

No. 785,382.

PATENTED MAR. 21, 1905.

T. A. SAVAGE.
CAR COUPLING.

APPLICATION FILED JUNE 28, 1904.

2 SHEETS—SHEET 1.

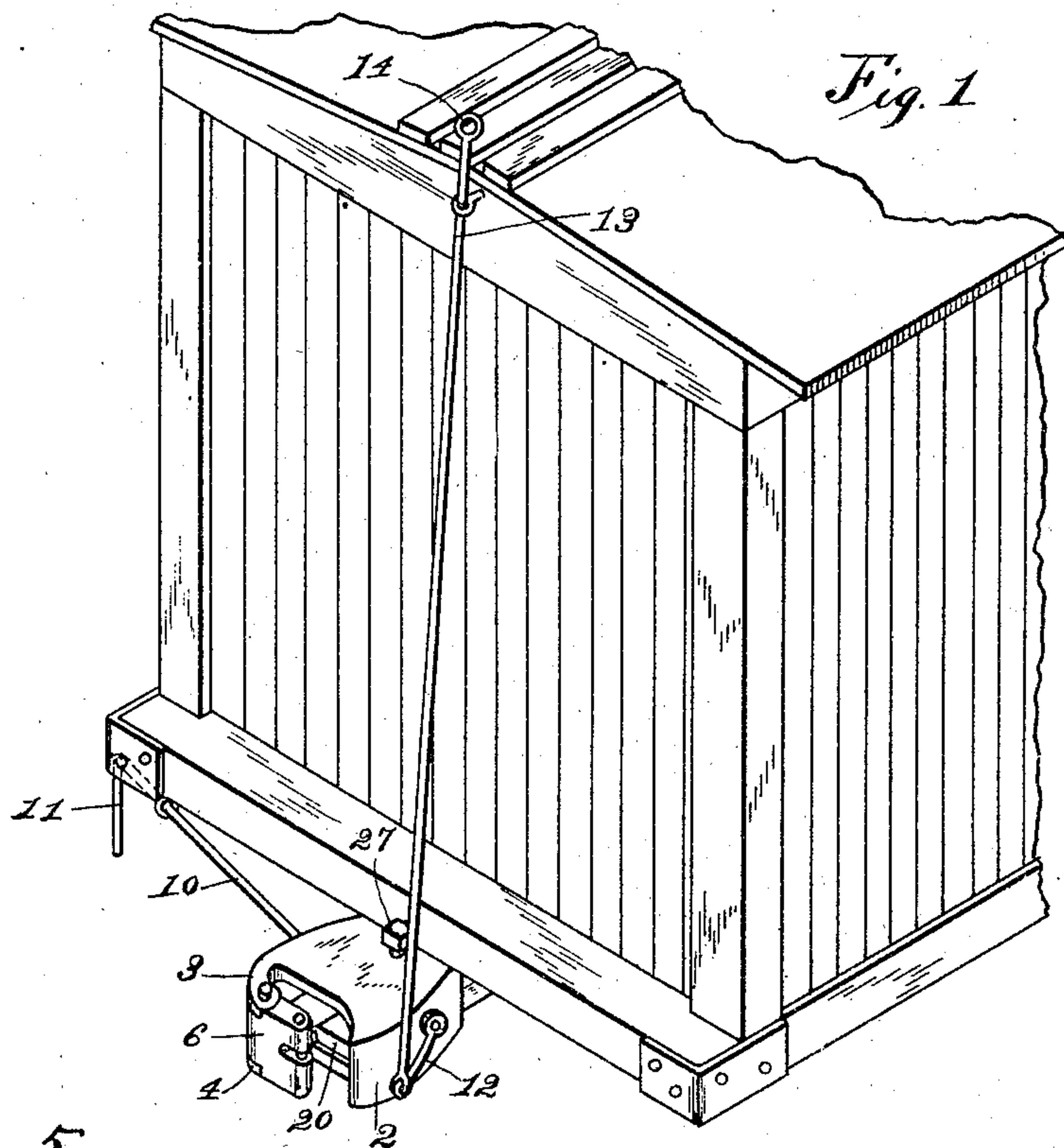


Fig. 5

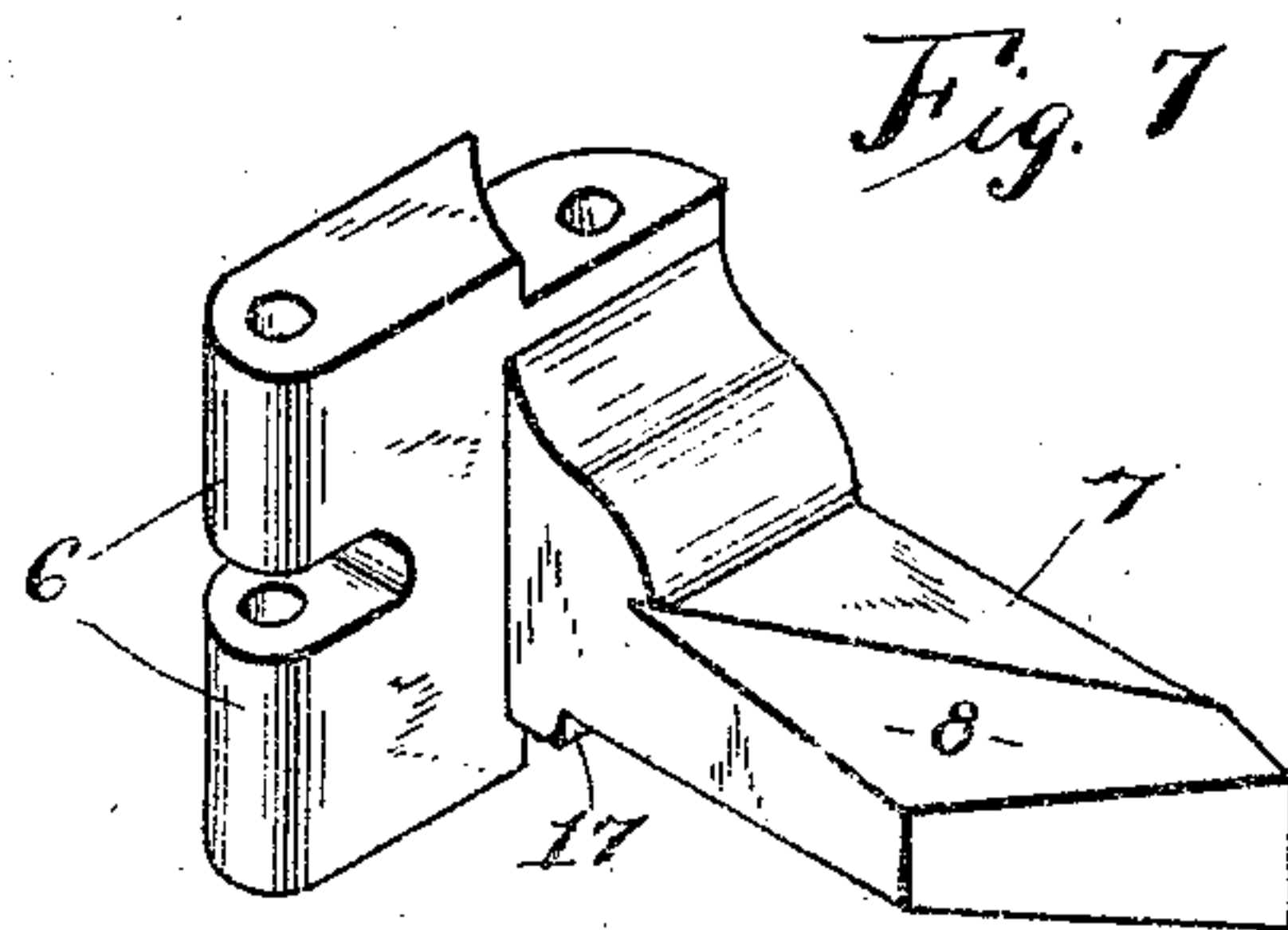
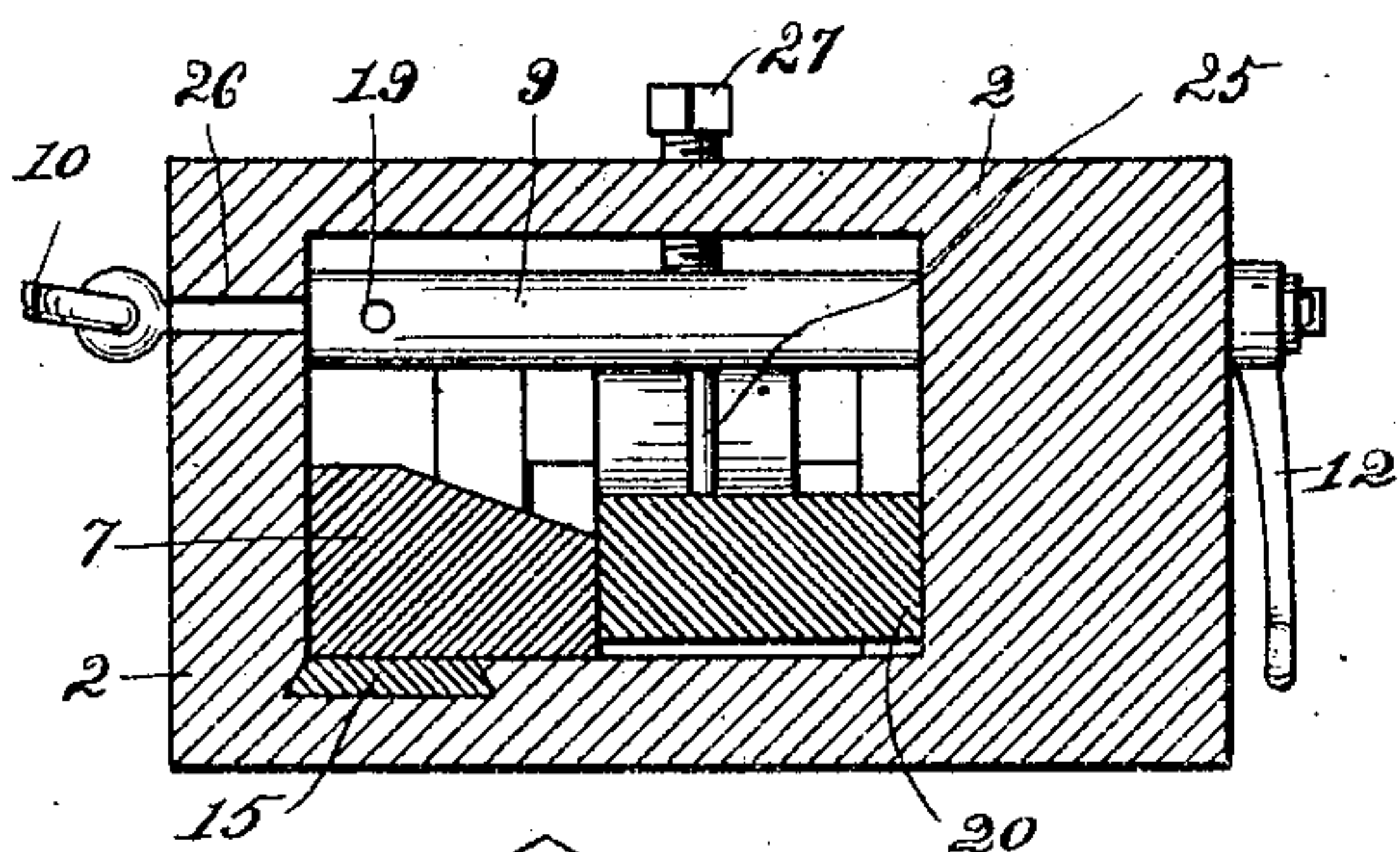


