

(No Model.)

R. W. GILLESPIE.
BOX FASTENER.

No. 441,548.

Patented Nov. 25, 1890.

Fig. I

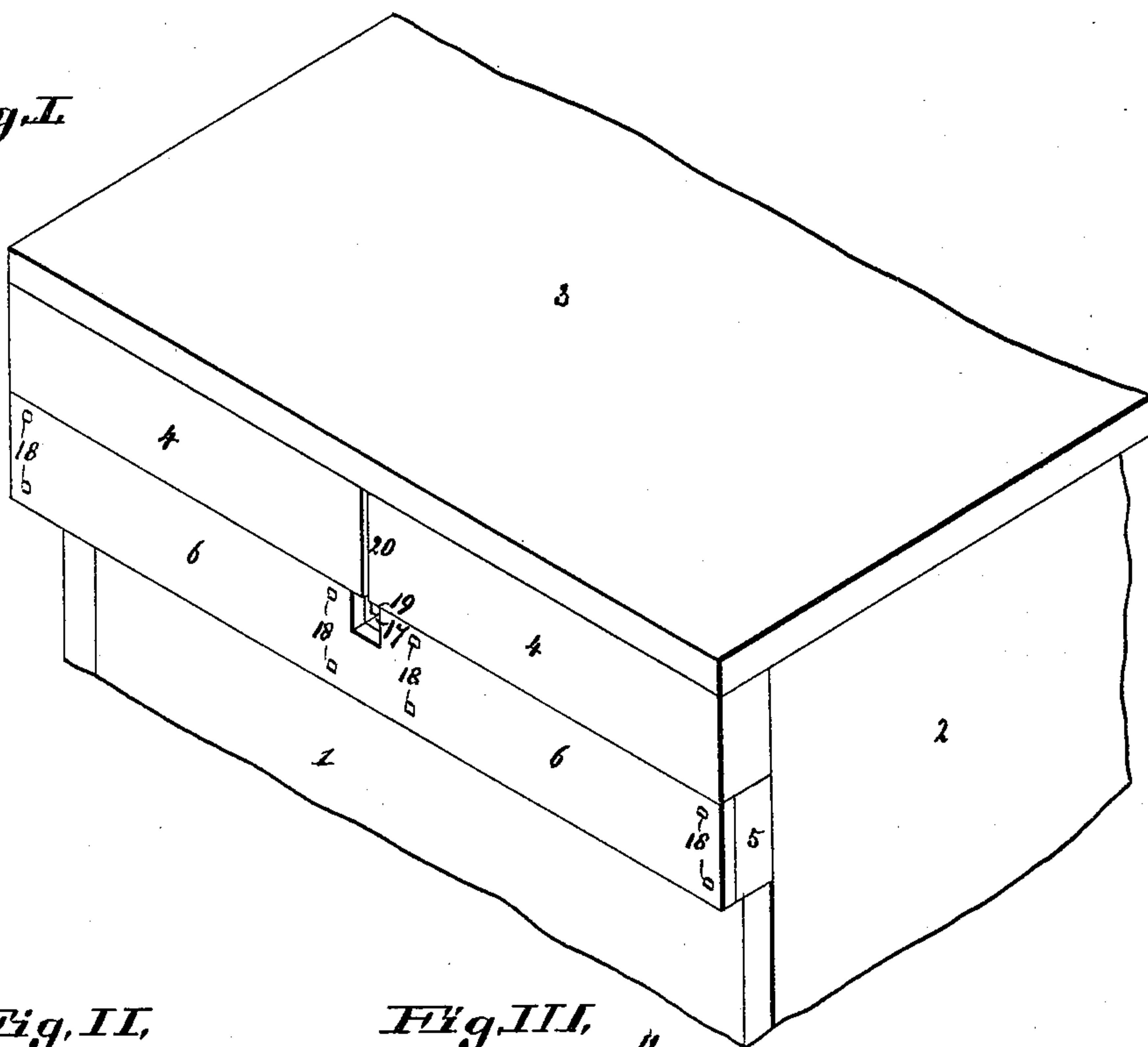


Fig. II,

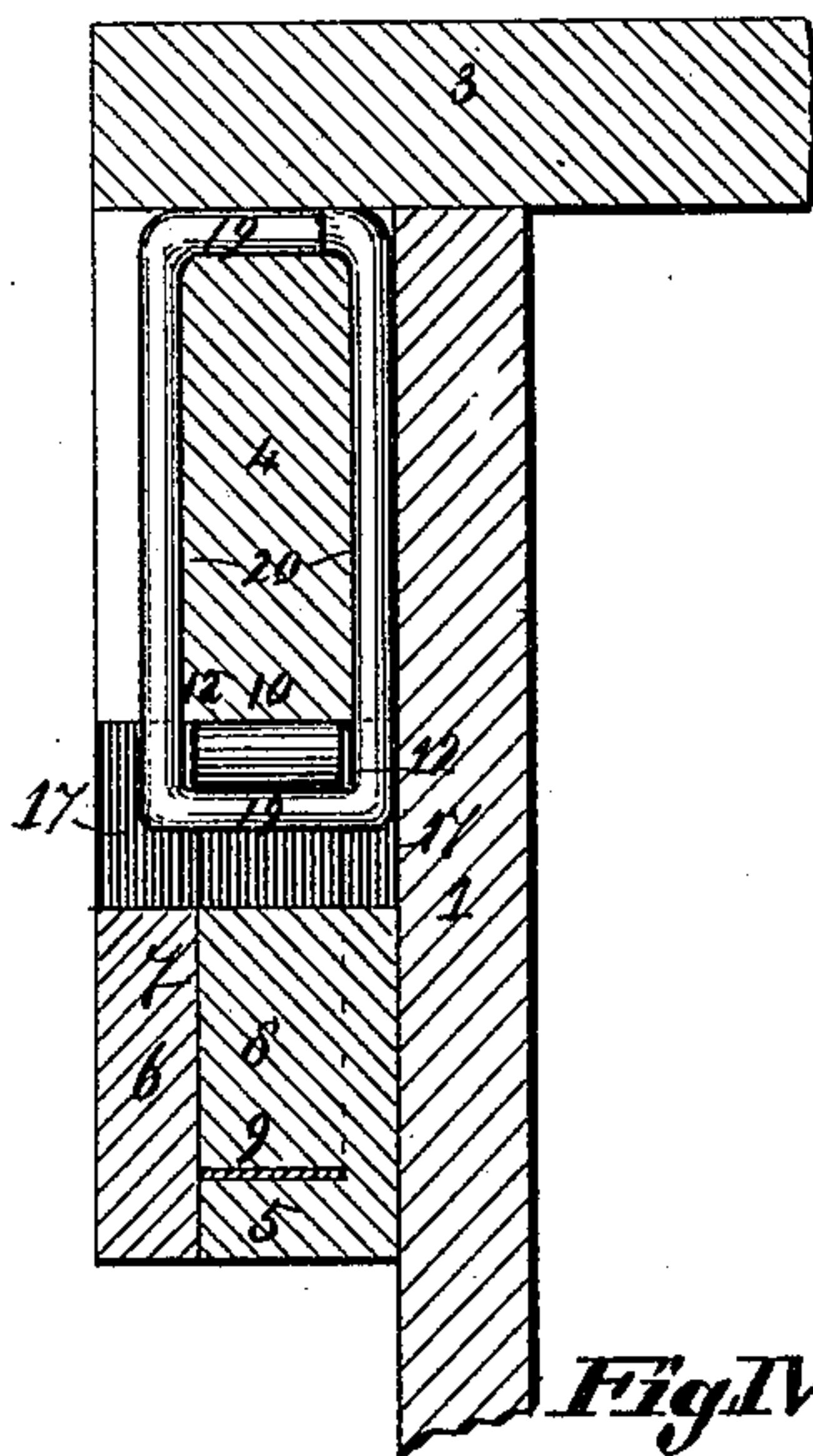


Fig. III,

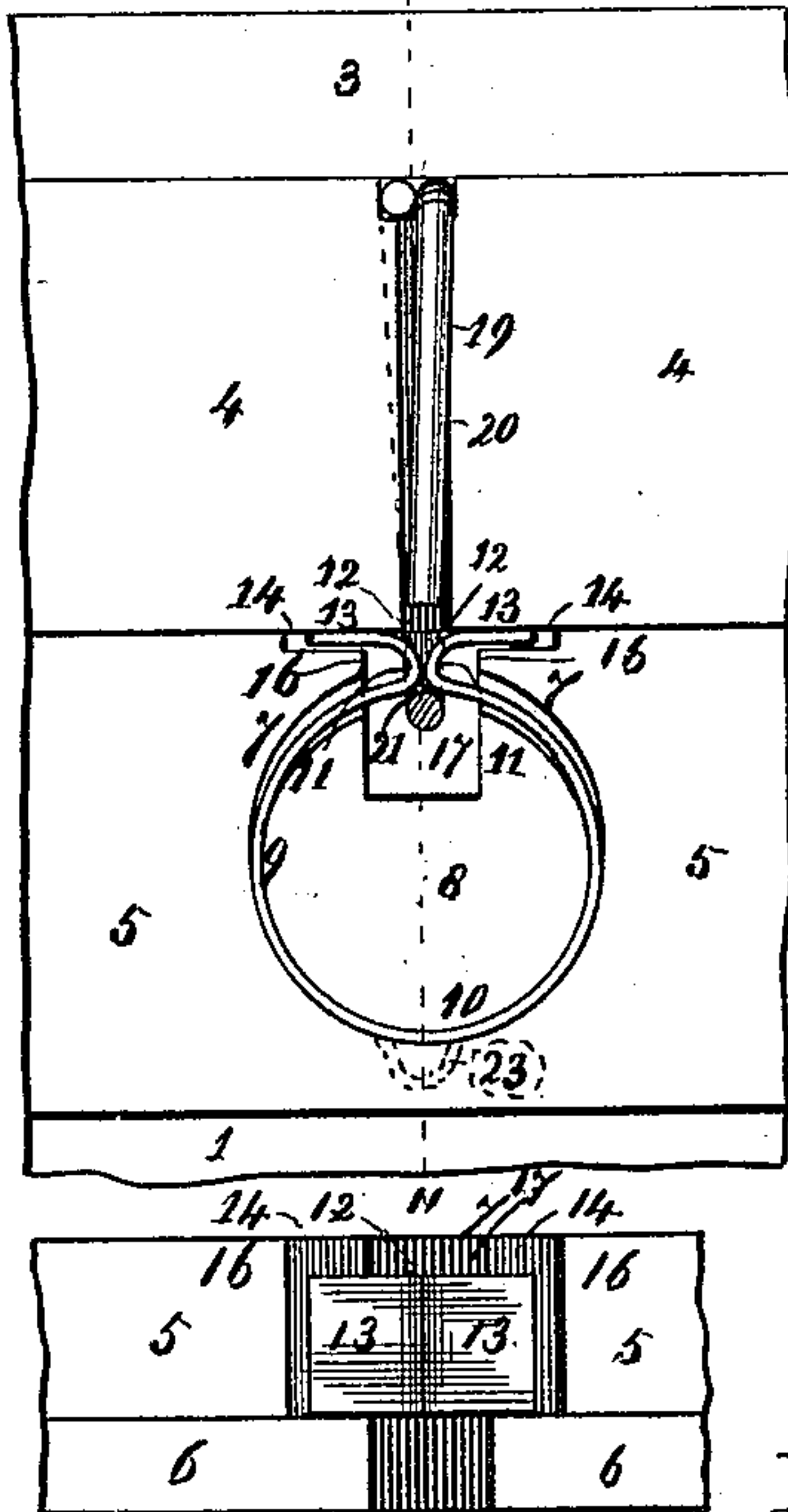


Fig. V,

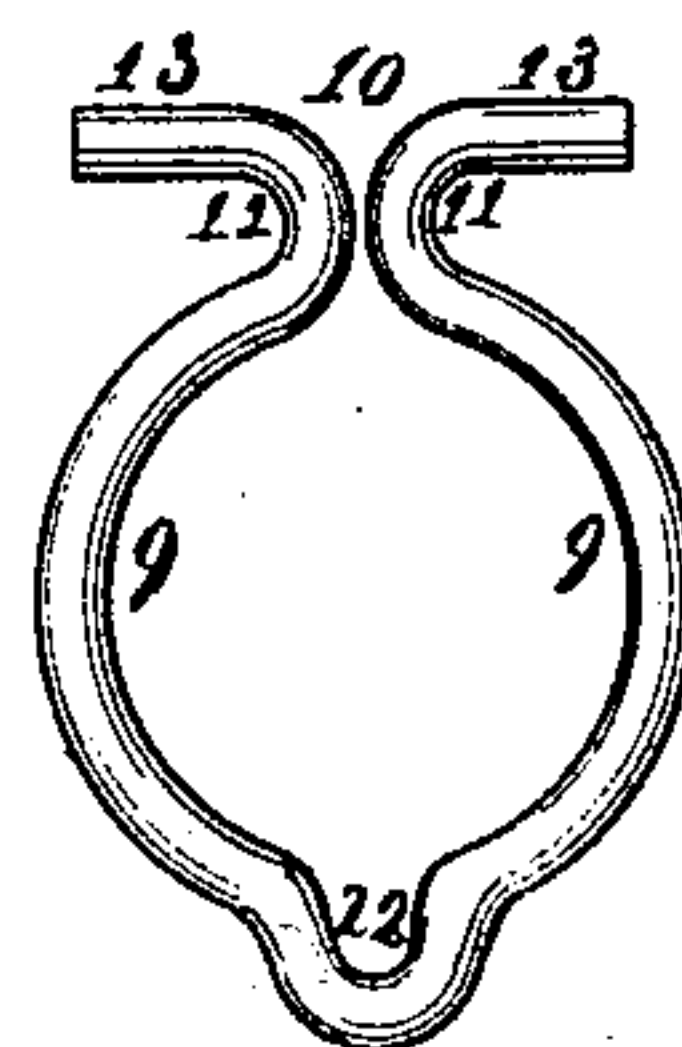


Fig. IV,

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BOX-FASTENER.

SPECIFICATION forming part of Letters Patent No. 441,548, dated November 25, 1890.

Application filed September 3, 1890. Serial No. 363,852. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. GILLESPIE, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Box-Fasteners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a duplex and yet integral spring-snap fastening boxed within the upper cleat of the box-section, and which engages with a hasp or staple that hangs pendent from the cleat of the lid-section when said lid is closed and thus locks the same, and which is unlocked to obtain access to the contents of the box by a sudden upward jerk