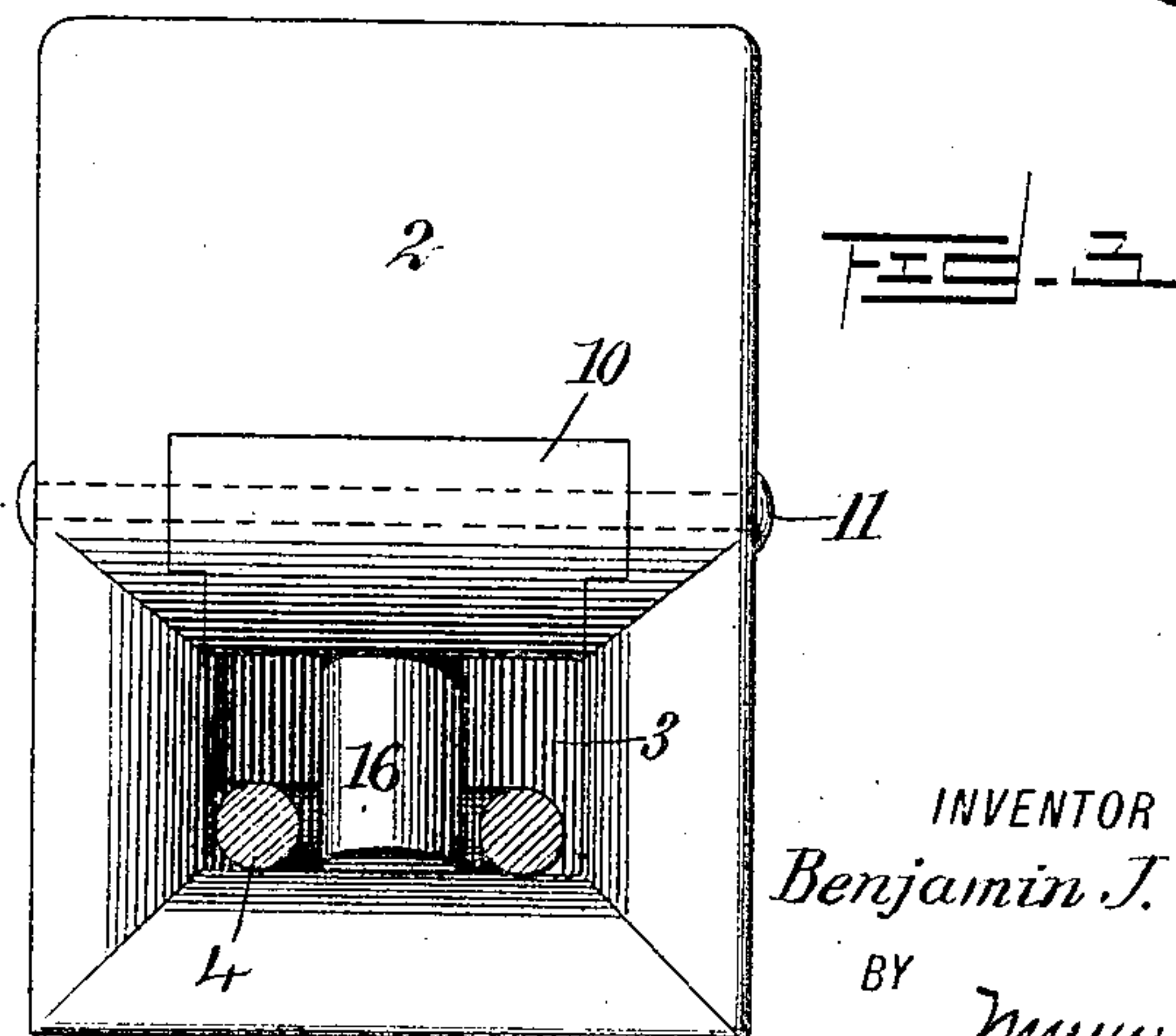
