

(No Model.)

F. A. BAIER.
BOX FASTENER.

No. 462,658.

Patented Nov. 3, 1891.

Fig. 1,

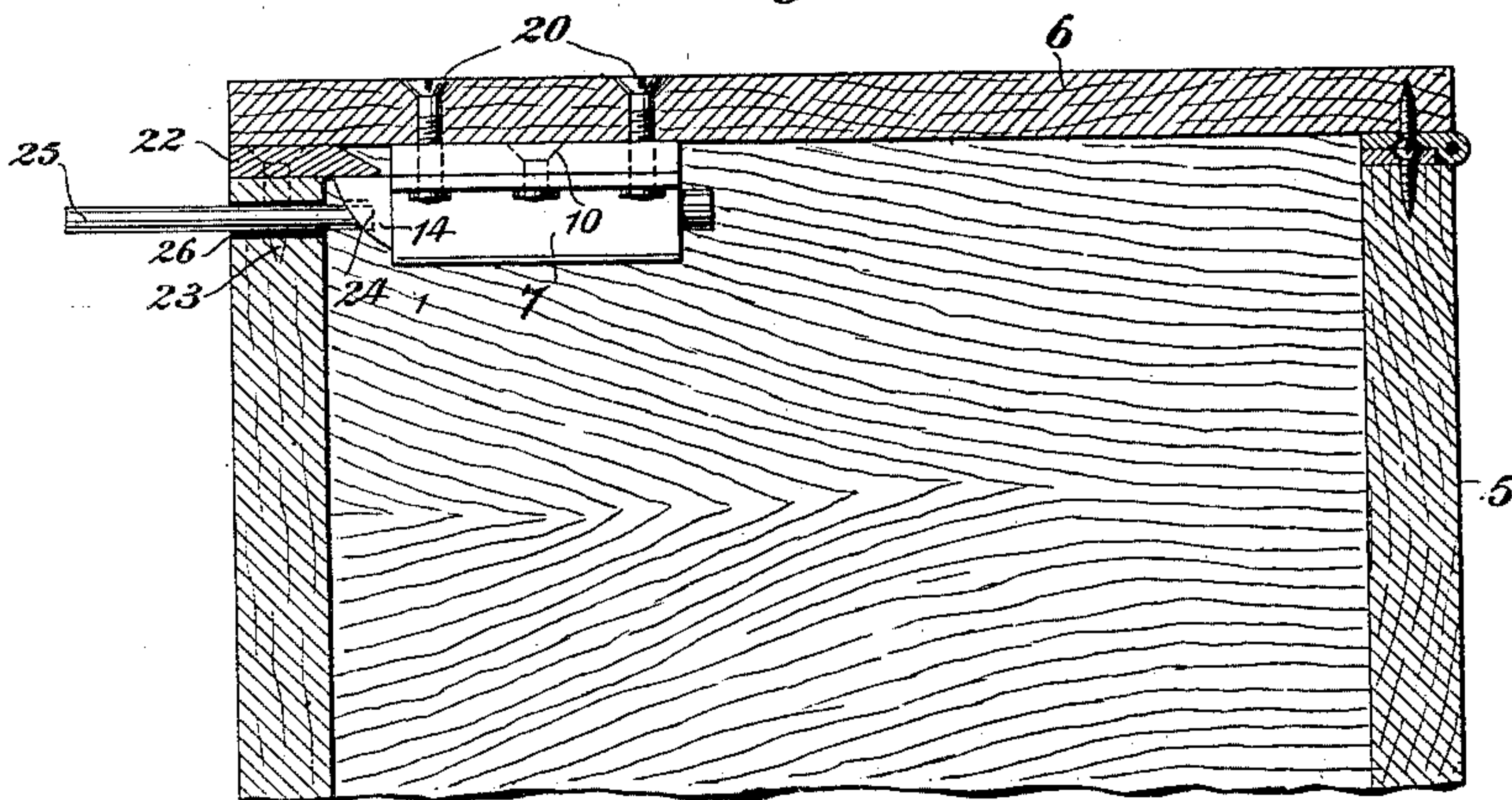


Fig. 2,

