

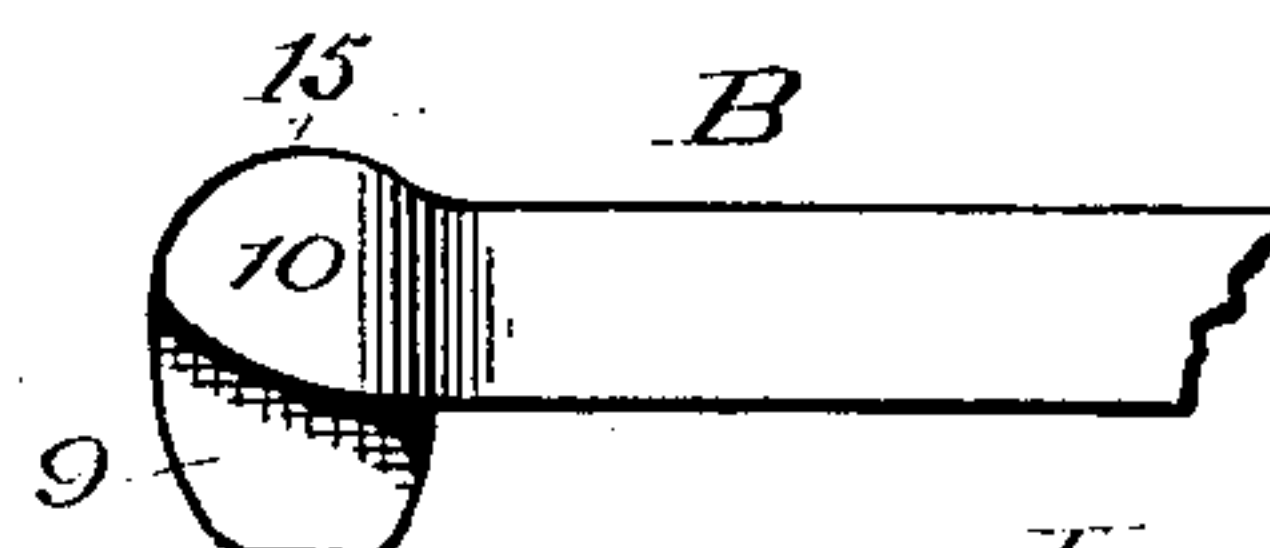
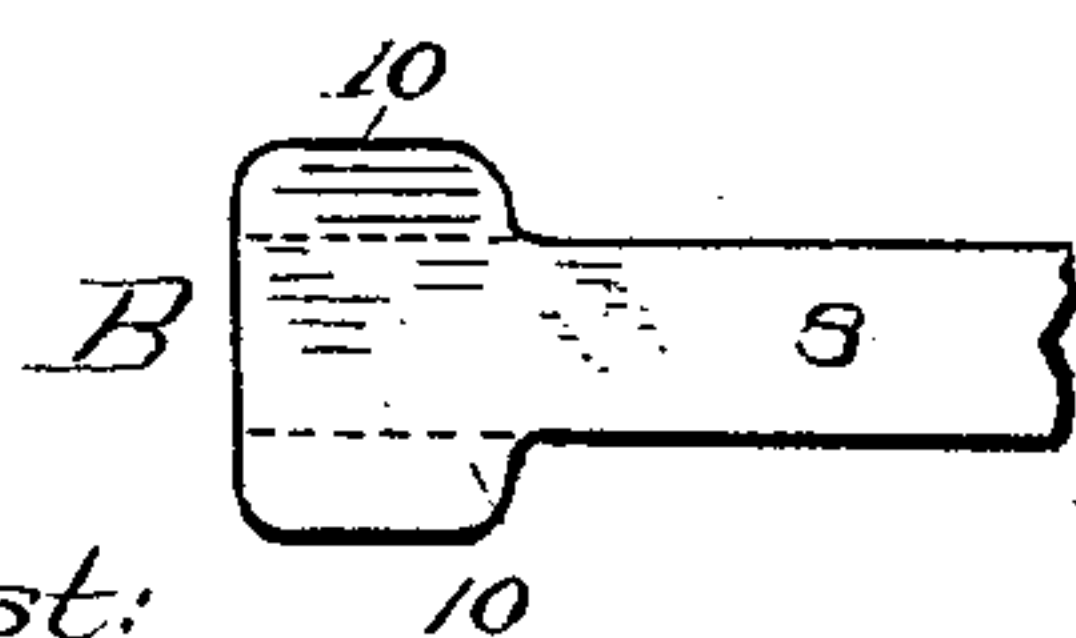
