

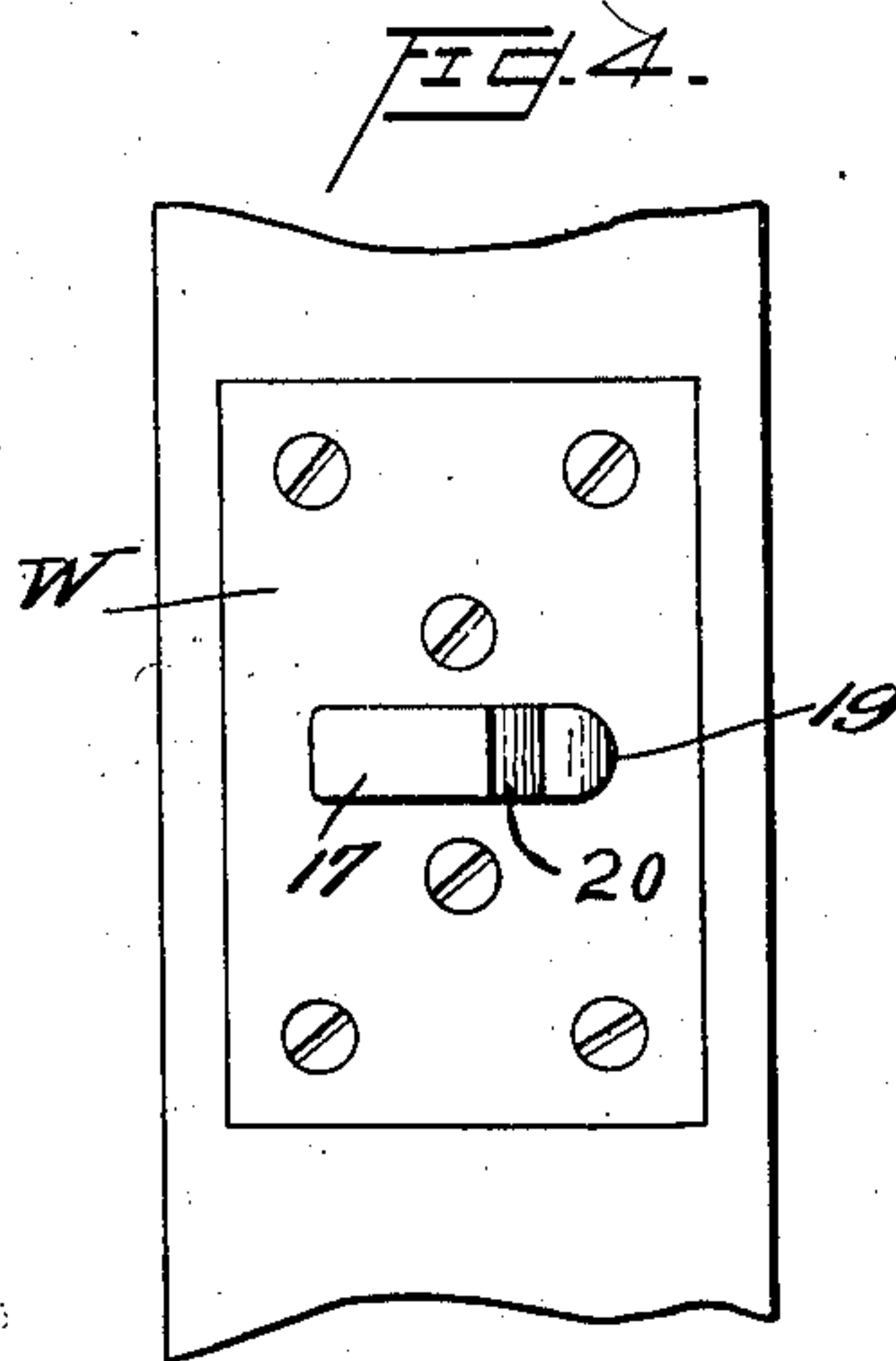