on the lid, which by the elevation of the hasp expands apart the lips of the jaw of the duplex spring, which allows said hasp that they have clutched to be raised, and the lid is then free to open; and the invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a detail perspective of a cleated box and its cleated lid to which the fastening is attached. Fig. II is a vertical section taken on line II II, Fig. III, and on an enlarged scale to that of Fig. I, and shows the lid closed and the hasp in engagement with its spring-lock. Fig. III is an enlarged detail view, the cover-strip of the spring-bearer cleat being removed to show the position of the duplex spring in its boxing and its locking position on the hasp. Fig. IV is an enlarged detail top view of the spring-bearer cleat and its cover-strip, and shows the suspension-arms and jaw of the duplex spring and the strap form of said spring; and Fig. V is an enlarged view of a modification of the duplex spring, in which it is formed of steel wire instead of strap-steel, and which is provided with a pendent lug at bottom, that serves in the capacity of a steady hold during the active operation of the spring.

Referring to the drawings, 1 represents the front side board of the box. 2 are the end boards. 3 is the lid, and 4 is the pendent front cleat of said lid, which overlaps the front top edge of the box when the lid is closed.

5 represents the spring-bearer cleat, which is secured at the front of the box to the end

boards near the top immediately beneath the pendent lid-cleat 4, and 6 is the cover-strip that covers the cleat 5 and incloses the spring-box, and which is secured to said cleat by the screws or nails 18.

7 represents the spring-box within the spring-bearer cleat 5. In said box is a wooden center core 8, around which is seated the single coil 9 of the duplex double-action locking-spring 10. Extension-loops form lips 11, that extend upward from the surmounting terminals of said coil and are bent to pass through the surmounting slot that forms an open throat 12 from the spring-box 7 to and through the top of the spring-bearer cleat 5, and terminal suspension-arms 13 are bent back in a directly reverse horizontal line from each other and are boxed in the shallow recess 14 in the top edge of said spring-bearer cleat at the mouth-opening 12 to said circular spring-chamber.

Now it will be seen that the above-described circular spring-chamber with its surmounting open throat forms in the outline of its boxing shoulders 16, that surmount the circle chamber and inclose the throat, between which shoulders within the throat the aforesaid loop-lips 11 pass upward and around, and on which shoulders the terminal suspension-arms 13 rest within the recesses 14, and thus hold the duplex double-acting locking-spring 10 in suspension within the spring-chamber 8. The two surmounting loop-lips 11 of said duplex spring in their normal position under the pressure of the circle spring elastically press against each other, so as to close the opening within their coil circle.