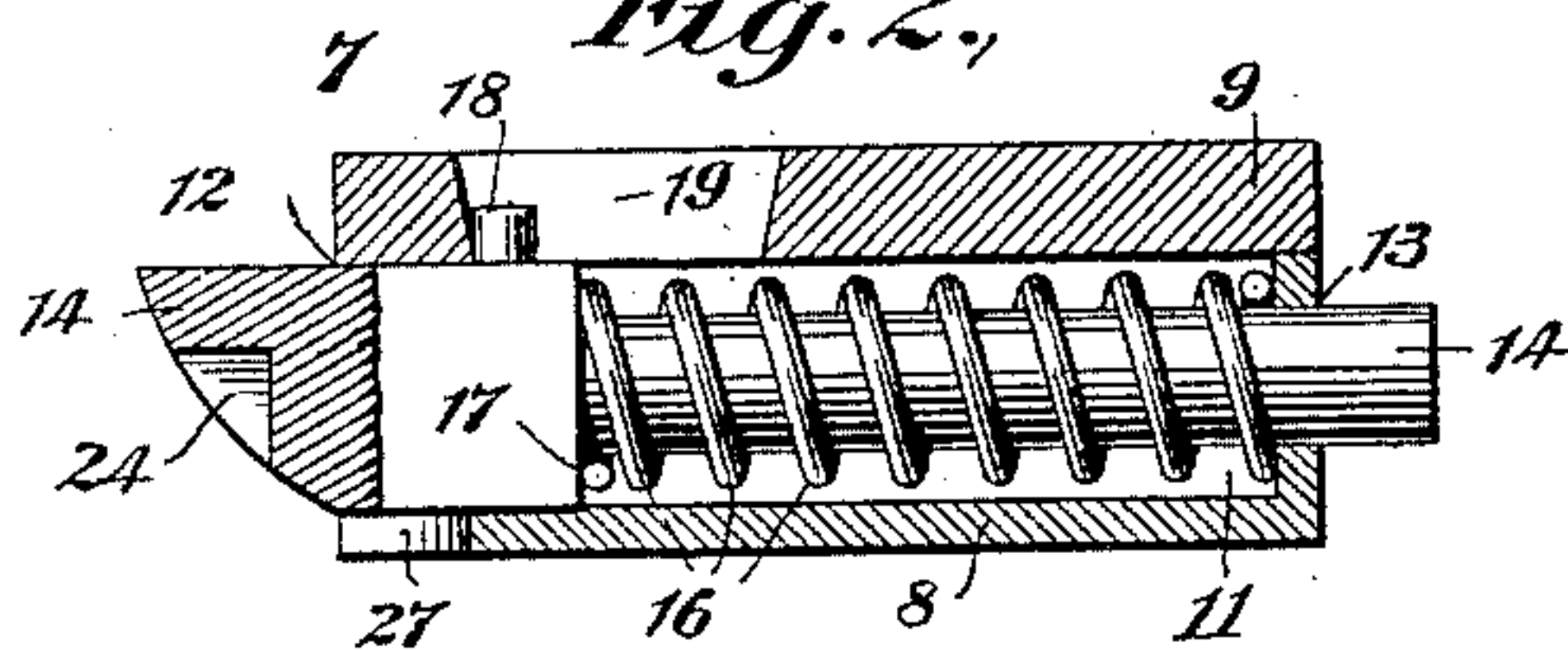
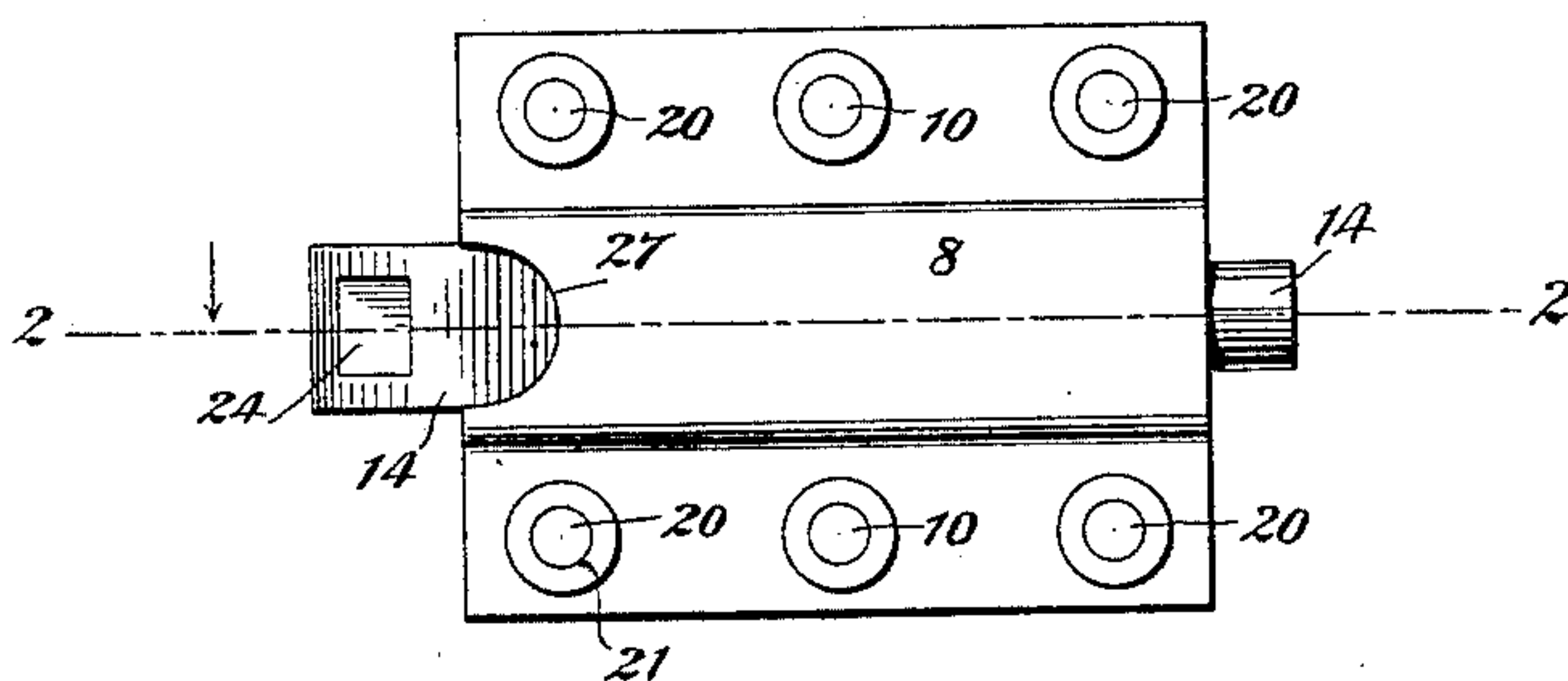