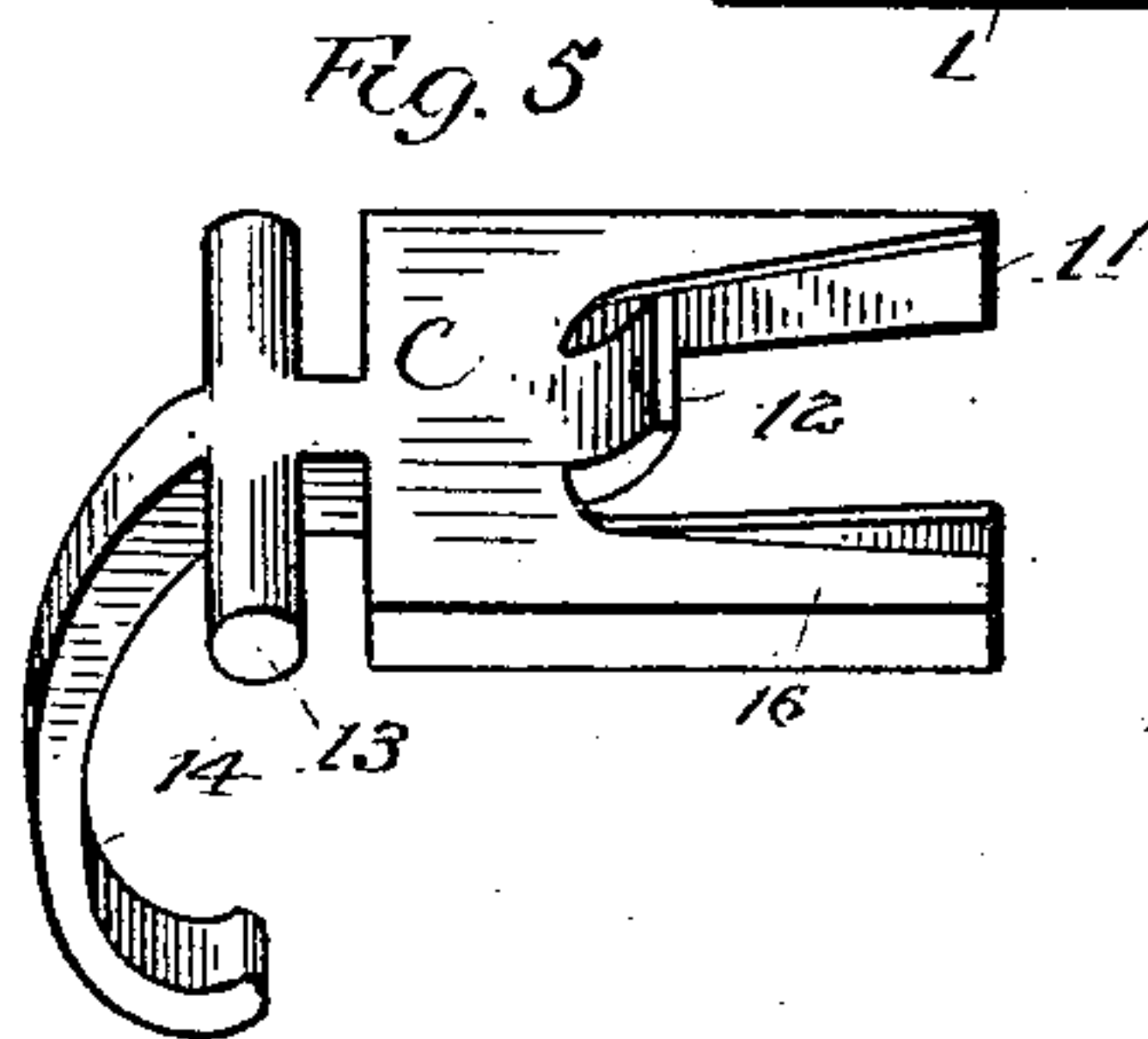
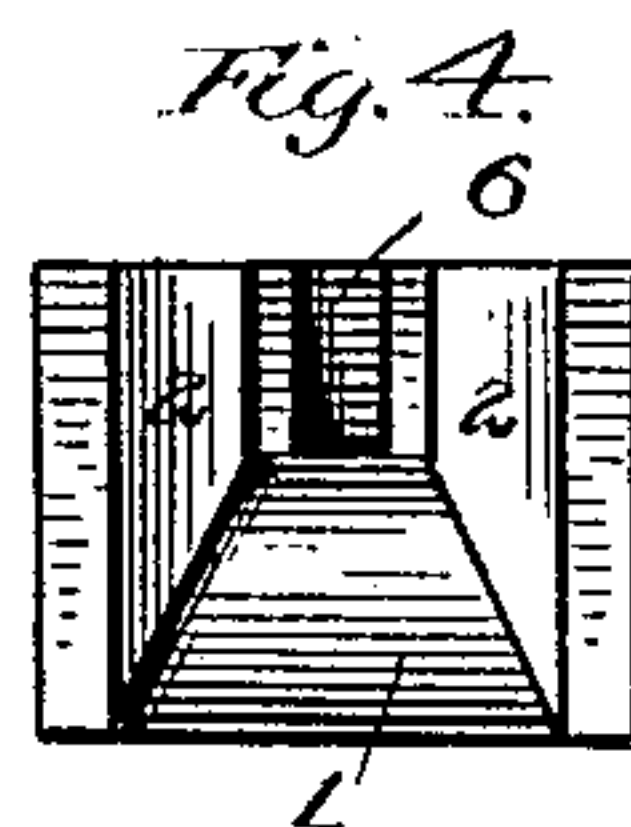