Fig. 7

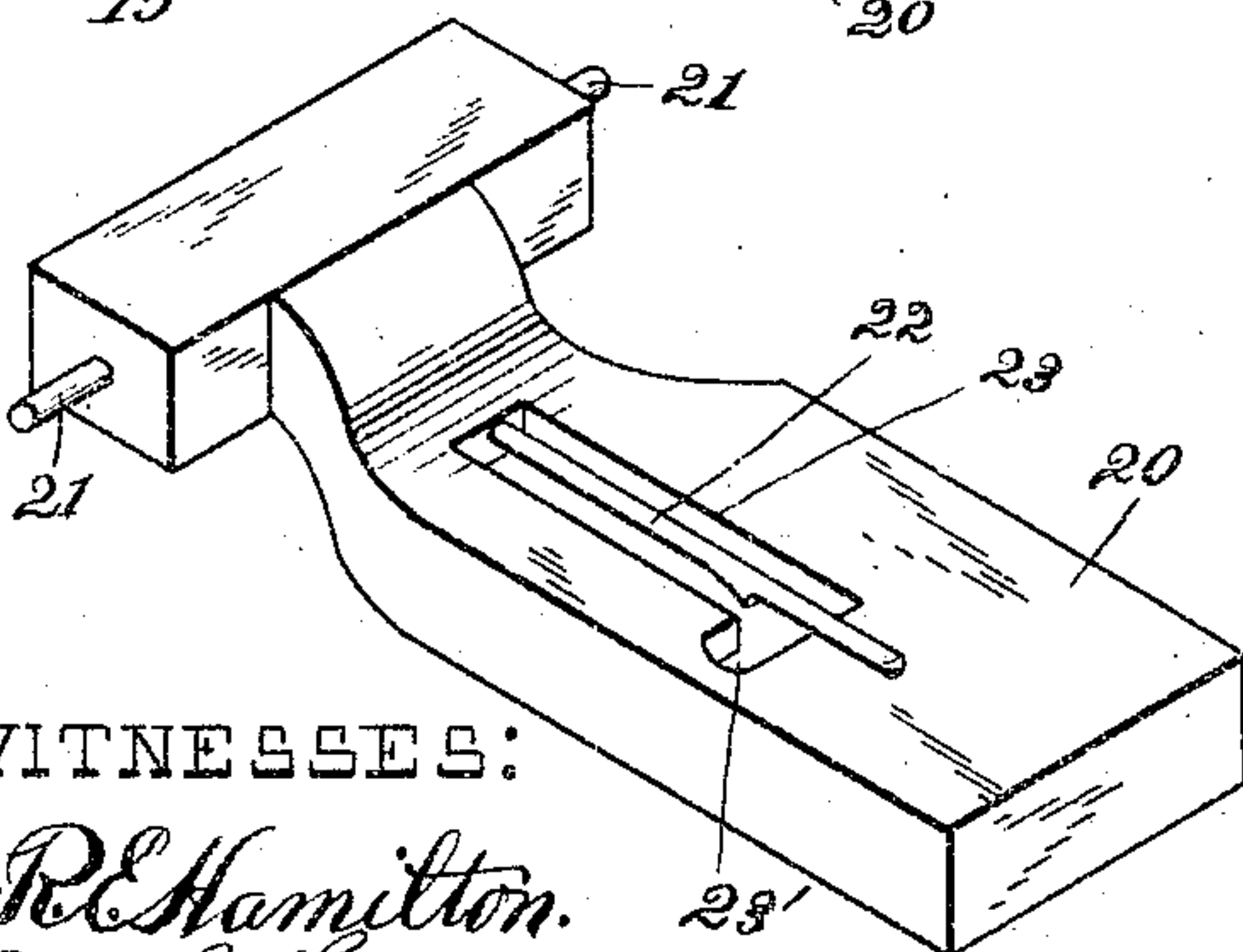


Fig. 6

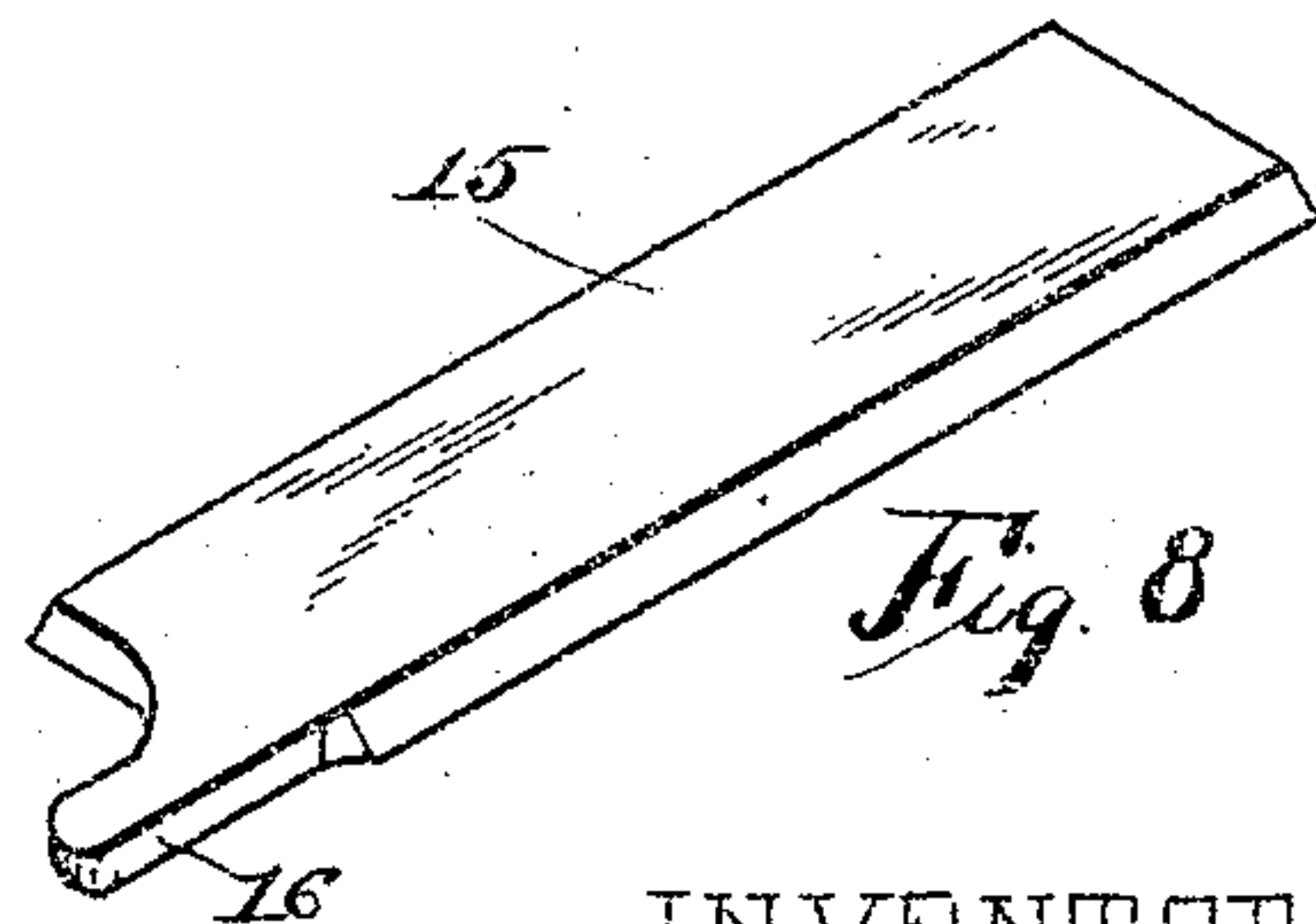


Fig. 8

WITNESSES:

