

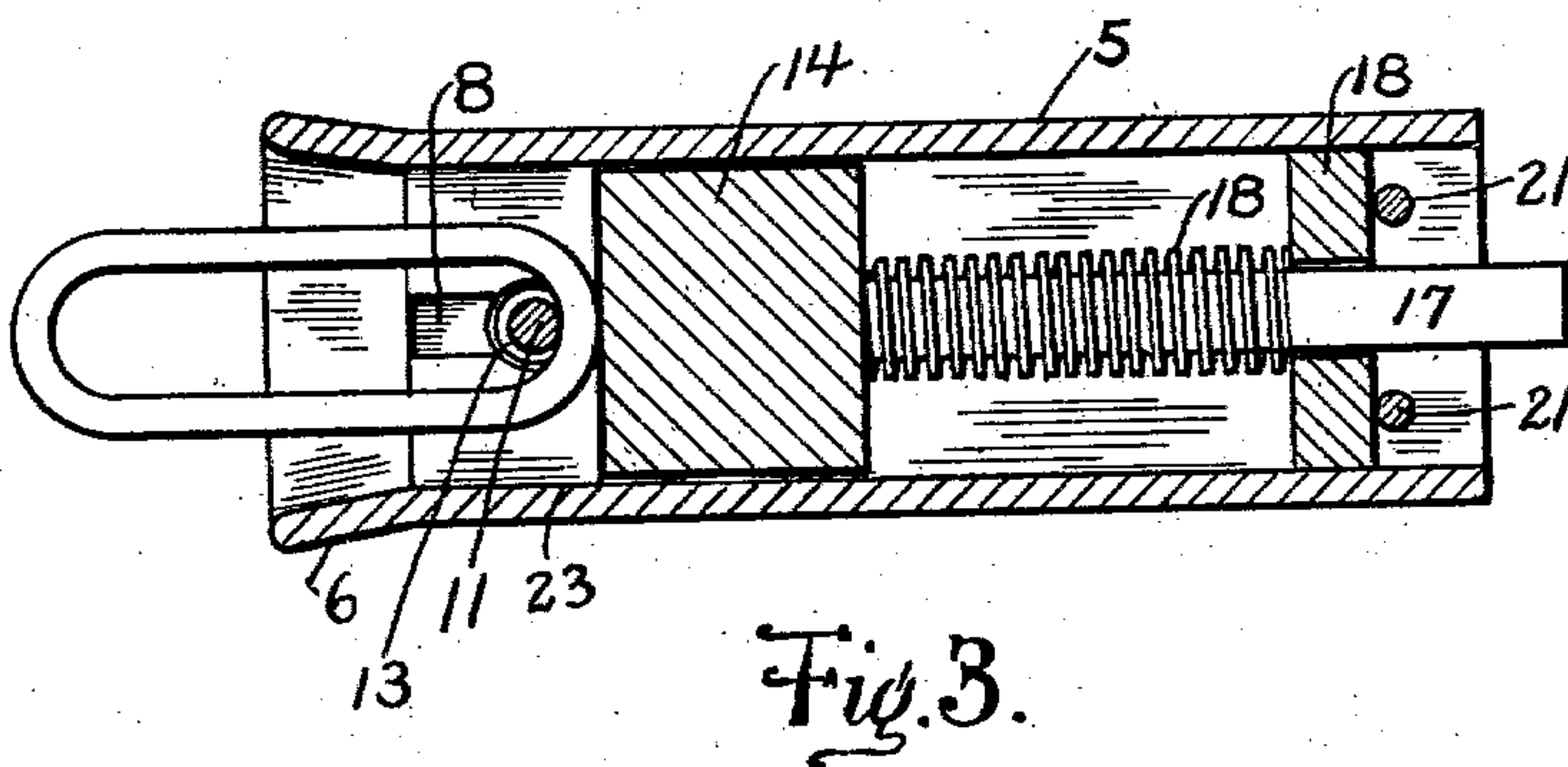
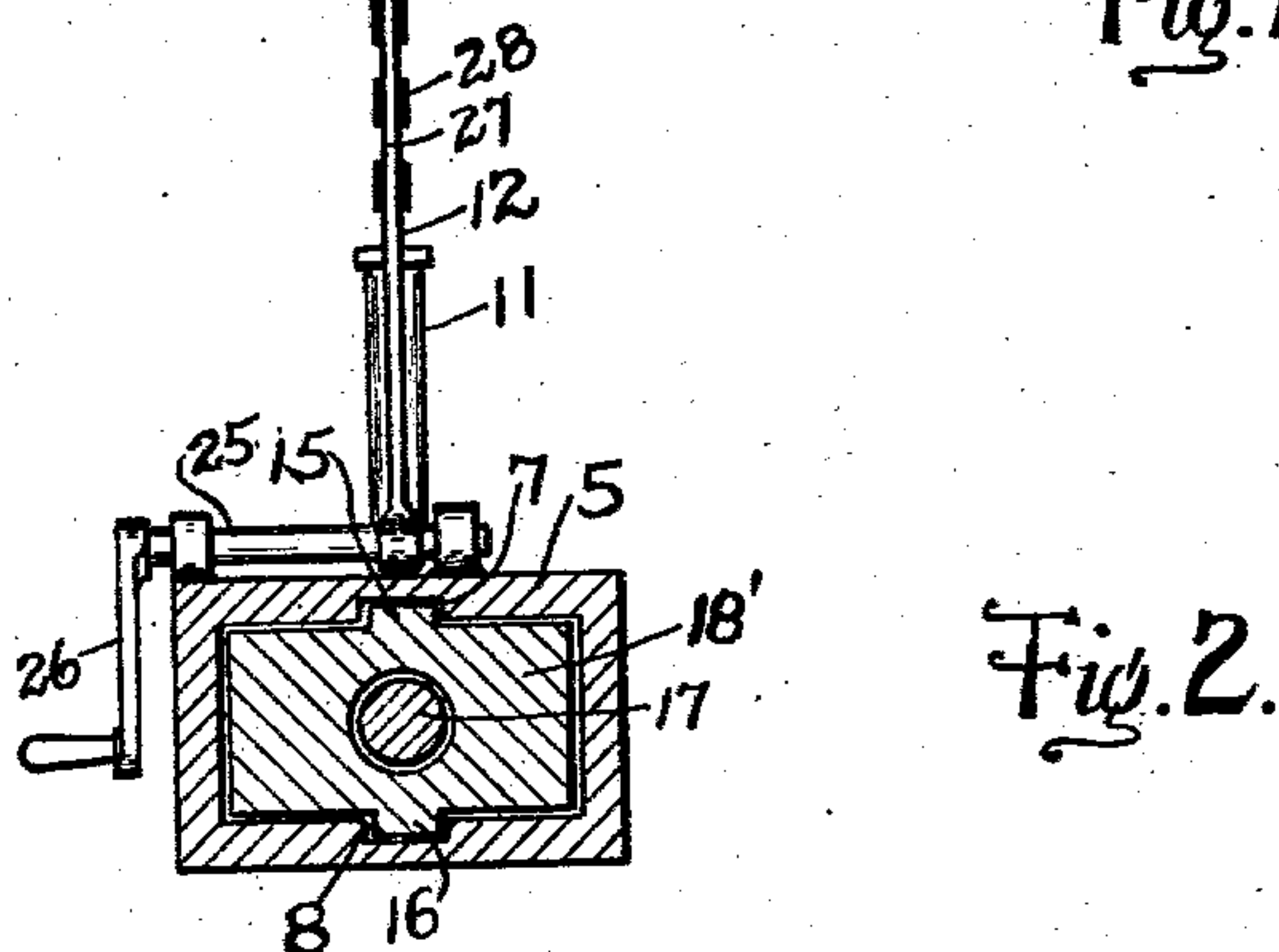