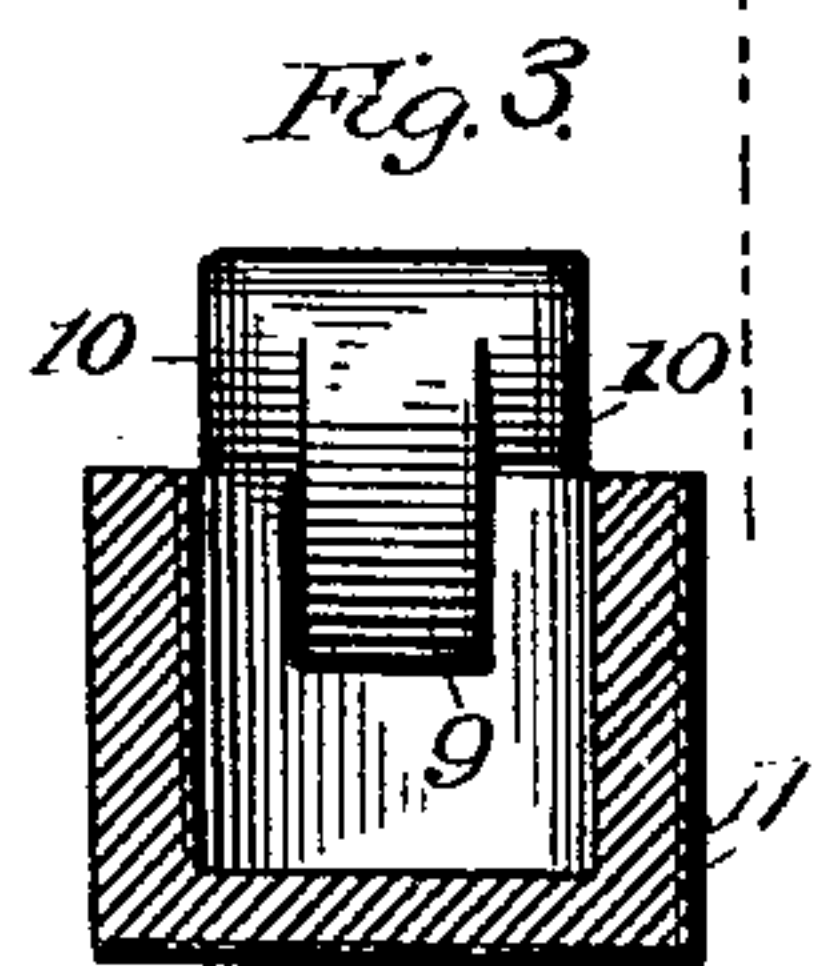