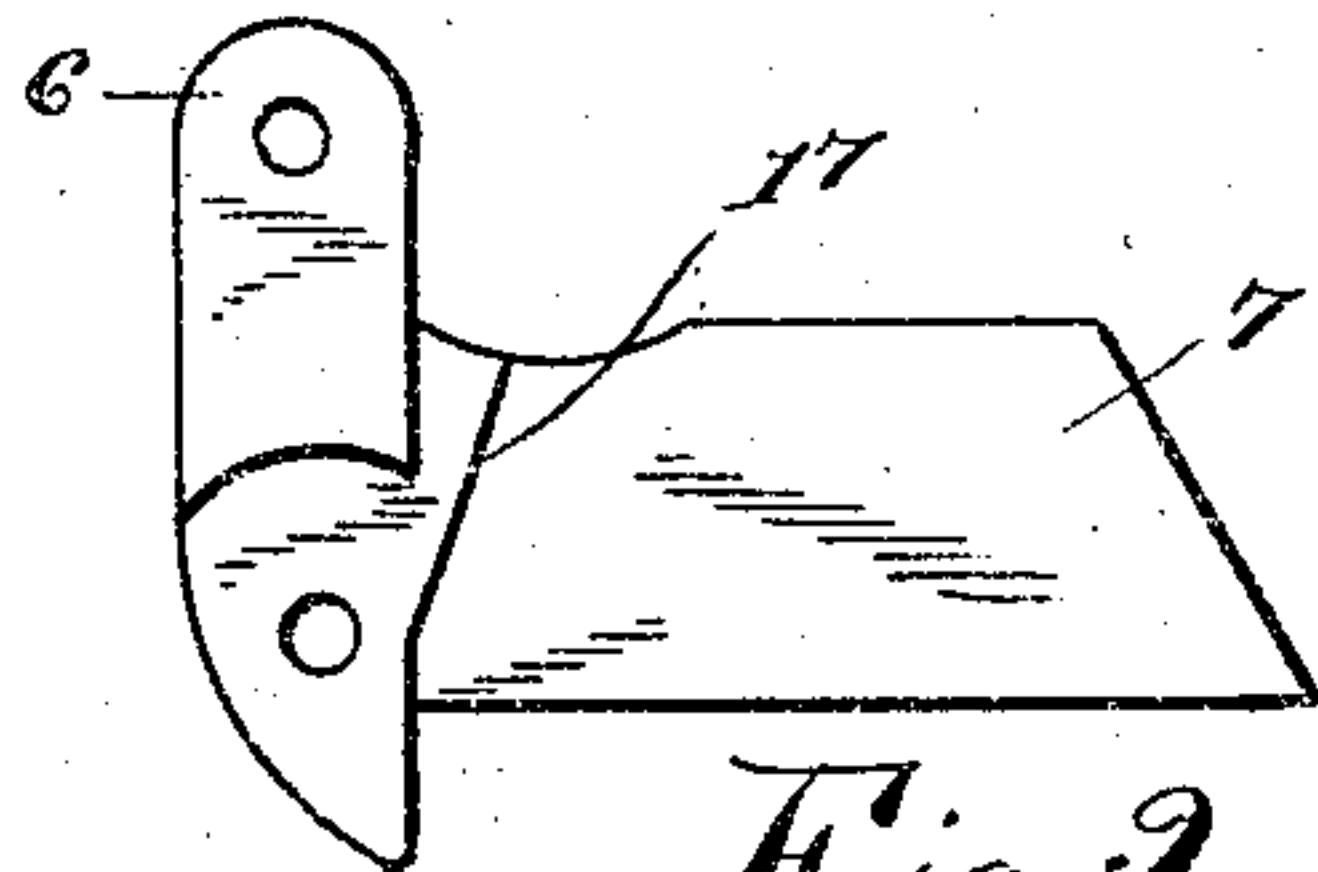
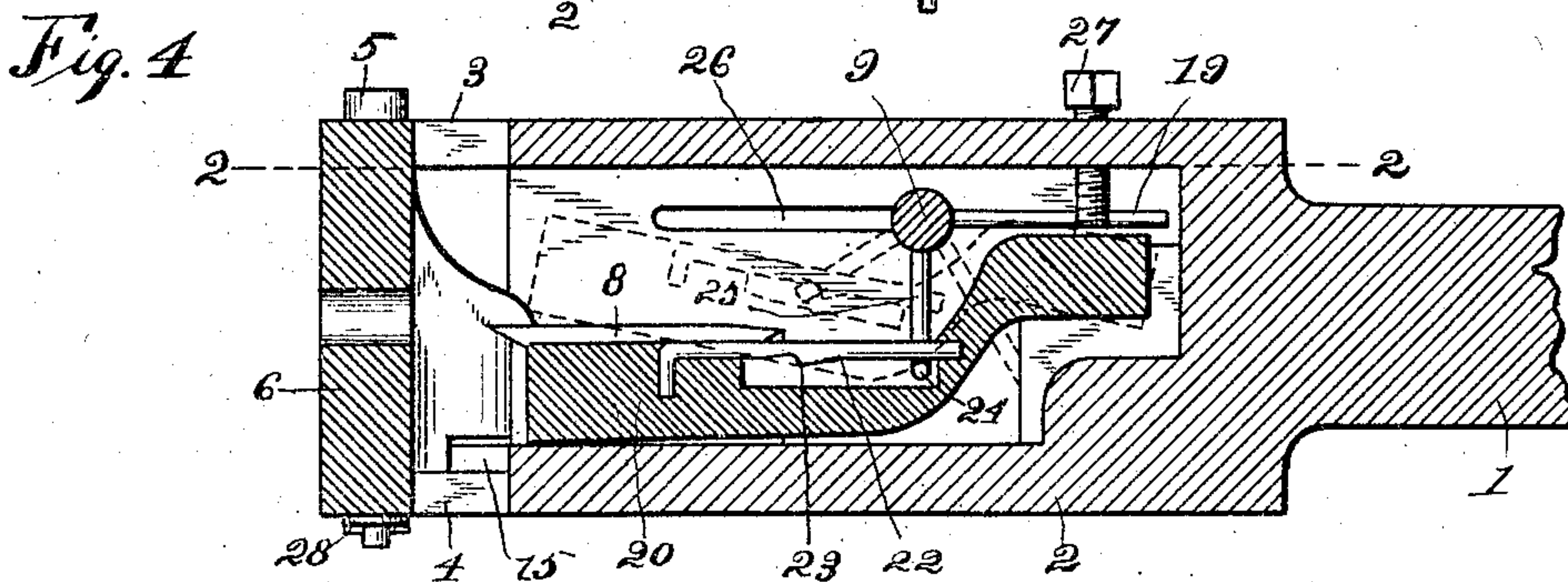