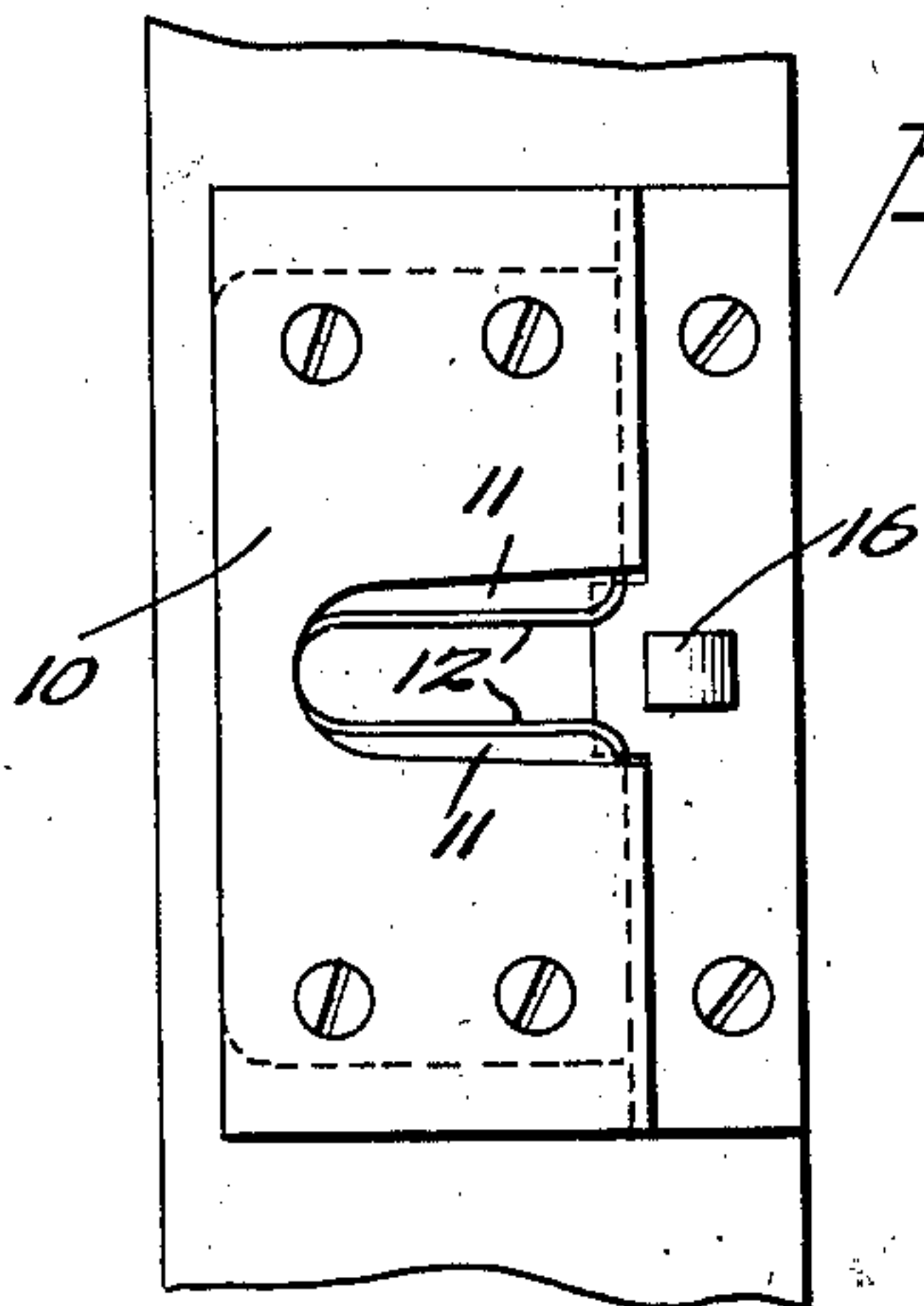