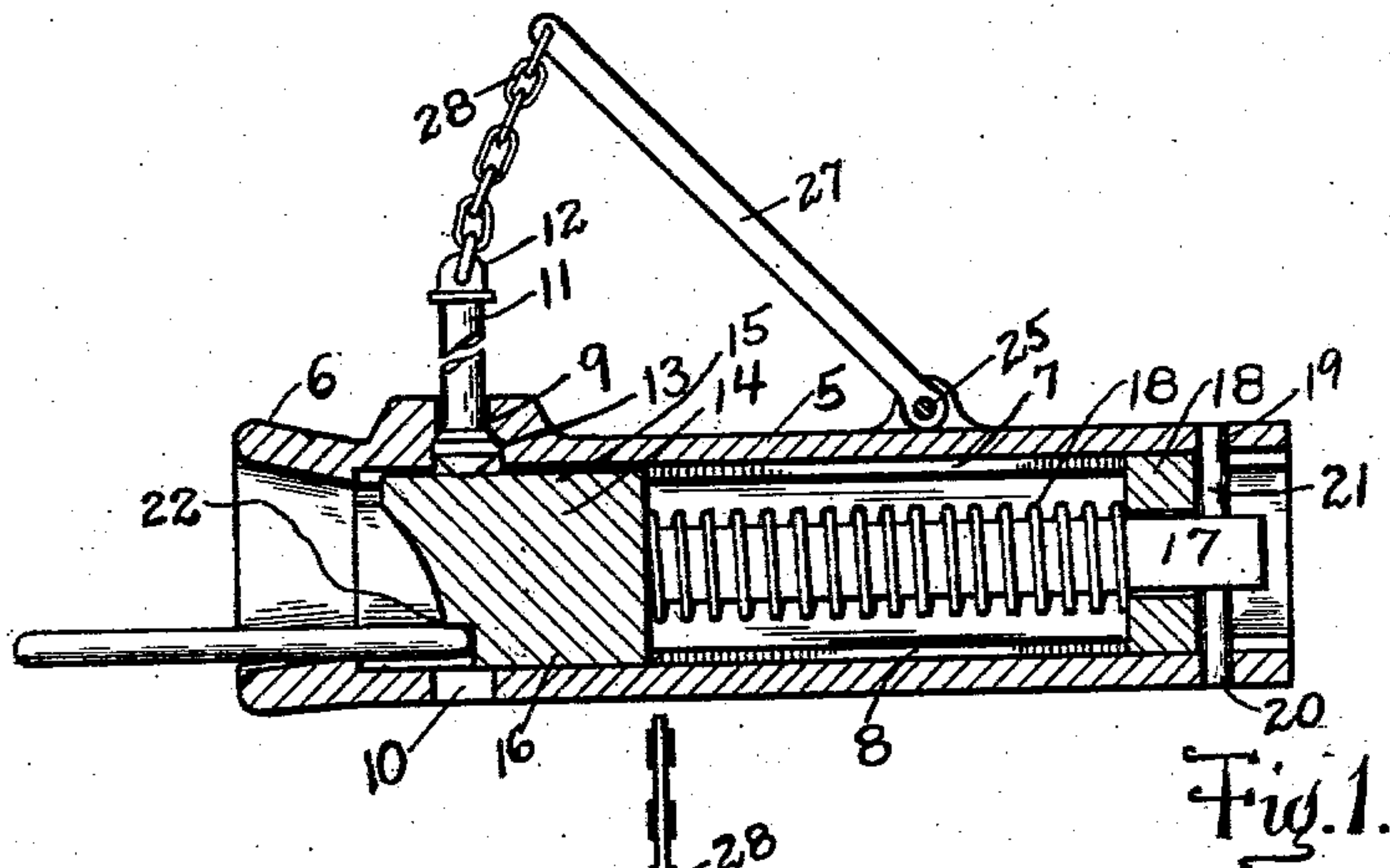
No. 740,490.