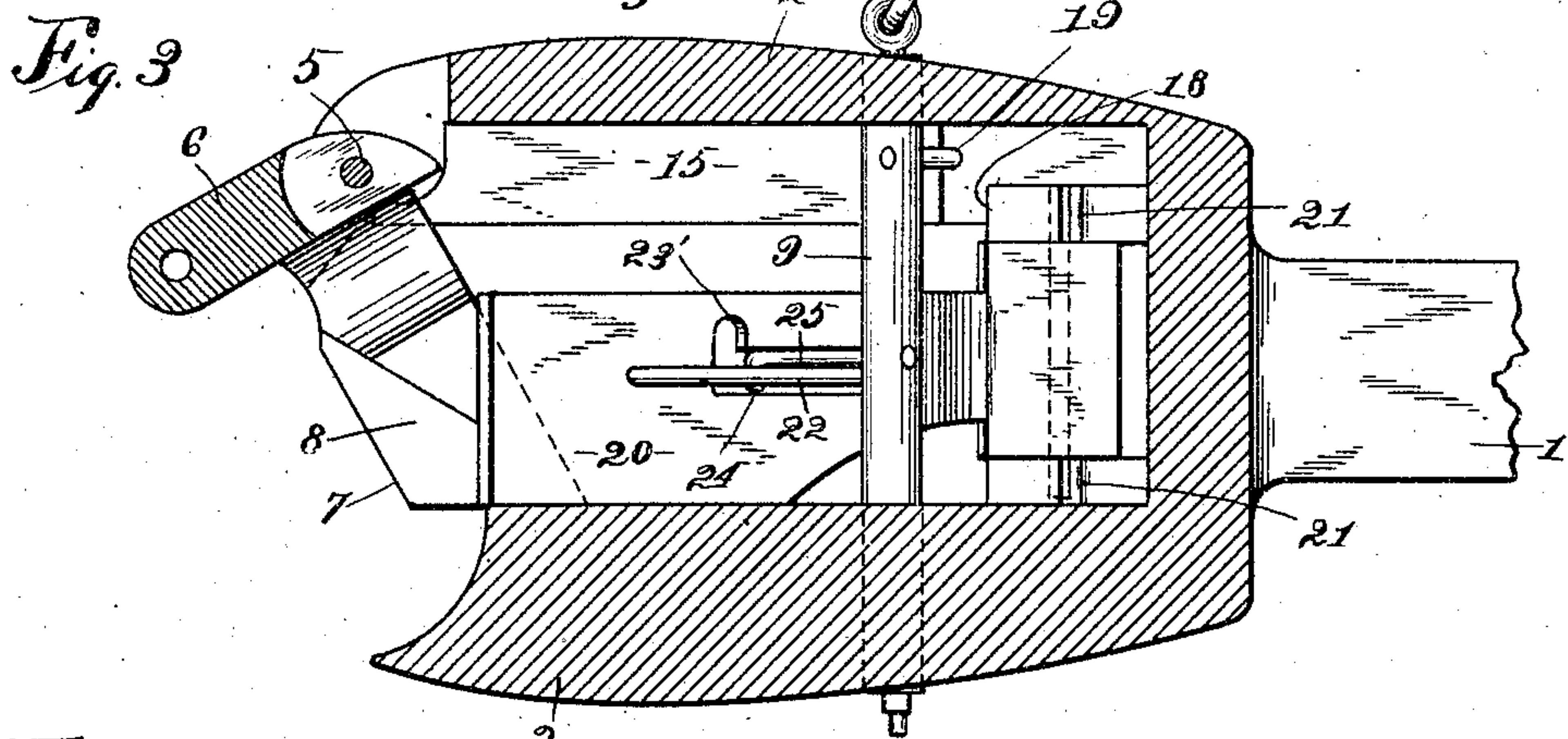