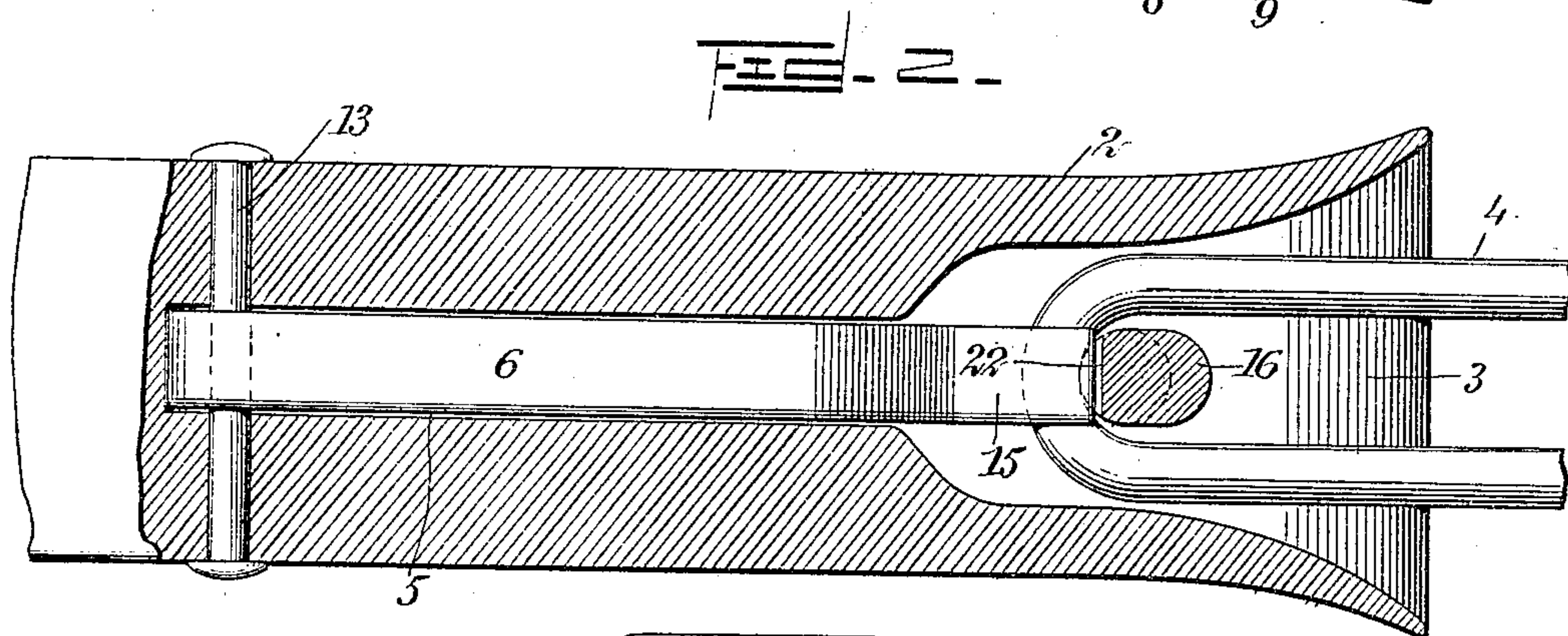
