on

the other coupling-head, and within the groove 15 is an annular packing-ring 17, which is composed of any desired material.

Formed on the coupling-head 8, longitudinal of the top thereof, is a flange-plate 18, which projects over the inner end of the coupling-head 7, and in line with said plate, near the outer end of the coupling-head 8, is an angular keeper 19, and the coupling-head 8 is also provided, adjacent to the side of the flange-plate 8, with an angular shoulder or projection 20, which is designed to enter a corresponding notch or recess 21, formed in the upper side of the coupling-head 7, and adjacent to the shoulder or projection 20, rearwardly thereof and in line therewith, is another transverse shoulder or projection 22, and between the shoulders or projections 20 and 22 is a transverse space 23.

Formed on the coupling-head 7, in line with the shoulders or projections 20 and 22, is a shoulder or projection 24, and in line therewith and near the outer end of the coupling-head 7 is an angular keeper 25, and pivoted to the shoulder or projection 24, by means of a screw or bolt 26, is a locking-bar 27, which is provided on its under side adjacent to said pivotal connection with a depending portion 28, which is adapted to enter between the shoulder or projection 24 and the angular keeper 25, and at the end of said depending projecting portion 28 is an extension 29, which passes within said keeper, and said locking-bar 27 is provided on its under side with another depending shoulder or projection 30, which is adapted to enter the space 23 between the shoulders or projections 20 and 22, and at the end thereof opposite the end which connects with the keeper 29 is an extension 31, which is adapted to enter the keeper 19, and said locking-bar is provided on its under surface, adjacent to the extension 31, with a depending portion 32, which is adapted to enter the space between the shoulder or projection 22 and the keeper 19.

In order to connect the coupling-heads 7 and 8, the lug or projection 14 is passed into the keeper 12 and the separate heads are swung together, so that the flange or rim 16 will enter the annular grooves 15, and the lock-bar 27 is then turned so that the ends thereof will engage with the keepers 19 and 25.

The keepers 19 and 25 securely hold the ends of the locking-bar, and the side walls of the shoulder or projection 22 are so formed as to interlock with the side walls of the corresponding transverse groove or recess formed in the lock-bar 27, and when the coupling-heads 7 and 8 are thus connected they cannot be separated without turning the locking-bar 27 into the position shown in full lines in Fig. 1, and the connection between the same is made perfectly water-tight.

In the form of construction shown in Figs. 3 and 4 the keeper 12 and the lug or projection 14 are also employed, and the upper side of the coupling-head 7 is provided at its inner end with an outwardly-directed shoulder or projection 33, which enters a corresponding notch or recess 34, formed in the adjacent ends of the coupling-head 8, and said coupling-head 7 is also provided with two vertical flange-plates 35, and the inner end of the coupling-head 8 is provided with two corresponding flange-plates 36, between which is pivoted a locking-bar 37, provided with a rectangular head 38, and the pivot-pin 39 passes through said rectangular head and through the flange-plates 36, and the flange-plates 36 overlap the adjacent end of the coupling-head 7. In this form of construction the coupling-heads are connected, as hereinbefore described, by inserting the lug or projection 14 within the keeper 12 and then pressing the coupling-heads together, so that the flange or rim 16 will enter the annular groove 15, after which the locking-bar 37 is turned down between the flange-plates 35 and locked in position by a movable pin or plug 40, which passes through the flange-plate 35 over the locking-bar, and the angular head 38 of the locking-bar 37 operates in connection with the shoulder or projection 33 and securely locks the coupling-heads together.

In the form of construction shown in Figs. 5 and 6 the coupling-head 7 is provided with the keeper 12 and the coupling-head 8 with the lug or projection 14, which enters said keeper, and the coupling-head 8 is also provided at its inner end with a projecting arm 41, which enters a corresponding notch or recess formed in the upper side of the coupling-head 7 adjacent to the inner end thereof, and said projecting arm 41 is provided at its outer end with an upwardly-directed shoulder or projection 42, and pivoted to a shoulder or projection 43 on the upper side of the coupling-head 7, as shown at 44, is a locking-bar 45, which is adapted to swing on its pivotal connection and which is provided on its under side with a depending shoulder or projection 46, which operates in connection with the upwardly-directed shoulder or projection 42, formed on the arm 41, and when said locking-bar 45 is swung into a position longi-

tudinal of the coupling-heads and centrally thereof the shoulder or projection 46, formed thereon, will engage with the shoulder or projection 42 on the arm 41 and securely lock the coupling-heads together.

The ends of the separate sections of hose to be connected with the coupling-heads may be secured thereto in any desired manner, and it will thus be seen that I accomplish the object of my invention by means of a device which is simple in construction and operation and one which is well adapted to accomplish the result for which it is intended, and it will also be apparent that changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a pipe-coupling device, the combination of two tubular heads, one of which is provided on its under side with a keeper, and the other with a lug or projection which is adapted to enter the same, one of said tubular heads being also provided in its inner end with an annular groove, and the other with an annular flange or rim adapted to enter said groove, and one of said coupling-heads being also provided on its upper side with a pivoted locking-bar, which is adapted to engage with suitable keepers, lugs or projections formed on the other, and means for holding the free end of said lever in connection with said keepers, lugs or projections, substantially as shown and described.

2. The hose-coupling device herein described, the same consisting of two similar tubular heads, one of which is provided on its under side with a projecting keeper and the other with a lug or projection which is adapted to enter the same, one of said coupling-heads being provided at its inner end with an annular groove, in which is placed a ring of packing material, and the other with an annular flange or rim adapted to enter said groove, one of said coupling-heads being also provided on its upper side with a pivoted locking-bar, and with a keeper for one end of said bar, and the other coupling-head being provided with a corresponding keeper for the opposite end of said bar, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 4th day of January, 1897.

SEYMOUR W. LUCAS.

Witnesses:

CHARLES S. ROGERS,
C. GERST.