PATENTED OCT. 6, 1903.

S. TOBIN.
CAR COUPLING.

APPLICATION FILED APR. 6, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL TOBIN, OF EMME, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 740,490, dated October 6, 1903.

Application filed April 6, 1903; Serial No. 151,297. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL TOBIN, a citizen of the United States, residing at Emme, in the county of Fayette, State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to car-couplers, and more particularly to the class of pin-and-link couplers; and it has for its object to provide a simple and efficient construction wherein the pin may be supported out of operative position and will be automatically dropped through the link when the latter is inserted into the coupler-head.

A further object of the invention is to provide a construction wherein when the link engages the follower or support at the upper portion thereof it will be directed downwardly to the lower portion of the follower or support before the latter is moved rearwardly, so that the link will travel sufficiently far to insure passing of the pin through the opening thereof before the pin is dropped, so that when the pin drops it will not strike any portion of the link, but will pass freely there-through.

A further object of the invention is to provide a construction wherein jamming of the support will be prevented and in which the spring of the support may be adjusted in tension.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a section taken longitudinally through the coupler embodying the present invention, the coupling-pin being shown in elevation and in supported position and the link in position to press the support rearwardly. Fig. 2 is a transverse section through the draw-bar and the supports therein. Fig. 3 is a longitudinal horizontal section through the coupler with the coupling-pin in engaging position.

Referring now to the drawings, there is shown a coupler including a draw-head 5, which is hollow and which has at one end the usual enlargement 6, which is flared, as illus-

trated, and which communicates with the interior of the draw-head. The interior of the draw-head, as well as the exterior, is rectangular in cross-section, and in the upper and lower walls thereof are the longitudinal grooves or channels 7 and 8, which extend from the rear end of the draw-head to points adjacent to the front end and communicate with the alining perforations 9 and 10, formed, respectively, through the upper and lower walls of the draw-head adjacent to the enlargement.