17 represents a key-hole slot that passes vertically down in the middle of the spring-bearer cleat, through the shoulders that inclose the throat, and approximately to or toward the middle of the spring-chamber.

19 represents the hasp or staple lock-catch, which is seated in the annular recess 20 around the middle of the pendent cleat 4 of the lid, which it thus embraces and by which it is firmly held. The hasp hangs pendent a sufficient distance beneath the cleat that bears it for its rectangular lower end (as the lid closes) to intrude between the lips 11 of the respective locking ends or lips of the duplex spring. The said hasp as it strikes the up-

per curves of said lips springs them back, as there is sufficient play between the shoulders 16 and the shallow recesses 14 above said shoulders to allow said lips to spring open 5 sufficiently to open the jaw 21 for the hasp to pass through the loops of said duplex spring, which loops immediately snap together again over the hasp and lock the same, and with it the lid to the box. Now the spring is made 10 sufficiently strong for the loop embrace of the hasp to hold good against any adverse accidental force that would otherwise tend to open the lid; but when it is desired to unlock and open the same to get at the contents of the 15 box after it has reached its destination the unpacker has merely to lift the front of the lid with a sudden movement, and the hasp then passing on the corresponding curved edges beneath the spring-loops forces them 20 back as it did on entering, so as to open the lips of the spring-jaw and allow the raising of the hasp between them, and thereby unlocks the box.

The hasp 19 is shown in Figs. II and III as 25 a rectangularly-bent wire, whose upper ends lap past each other at the top of the annular recess around the middle of the pendent cleat 4; but the terminals of said hasp may, if preferred, be abutted so as to abut against each 30 other, or beveled so as to make a bevel counter-lap, or jointed by any other suitable means. It will be seen that when the foot of the hasp strikes the jaw the said hasp is held rigid from uprising by its upper end coming 35 in tight contact with the surmounting lid above. (See Figs. II and III.)

In Fig. V is shown a modification of the duplex locking-spring, in which it is formed of wire instead of in the strap form shown in 40 Figs. II, III, and IV. A pendent bent lug 22 at the bottom of the circle of the spring in said modification is made to fit into a recess 23 below the spring-chamber in the spring-bearer cleat 5 and forms a steady hold there- 45 by of said duplex spring while it is in active operation.

I do not confine myself to placing the fastening on the front of the case, as it is evident that it can be placed on the end or ends 50 thereof without departing from the essential features of the invention.

I claim as my invention—

1. In a box-fastener, the combination of the spring-bearer cleat 5, provided with the spring-box 7, the duplex double-acting locking-spring seated in said box, the hasp-bearer 55 cleat 4, provided with an annular recess 20, and the locking-hasps 19, secured in said annular recess to said cleat 4, the said duplex spring and hasp being arranged to effect the locking 60 of the box, substantially as and for the purpose set forth.

2. In a box-fastener, the combination of the spring-bearer cleat 5, secured to the box and provided with the spring-box 7, the duplex 65 double-acting locking-spring constituted of the single-coil circle 9, the contact locking-lips 11, and the suspension-arms 13, the pendent lid-cleat 4, provided with the annular recess 20, and the locking-hasps 19, that is seated 70 in said recess and embraces said cleat 4, that hangs pendent from the lid of the box, and which hasp engages with said duplex spring to lock said box, substantially as and for the purpose set forth. 75

3. In a box fastener, the combination of the spring-bearer cleat 5, the said cleat provided with the spring-box 7, the said spring-box having a steady-hold recess 23, the single-coil circle of the duplex double-acting locking-spring, the pendent steady-lug at the base 80 of said spring, the locking-lips 11 and the suspension-arms 13 of said spring, the pendent lid-cleat 4, and the hasp 19, that embraces said pendent cleat, and which hasp is snap- 85 locked by said lips 11 of said duplex spring, and thus locks the box, substantially as and for the purpose set forth.

4. In a box-fastener, the combination of the spring-bearer cleat 5, provided with the 90 spring-box 7, the duplex double-acting locking-spring 10, housed in said box, the center core-block 8 within said box, the hasp-bearer cleat 4, and the hasp 19, secured to said cleat, and which hasp engages with said duplex 95 spring, substantially as and for the purpose set forth.

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In presence of—

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