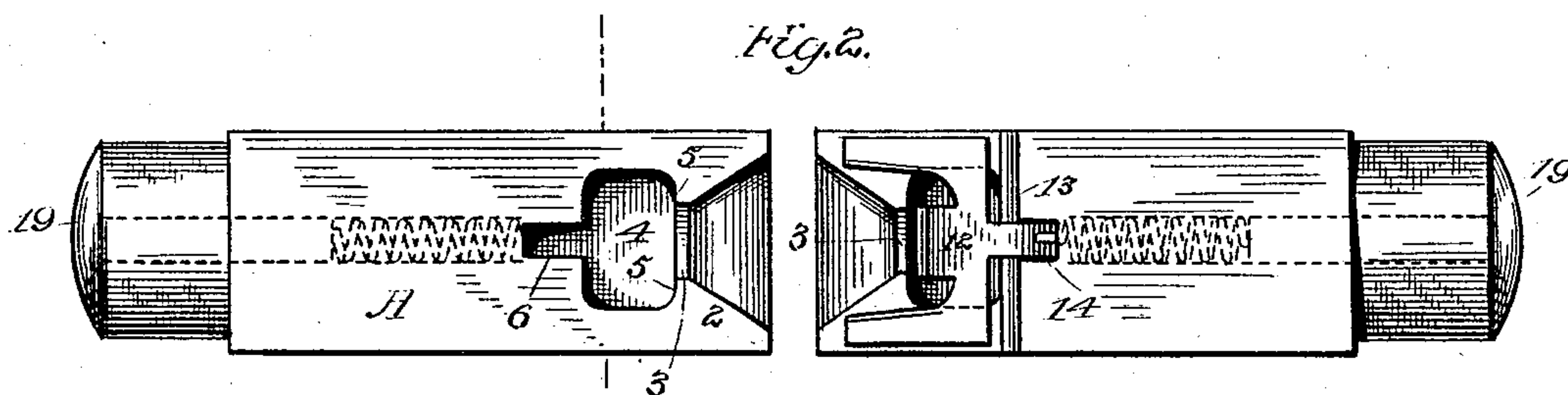
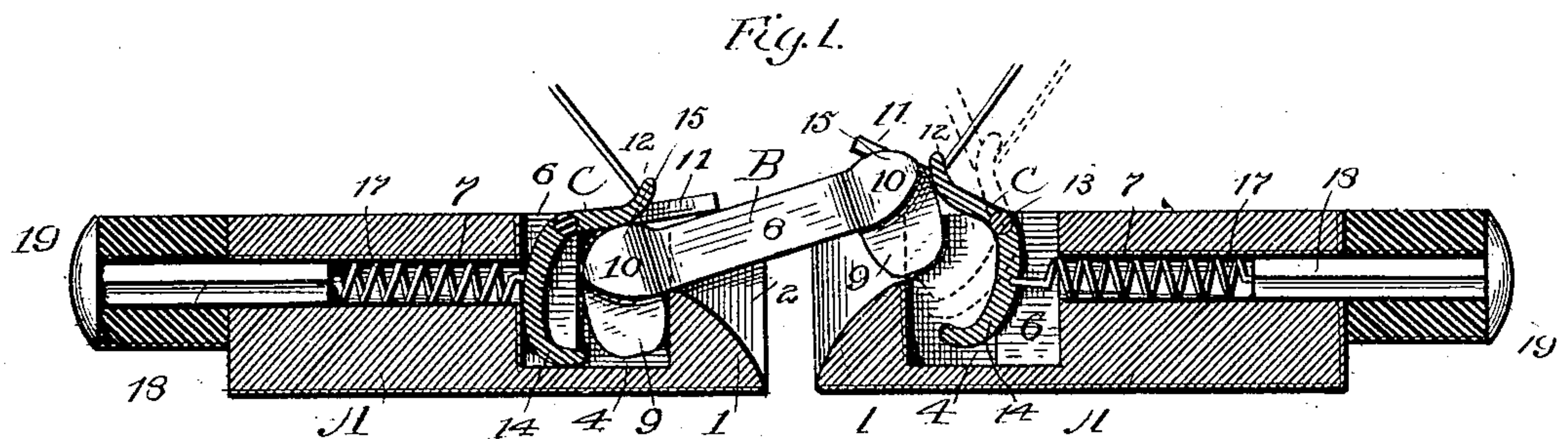
(No Model.)