The alining perforations 9 and 10 are designed to receive the coupling-pin 11, which is slidably engaged in the upper perforation and is adapted for movement therethrough into and out of engagement with the lower perforation. The upper end of the coupling-pin has a head 12, which prevents passage of the coupling-pin downwardly out of the perforation 7, and the lower end of the coupling-pin is provided with a ferrule 13, which prevents the pin from being drawn upwardly out of said perforation.

It is desired during the coupling operation to hold the pin with its lower end above the upper face of the concavity of the draw-head when the link is inserted and then to drop the pin through the link, and for this purpose a supporting-block or follower 14 is slidably disposed in the draw-bar for movement longitudinally thereof, and said support has longitudinal ribs 15 and 16 on its upper and lower faces, which slidably engage the slots of channels in the upper and lower walls of the draw-bar, so that said ribs by contact with the front ends of the channels will limit the forward movement of the supporting-block, so that it will rest with its forward end slightly beyond the perforation 7 to support the coupling-pin, and when the block is moved rearwardly the pin will be released and will drop into engagement with the lower perforation.

From the rear end of the supporting-block extends a stem 17, and encircling this stem is a helical spring 18, which rests with its forward end against the block, while its rear end rests against the stop 18' in the form of a guide-plate having a central opening through which the stem is slidably passed. Through the top and bottom of the draw-bar,

at the rear end thereof, are alining perforations 19 and 20, through which are engaged pins 21, which stand at opposite sides of the stem and against which the guide-plate rests and is held by action of the helical spring. By the interposition of blocks between the guide-plate and the vertical pins the guide-plate may be moved forwardly and held with the spring under increased tension, it being understood that the spring holds the supporting-block normally and yieldably at the forward limit of its motion and in position to support the coupling-pin.

With the supporting-block in position to support the coupling-pin and the coupling-link being held in the draw-head of another car the cars are brought together so that the link strikes the support and moves it rearwardly, so that it releases the pin, and the latter drops through the link. In order for the pin to pass through the link, however, it is necessary that the link shall pass sufficiently far to the rear that its ends shall lie beyond the pin before the latter is dropped, and for this reason the forward end of the supporting-block is recessed, so that the upper portion extends forwardly beyond the lower portion. The end of the supporting-block is beveled from its upper side to a line adjacent to its lower side, where a shoulder 22 is formed. If when the cars are brought together the link is elevated, so that it will strike the upper portion of the supporting-block, it will be directed downwardly by the beveled face and will not act to press the support rearwardly until it has reached the shoulder 23, at which time the front end portion of the link will have passed beyond the coupling-pin, so that when the link moves the support the pin will be dropped through the link. At the shoulder the end of the supporting-block is slightly recessed, so that the end of the link may be engaged therein to hold the link in proper position to enter the head of the coupler of the other car.

It will be noted that the lower end of the perforation 7 is countersunk to receive the ferrule at the lower end of the coupling-pin when the latter is raised, and the draw-head is thickened to give a greater bearing-surface for the coupling-pin.

To raise the pin, a rock-shaft 25 is mounted

transversely of the draw-head and has at one end a crank or handle 26 and at the other end a crank 27, which is connected to the head of the pin by means of the chain 28, so that when the shaft is rocked the pin will be raised.

What is claimed is—

1. A car-coupler comprising a draw-head having a cross-sectionally angular passage therethrough having longitudinal channels in its upper and lower walls terminating short of its forward end, alining vertical perforations through the draw-head with which the channels communicate at their forward ends, a supporting-block slidably mounted in the head and having longitudinal ribs engaging the channels, said block being adapted to lie in position to cover the lower end of the upper perforation, a coupling-pin slidably mounted in the upper perforation, and means for holding the supporting-block yieldably at the forward limit of its movement.

2. A car-coupler comprising a draw-head having a cross-sectionally angular passage therethrough having longitudinal channels in its upper and lower walls terminating short of its forward end, said draw-head having alining vertical perforations with which the channels communicate at their forward ends, a supporting-block slidably mounted in the head and having longitudinal ribs engaging the channels, said block having a recess in the lower portion of its front face and being beveled forwardly from said recess to the upper face of the block, the upper rib of the support terminating short of the forward end of the upper face of the block, an adjustable guide-block in the draw-head, a stem for the supporting-block slidably engaged with the guide-block, a helical spring disposed upon the stem and resting with its ends against the guide-block and supporting-block respectively, and pins engaged vertically through the draw-head and against which the guide-block rests.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL TOBIN.

Witnesses:

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