Fig. 3,



Witnesses

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UNITED STATES PATENT OFFICE.

FRANZ AUGUST BAIER, OF NEW YORK, N. Y.

BOX-FASTENER.

SPECIFICATION forming part of Letters Patent No. 462,658, dated November 3, 1891.

Application filed May 19, 1891. Serial No. 393,509. (No model.)

To all whom it may concern:

Be it known that I, FRANZ AUGUST BAIER, a citizen of the United States, residing at New York, county and State of New York, have invented certain new and useful Improvements in Box-Fasteners, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

In the said drawings, illustrating an application of my invention, Figure 1 is a view in cross-section of a box provided with my improved fastener, the lower part of the box being broken away for convenience of illustration. Fig. 2 is an enlarged sectional view of the fastener detached, the plane of the section being indicated by line 2 2, Fig. 3. Fig. 3 is an enlarged under side view of the fastener, detached.

Referring to the said drawings, in which like numbers of reference designate like parts throughout, 5 designates an ordinary form of box having a hinged lid 6, to the inner side of which is secured my improved fastener 7. The fastener consists in a simple form of spring or snap lock, the casing of which is composed, preferably, of two separable plates 8 and 9, which are detachably secured together by the screws 10 10, so that the interior of the lock may be reached easily for cleaning or repairing it. The casing-plate 8 is formed with a recess or chamber 11, and at one end is provided with the bolt-hole 12 and at the other with a perforation 13, serving as a bearing for the stem or rear end of the bolt to work in. The bolt 14 of the lock works in the chamber 11, and is provided with a suitable spring 16 for keeping it normally shot or closed. This bolt-spring 16 may be applied in a variety of ways, and in the present construction it consists in a spiral spring encircling the cylindrical stem or reduced portion of the bolt, with one end abutting against one end of the casing and the other against a head or shoulder 17 of the bolt. The throw or range of movement of the bolt is regulated by means of a stud 18 on the bolt, and which is preferably formed integral therewith, and a slot 19, which is formed in the casing-plate 9, the stud traveling through the length of

the slot as the bolt is moved on its length. Of course, if desired, the casing of the lock may be cast or formed in one piece, in which instance the stud 18 would have to be detachable, in order to put the lock together, the bolt being capable of insertion in the casing through the bolt-hole when the stud is removed.

The lock is secured upon the inner side of the box-lid preferably by means of the screws 20 20, which pass down through the lid and take into the screw-threaded perforations 21 21, formed in the edges of the lock-casing, and as a precaution against the removal of the lock by withdrawing these screws, the ends of the screws are riveted, or they may be provided with nuts.

The bolt engages with a latch-plate or projection 22, which, in the construction shown, consists in a metallic plate let into the upper edge of the locking side of the box and secured by screws 23, the inner edge of the plate being beveled, as shown, in order to render the slipping of the bolt over it easier and smoother. The face of the bolt, which is also suitably beveled for slipping over the latch-plate, is formed with a notch or indentation 24, which is of a size and shape to receive the end of a rod, nail, or stick 25, which serves as the push-rod or key for forcing back the bolt, so as to draw it and unlock the fastener. The bolt is reached by the rod or key, through an opening 26, formed, preferably, in the side of the box, subjacent the latch-plate or projection 22, the key being applied, in substantially the manner shown, by passing it through the opening 26, by hand, and entering it in the notch 24 of the bolt, and then pushing it in the direction of the length thereof, so as to draw the same and allow the lid to be raised while so drawn. As the end of the key or rod 25 follows the bolt into the casing provision has to be made for the key or rod to escape laterally therefrom. This is accomplished by cutting away one side of the casing, at 27, at one edge of the bolt-hole 12. By means of this, the lid may be raised as soon as the bolt is drawn, the key or rod being cleared by the cut-away part 27, as will be readily understood from the drawings. Of course the cut-away portion 27 may be arranged at one of the other sides of the bolt-hole, in which case

the notch in the bolt-face would have to be open at the sides, as it now is at the bottom. The fastener locks automatically when the lid of the box is shut down, like an ordinary
5 spring-lock, and it is released or unlocked by applying a rod or key in the manner above described.

From the foregoing description of my invention it will be seen that any suitable instrument, such as a wire, nail, stick, or the like, may be used as the push-rod or key for drawing the bolt. The fastener is of a simple and durable construction, and as there are no projecting knobs or handles for manipulating the bolt, and as it is entirely concealed within the box, there is no possibility of its being struck and bent in the rough handling to which packing-boxes or shipping-crates are liable to be subjected. The fastener is applicable to all kinds of boxes and shipping-crates—such, for instance, as boxes for packing mineral-water bottles, beer-bottles, &c. After the box is filled with articles, and locked for shipment, a seal or paper label
25 may be placed over the opening 26, or the same may be filled with wax or a sealed cork, which would have to be mutilated or broken

in order to operate the fastener, and, hence, would serve as a safety-seal.

Having thus described my improvements in box-fasteners, what I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with a box provided with a lid, of a spring-lock arranged upon the inner side of the lid, and a latch plate or projection for the lock located upon the edge of the box, the bolt of said lock having its beveled face formed with a notch or indentation for receiving the end of a rod or key for drawing the bolt, the casing of the lock being cut away at one side of the bolt-hole for the removal of the rod or key after the bolt has been drawn, the side of the box bearing the latch plate or projection being provided with an opening adjacent thereto for the passage of the rod or key for operating the bolt, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand, this 9th day of May, 1891, in the presence of two subscribing witnesses.

FRANZ AUGUST BAIER.

Witnesses:

HENRY L. AHRENS,
JOSEPH BRACH.