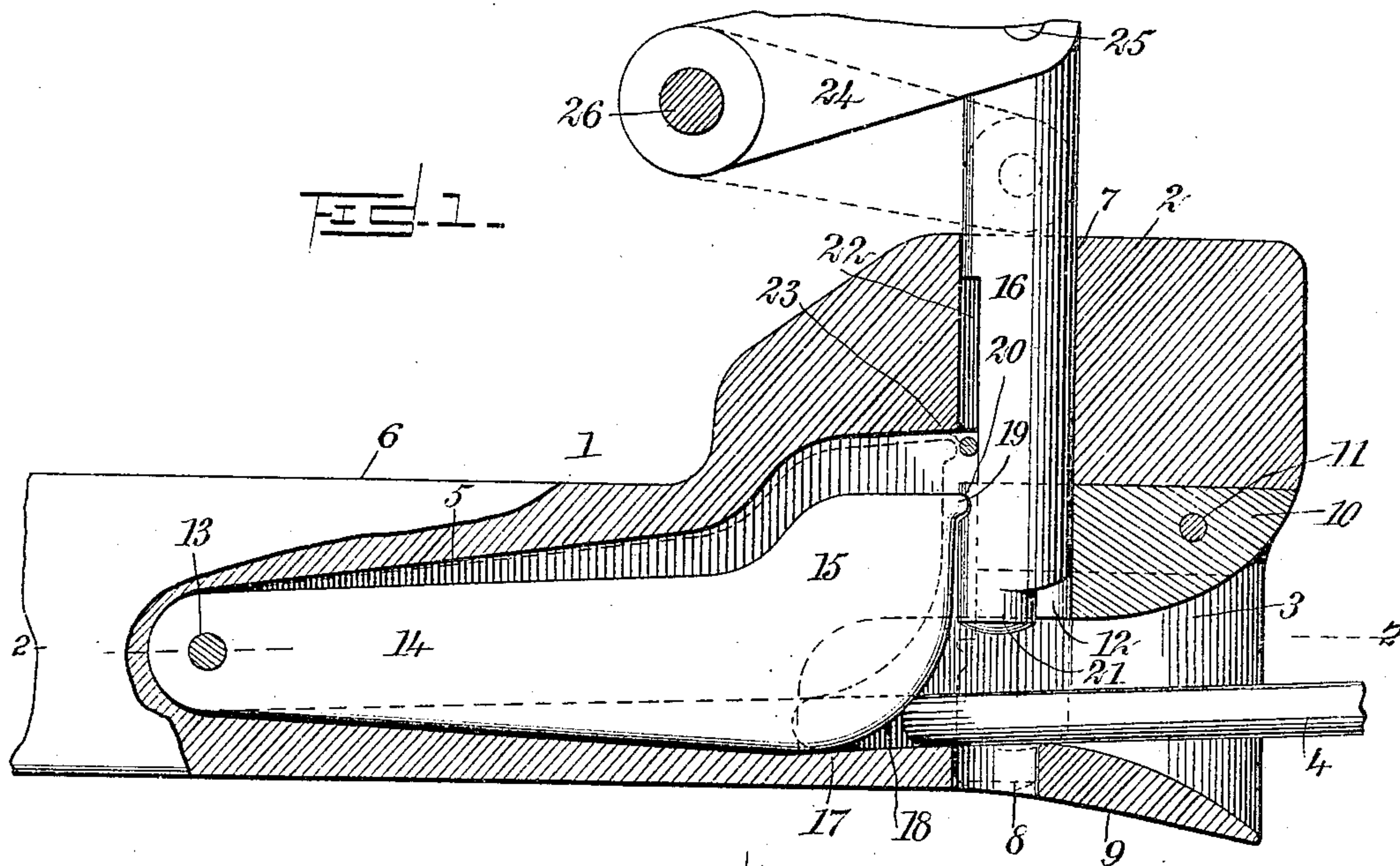