D. W. COBURN.

CAR COUPLING.

No. 275,150.

Patented Apr. 3, 1883.



Attest:
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Atty.

UNITED STATES PATENT OFFICE.

DANIEL W. COBURN, OF BUFFALO, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 275,150, dated April 3, 1893.

Application filed February 21, 1893. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. COBURN, of Buffalo, in the county of Leon and State of Texas, have invented a new and useful Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to an improvement in automatic car-couplings; and its object is to simplify the construction and cheapen the cost by reducing the number of parts, the device being thereby rendered more certain in operation and less liable to get out of order and need repair.

My invention comprises a draw-head slotted from top to bottom, and having at its forward end an incline, a peculiar latch to engage automatically with the slot in the draw-head, a pivoted weight for holding the latch in position, and a lever pivoted in the draw-head and operated from the outside for throwing up the latch and uncoupling the car.

The invention consists in various improvements in construction and novel combinations of the operative parts, fully hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a central longitudinal section of adjacent draw-heads, with the coupling-latch in side elevation. Fig. 2 is a top or plan view. Fig. 3 is a section on line *x x*, Fig. 2. Fig. 4 is a front view of the draw-head. Fig. 5 is a perspective view of the pivoted weight and lever. Fig. 6 shows details of the latch.

A represents the draw-heads of a car, which externally are of rectangular form, and are mounted in the frame-work of the car so as to have a slight longitudinal movement when struck by the draw-head on the next car. At the front end of each draw-head is an incline, 1, the draw-head at that point being slotted, and the side walls, 22, of the slot converge, as shown in Fig. 2, to the shoulder 3. The shoulder 3 is formed by means of a deep chamber, 4, which extends from the top nearly to the bottom of the draw-head, such shoulder being about half the height of the draw-head, which is entirely open above it. The width of the chamber 4 is slightly greater than the width of shoulder 3, so that there are formed projections 5 5, Fig. 2. The chamber 4 communi-

cates with a narrow slot, 6, in the draw-head, of the same depth as such chamber, and this in turn with a longitudinal slot, 7, extending through to the rear end of the draw-head, Figs. 1 and 2. The form of the connected slots and chamber of the draw-head is clearly shown in Fig. 2.