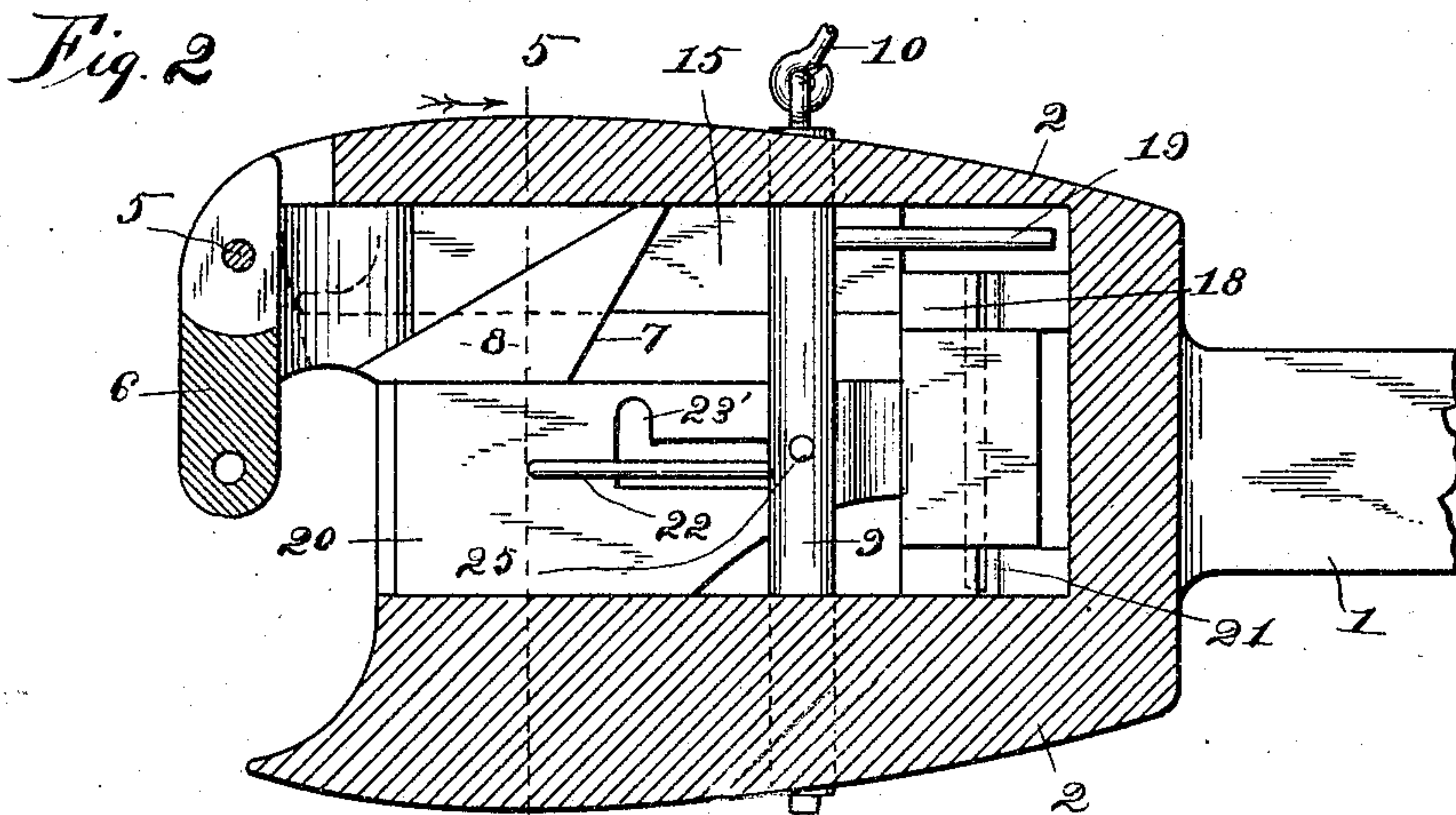
R. Hamilton.
M. L. Lange