No. 816,711.

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B. J. COBB.
CAR COUPLING.
APPLICATION FILED JULY 8, 1905.



WITNESSES:

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BENJAMIN J. COBB, OF LEESVILLE, LOUISIANA.

CAR-COUPLING.

No. 816,711.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed July 8, 1905. Serial No. 268,763.

To all whom it may concern:

Be it known that I, BENJAMIN J. COBB, a citizen of the United States, and a resident of Leesville, in the county of Vernon and State of Louisiana, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

This invention relates to car-couplings; and it consists, substantially, in the details of construction and combinations of parts hereinafter more particularly described, and pointed out in the claims.

The invention has reference more especially to the automatically-operated car-couplings of the link-and-pin type; and one of the principal objects of the invention is to provide a structure of this character of an embodiment by which to overcome numerous disadvantages and objections hitherto encountered in many former contrivances devised with like ends in view.

A further object is to provide an automatic car-coupling of the link-and-pin type, which is simple in construction and comparatively inexpensive to manufacture, besides being secure and strong, effective and reliable in operation, and possessing the capacity for long and repeated service.

The above and additional objects are attained by means substantially such as are illustrated in the accompanying drawings, forming a part of this specification, in which similar reference characters designate similar parts in all the views, and in which—

Figure 1 is a vertical longitudinal sectional view of one member of my improved car-coupling, showing very clearly the construction of the automatically-actuated pin and the controlling-block therefor located within the coupling-head. Fig. 2 is a horizontal longitudinal sectional view on the line 2 2 of Fig. 1, and Fig. 3 is an end elevation looking from the right in Fig. 1.

Before proceeding with a more detailed description it may be stated that in the form of my improvements herein shown I employ a car-coupling of the ordinary link-and-pin type, comprising coupling members, each being practically a duplicate of the other, and therefore but one of such members has been illustrated herein for the purpose of explaining the construction and operation of the coupling. As herein shown, I employ a specially-constructed coupling member for each of the two cars to be coupled together, associated with which is an ordinary coup-

ling-link, together with a specially-constructed pin-fastening therefor, cooperating with which is a controlling-block of special construction located and operating interiorly of the coupling member.

While I have herein represented my improvements in a certain preferred embodiment, it will be understood, of course, that I am not limited thereto in precise detail, since immaterial changes therein may be resorted to coming within the scope of my invention.

Reference being had to the drawings by the designating characters thereon, 1 represents in entirety one of the duplicate coupling members employed by me in the carrying out my invention, said member comprising a coupling-head 2, which is hollowed out from the inner end thereof, so as to provide a mouth 3 for the insertion or introduction within the head of an ordinary link 4, said mouth 3 being of the desired capacity both diametrically and longitudinally of the structure, and the walls thereof merging into a throat 5, extending interiorly of the shank 6, leading from the said coupling-head 2. The upper portion of the coupling-head is formed with an opening 7 extending therethrough vertically, while coinciding with this opening is another opening 8, formed in the lower part 9 of the said mouth 3 of the coupling-head, said last-named opening being less in diameter than said opening 7 for a purpose which will presently be explained. Located within the mouth 3 and supported between the side walls thereof directly adjacent to the inner surface of the said upper part 2 of the coupling-head is a block or wedge 10, which is removably secured in position by means of a rod or bolt 11, extending transversely through the same, as well as the said side walls of the mouth, it being noted that this block or wedge is slotted or cut out at the inner portion thereof to provide a notch 12, extending from the inner face thereof and coinciding in position with the hereinbefore-mentioned opening 7, parts of the surface of the walls of said notch forming practical continuations of corresponding parts of the surface of the walls of the said opening 7.

Pivoted between the side walls of the throat 5 at 13 is the inner end of an extension 14 of a block 15 for controlling the fall or drop of a coupling-pin 16 to coupled relation with the link 4, by which two cars may become united or coupled together in a manner well understood. The block 15 of its own weight tends

to rest upon the lower surface portion 17 of the interior of the coupling-head, and the forward or outer face thereof is struck on a curve 18, as shown, the upper extremity of which terminates in an outturned lip 19, operating at the proper time to be received within a notch 20, formed in the adjacent surface portion of the said pin 16, the main body of the latter being of a diameter equal to that of the opening 7 of the coupling-head 2, as well as that of the notch 12 of the block or wedge 10, while the lower end thereof is formed with an extension 21 of decreased diameter to fit within the opening 8 of the hereinbefore-mentioned lower part 9 of the mouth 3 of the coupling-head in the lowered position of the said pin. The pin 16 is also provided in the face thereof adjacent to the controlling-block 15 with a longitudinal groove 22, transversely through which and supported in the side walls of the coupling-head is a rod or pin 23, serving as a stop to limit the downward movement of the pin, as well as preventing the latter from being entirely withdrawn in the upward movement thereof, it being here mentioned that preferably the raising or lifting of said pin is effected by means of a suitable arm or lever 24, movably connected with the upper end of the pin at 25 and having a pivotal support at 26, although it is apparent that other means for this purpose may be employed, if desired.