B represents the coupling-latch, which consists of a square shank, 8, having at each end a triple catch, 9 10 10. The catch 9 is a downward projection of the latch, having rounded corners, so as to slide freely up the incline in the draw-head. The form of the side catches, 10 10, is shown in Fig. 6. They are upon the level of the shank 8, and project sidewise at right angles to the direction of the catch 9. Their shape is such that the shape of the end of the coupling-latch (in plan view) is similar to that of chamber 4 of the draw-head.

In the operation of coupling, the head of the latch is held in the chamber 4 of one of the draw-heads, (by means to be hereinafter described.) On approaching a car the catch 9 of the latch slides up the incline in the opposing draw-head and falls over the shoulder 3 into the chamber 4. The side catches, 10, at the same time engage with the projections 5 5, so that the latch is held firmly at three points, while at the same time the rounded corners permit it the slight movement necessary on curves. The latch is held in engagement with the draw-head by a weight, C. (Shown in perspective in Fig. 5.) It consists of a slotted front plate, 11, a tongue, 12, a pivot or journal, 13, and a curved lever, 14. It is journaled in the narrow slot 7 of the draw-head, and extends forward, the tongue 12 bearing upon the upper part of the head of the latch, which is slightly rounded, as shown at 15. The side projections, 16, formed by the slot in the front plate, give the device sufficient weight to hold the latch in position without danger of jarring out. The lever 14, which forms an integral part of the weight, extends substantially at right angles to the front plate, and, curving forward at its lower end, is adapted to bear upon the lower side of the catch 9. To this lever is connected a stiff tension-spring, 17, which is held in the slot 7 of the draw-head, and is connected to a square bolt, 18, which fits in such slot. The tension of the spring

tends to draw the lever out of contact with the latch, as shown in the left-hand draw-head in Fig. 1.

To the tongue 12 of the weight is attached a cord, chain, or other operating device, which, (in case of a box-car) is carried up to the top of the car, or connected in any convenient and readily-accessible manner.

It will be readily understood now that the entering latch, rising on the incline, raises the weight against the tension of the spring until the catches have engaged with the shoulders 3 5 5, when the spring and its own weight will cause the plate to drop the tongue 12 bearing on the top, while the slot in such plate permits the slight freedom of motion required. In uncoupling, the cord is pulled, throwing back the plate and forward the lever, and raising the latch above the shoulder 3, when it drops out of the draw-head, the spring immediately throwing the weight and lever into position.

Upon the end of the bolt 18 is a flat head or plate, 19. The bolt extends out of the draw-head, between which and the head 19 is interposed a heavy spring-buffer, which I have shown in the drawings as a solid block of rubber. This yields to sudden pressure on the draw-head and lessens the jar and concussion of the shock caused by the meeting of two unyielding or rigid draw-heads.

The construction of my draw-head with an open top permits the latch to be self-adjusting to cars having draw-heads of different height, there being nothing to interfere with the vertical movement required.

Having described my invention, I claim—

1. A draw-head having an inclined mouth

and a top entirely open above such mouth, converging side walls, and a chamber, 4, in the rear of the inclined mouth, in combination with a coupling-latch having the downwardly-projecting catch 9 and the side catches, 10 10.

2. In a car-coupling, the combination of an open-topped draw-head having a shoulder, as 3, a latch engaging directly with such shoulder, a plate resting upon such latch to hold it in engagement, a pivoted lever, a tension-spring, and a chain or equivalent device for operating the lever against the tension of the spring.

3. The coupling-latch having the downwardly-projecting catch 9, the side catches, 10 10, and the rounded top 15.

4. Combined with the draw-head and coupling-latch, the weight C, composed of a slotted plate, a tongue, 12, a pivot, and a curved lever.

5. Combined with the draw-head having the chamber 4, and the narrow slot 6, connected thereto, and with the coupling-latch, the pivoted lever contained in such slot, and means for operating such lever, substantially such as described.

6. In combination with a draw-head having the inclined mouth, the chamber 4, and the slots 6 7, the coupling-latch, the weight and lever, and the spring connected to such lever.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL W. COBURN.

Witnesses:

L. W. SEELY,
JOHN B. THOMPSON.