INVENTOR,
T. A. Savage
By Higdon & Higdon
attys

T. A. SAVAGE.
CAR COUPLING.

APPLICATION FILED JUNE 28, 1904.

2 SHEETS—SHEET 2.



WITNESSES:

R. E. Hamilton.
M. L. Lange

INVENTOR,

T. A. Savage
By Higdon & Higdon
Attys

UNITED STATES PATENT OFFICE.

THOMAS A. SAVAGE, OF KANSAS CITY, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 785,382, dated March 21, 1905.

Application filed June 28, 1904. Serial No. 214,444.

To all whom it may concern:

Be it known that I, THOMAS A. SAVAGE, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented new and useful Improvements in Car-Couplers, of which the following is a specification.

My invention relates to improvements in car-couplers of that class in which the coupling is effected by coengagement of two jaws or knuckles without the presence of links or pins.

The object of the present invention is to improve upon the construction for which Letters Patent No. 756,645 of the United States were issued on the 5th day of April, 1904.

Reference is now had to the accompanying drawings, in which--

Figure 1 is a perspective view of one of my improved couplers with the means for disengaging it from another coupler. Fig. 2 is a sectional plan view taken on line 2 2 of Fig. 4, the knuckle being in closed position. Fig. 3 is a similar view, the knuckle having been thrown open by rotation of the shaft 9. Fig. 4 is a vertical longitudinal section of the coupler, the parts being in the same position as shown in Fig. 2. Fig. 5 is a transverse sectional view taken on line 5 5 of Fig. 2. Fig. 6 is a detached perspective view of the part which I term the "lock-block." Fig. 7 is a detached perspective view of the knuckle. Fig. 8 is a detached perspective view of the uncoupling-slide. Fig. 9 is a bottom plan view of the knuckle, showing the part engaged by the uncoupling-slide.

Referring to Figs. 2, 3, and 4, 1 is a portion of a draw-bar, on the end of which the body 2 of the coupler is formed. The top and bottom of the body 2 are provided with two horizontally-projecting ears 3 and 4, through which passes a pivot-pin 5, on which is swung the knuckle or jaw 6.

As most clearly shown in Fig. 7, the knuckle 6 has an integral inwardly-extending portion 7, hereinafter called the "tail" of the knuckle. This portion is formed with an inclined surface 8, which facilitates the passing of the tail under the lock-block when the latter is raised. It will be observed that the

metal composing the tail 7 is thickened as it merges into the knuckle, thus providing ample strength to meet the stresses to which these parts are subjected.