From the foregoing it will be seen that when the controlling-block 15 is in the position indicated in full lines in Fig. 1 the coupling-pin 16 will be in the position indicated in dotted lines in said figure, while the link 4 will be obviously held in position by said pin, this being the position occupied by the parts referred to when two cars are coupled together, it being noted that the said link 4 is assisted to be held in the desired relation to the pin, both for coupling and uncoupling cars, by the weight of the said block 15 resting upon the inner end thereof, substantially as indicated. When it is desired to disconnect the coupling member from its fellow member, (not shown,) and thus uncouple the cars, it is simply necessary to elevate the pin 16 through the medium of the aforesaid arm or lever 24 or in any other way, and when the upper edge of the notch 20 in said pin is brought into contact with the lower edge of the lip 19 of the controlling-block 15 this block will be lifted slightly with the pin to permit of the lip passing within the notch, as will be apparent. Whenever coupled relation is to be established between the two coupling members, the coupling-link 4 (which, as will be understood, is usually permanently maintained on the coupling-pin 16 of one or the other of the coupling members) of one member is caused to enter the mouth of the other member, while the pin 16 is held in the elevated position thereof through the

coöperative action therewith of the aforesaid block 15, whereupon as soon as the entering end of said link is brought into forcible contact with the curved face 18 of the now lowered controlling-block 15, said block is caused to be again lifted, (substantially to the position thereof indicated in dotted lines,) thus to effect clearance of the lip 19 from the notch 20, and thereby release the pin and permit it to fall or drop by gravity in such manner as that the link will be engaged by the lower portion thereof, while the extension 21 will enter the opening 8, thereby completing the coupling.

From the foregoing it will be seen that by removing the block or wedge 10 access to the interior of the coupling member may readily be had for any purpose desired—as, for instance, to insert or properly place in position the aforesaid controlling-block 15 and its shank—and while occupying its intended position within the mouth 3 of the coupling-head it is apparent that said block or weight also furnishes an increased bearing or operative surface for the movable coupling-pin 16, thus imparting additional strength to the entire structure and rendering the several movable parts less susceptible to breakage or distortion.

It will be observed that the forward part of the upper portion of the head 2 of the coupling member projects beyond the lower part 9 of the mouth 3 thereof, so that when the coupling member and its fellow are brought together the lips and sides of the mouth of each member will be prevented being injured or broken, as will be apparent.

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

1. A coupling, comprising a member having a head provided with a mouth for the entrance to the head of an end of a coupling-link, an engaging pin for the link slidable up and down within the head, and means for retaining the pin in its upward position, the forward upper portion of the head projecting beyond the corresponding lower portion thereof, as and for the purpose set forth.

2. A coupling, comprising a member having a head provided with a mouth for the entrance to the head of an end of a coupling-link, an engaging pin for the link slidable up and down within the head, and means for retaining the pin in its upward position, adapted to release the pin automatically on contact of the link with said means, the forward upper portion of the head projecting beyond the corresponding lower portion thereof, as and for the purpose set forth.

3. A coupling, comprising a member having a head provided with a mouth for the entrance within the head of an end of a coupling-link, said mouth merging into a throat extending into the shank of the head, an en-

gaging pin for the link slidable up and down within an opening therefor in the head, and means for retaining the pin in its upward position, embodying a controlling-block having
5 an outer curved face and a lip and provided with a shank pivoted at its extremity adjacent to the extremity of the throat, said pin having a notch in one side thereof in which
10 said lip is received as the pin is drawn upwardly.

4. A coupling, comprising a member having a head provided with a mouth for entrance within the head of an end of a coupling-link, an engaging pin for the link slidable up and down within an opening therefor
15 in the head, means for retaining the pin in its upward position, and a block removably supported in the upper part of the mouth for enabling access to the interior of said member.

5. A coupling, comprising a member having a head provided with a mouth for entrance within the head of an end of a coupling-link, an engaging pin for the link slidable up and down within an opening therefor in the head, means for retaining the pin in its
20 upward position, and a block removably supported in the upper part of the mouth for enabling access to the interior of said member, said block having a notch in the inner portion thereof for receiving and guiding the pin
25 when the latter is raised and lowered. 30

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

BENJAMIN J. COBB.

Witnesses:

LOUIS FOSTER,
H. A. BREMER.