Passing transversely through the coupler is a rockable shaft 9, to one end of which an operating-rod 10 is connected in such a manner that rotation of said rod will turn the shaft. Rod 10 is provided with a handle 11 in proximity to the side of the car. On the other end of the shaft 9 a lever 12 is rigidly secured, and a rod 13 connected thereto extends up to a point adjacent the top of the car, being provided with a handle 14, so that the coupler may be operated from the top of the car, which effects a saving of time and labor to the brakeman when coupling or uncoupling cars. Fitted in a suitable groove in the bottom of the coupler on the same side as the knuckle 6 is a slidable bar 15, the outer end 16 of which passes under the tail of the knuckle and abuts against an inclined shoulder 17 formed on the bottom thereof. (See Fig. 9.) The inner end of the slide 15 abuts against a fixed shoulder 18, Figs. 2 and 3. A finger 19 of just the right length to engage the inner end of the slide 15 is tightly driven through a hole drilled in the shaft 9. Thereby when the shaft is turned (the knuckle being closed) the slide 15 will push against the shoulder 17 and will thereby turn the knuckle to open position. Preferably the slide and its groove are beveled, as shown, so that the slide cannot become displaced upwardly.

Unless the shaft 9 be turned the knuckle is prevented from turning or opening by a lock-block 20. (Shown detached in Fig. 6.) The outer portion of this block loosely fits the space between the tail 7 and the opposite side of the body 2 when in normal position. It is pivoted adjacent the inner end of the coupler by trunnions or studs 21, which rest in grooves formed in the subjacent portions of the body 2. Thus before insertion of the shaft 9 the block 20 may be passed into the body of the coupler and the trunnions 21 dropped into position, and the block may also be removed for repairs. Cast in the upper surface of the lock-block is a rod 22, below which is formed a recess 23, the purpose of

which is to give clearance to a depending hook 24, which lies just beneath the said rod 22. The stem 25 of this hook is driven through a hole drilled in the shaft 9. A slot 26 is formed
 5 in the thinner side of the body 2, so that the hook or stem 25 may be passed into the interior of the coupler when the shaft is inserted. A lateral extension 23' of recess 23 permits the hook to be passed under the rod 22 when
 10 assembling.

It will now be understood that when the shaft 9 is turned from its normal position the lock-block 20 will first be tipped up at its outer end by means of a hook 24, engaging
 15 the rod 22, thereby releasing the tail of the knuckle. When the lock-block reaches a sufficient height, the finger 19 strikes the slide 15, which swings the knuckle out to open position, its tail passing under the lock-block.
 20 The impact of the two knuckles coming together will turn them to closed position, in which they interlock, as the lock-blocks will automatically fall to normal position, preventing movement of the tails.

To prevent the possibility of the trunnions 21 being lifted out of their sockets when the lock-block is being lifted, I provide a set-screw 27, which passes through the top of the
 25 body 2 and almost touches the top of the lock-block in line with the trunnions. Before removing the lock-block from the coupler this screw is run up until flush with the inner side of the top.

The knuckle-pin 5 may be secured at its
 35 lower end with a cotter, as 28, Fig. 4.

By means of the construction described the spring shown in the aforesaid Patent No. 756,645 is dispensed with and the construction is otherwise much simplified, and there-
 40 fore improved.

I am aware that various modifications may be made without departing from the spirit and scope of my invention, and I do not wish to limit myself to the precise details of construction and arrangement shown in the draw-
 45 ings.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

50 1. In a car-coupler the combination, with

the body portion, of a knuckle pivotally mounted thereon, the lower face of the knuckle having a shoulder 17 thereon, a longitudinally-slidable bar supported by the bottom
 55 of the body portion, one end of said bar being adapted to engage said shoulder of the knuckle, a transverse rockable shaft, a finger carried by the shaft, said finger being adapted to engage the opposite end of the slidable
 60 bar, whereby the knuckle may be thrown open by partial rotation of the shaft, substantially as described.

2. In a car-coupler the combination, with the body portion, of a knuckle pivotally
 65 mounted thereon, the lower face of the knuckle being provided with a shoulder 17, a longitudinally-slidable bar supported by the bottom of the body portion, one end of said bar being normally in contact with said shoulder,
 70 of the knuckle, a transverse rockable shaft, a finger carried by said shaft, said finger being adapted to strike the opposite end of the slidable bar, whereby the knuckle may be thrown open by partial rotation of the shaft, sub-
 75 stantially as described.

3. In a car-coupler the combination, with the body portion, of a knuckle pivotally
 80 mounted thereon, the knuckle having integral therewith a tail portion 7 and a shoulder 17, a longitudinally-slidable bar one end of which is adapted to engage said shoulder 17,
 85 and a transverse rockable shaft carrying a finger which is adapted to strike the opposite end of said slidable bar; in combination with a rearwardly-pivoted lock-block which nor-
 90 mally engages the tail of the knuckle and holds the knuckle in closed position, and an arm carried by the shaft and engaging the lock-block in such a manner that when the shaft is turned the lock-block is first lifted,
 95 the said finger then causing the knuckle to be thrown open, the tail 7 passing beneath the lock-block, substantially as described.

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

THOMAS A. SAVAGE.

Witnesses:

M. L. LANGE,

K. M. IMBODEN.