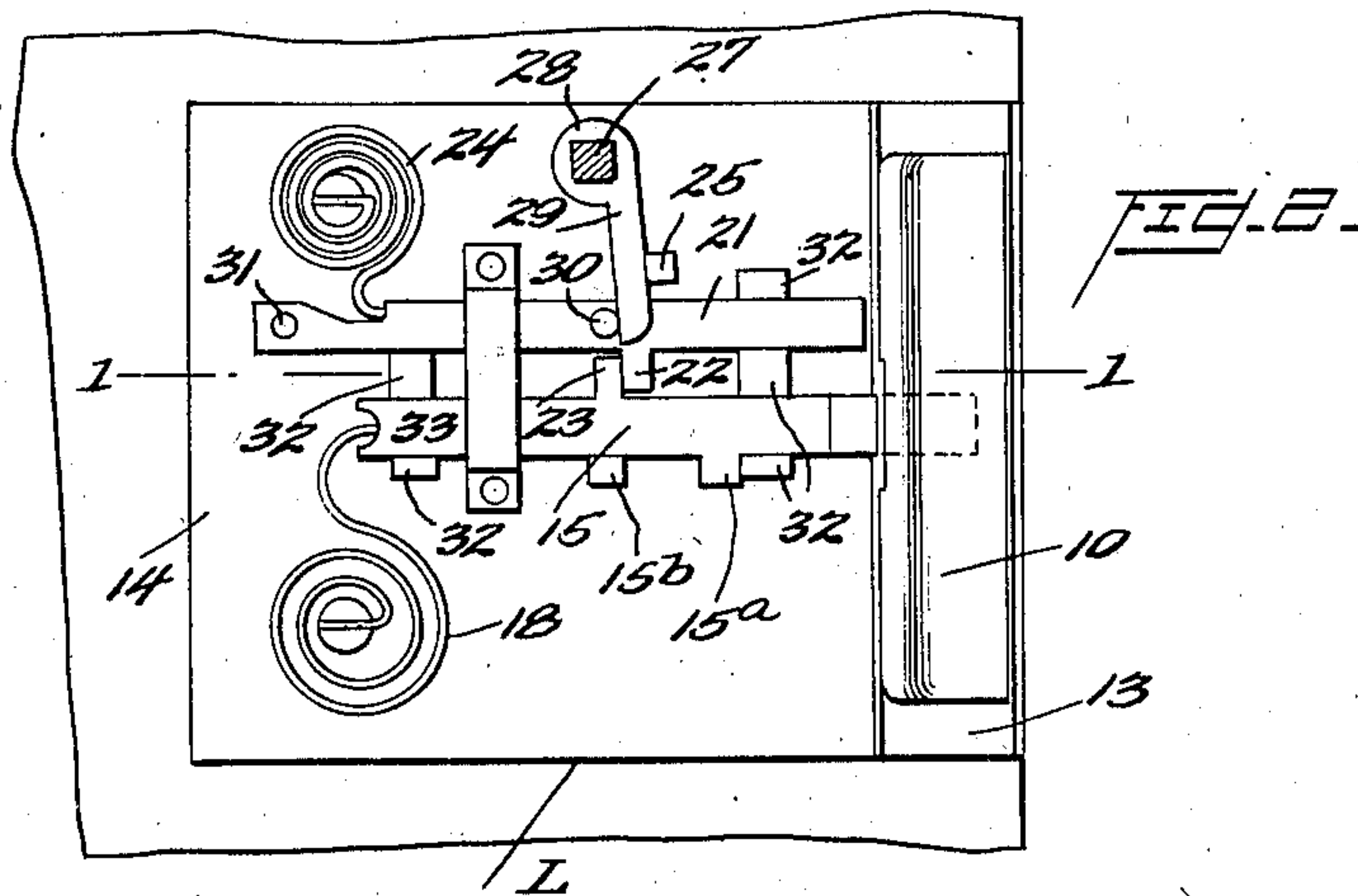
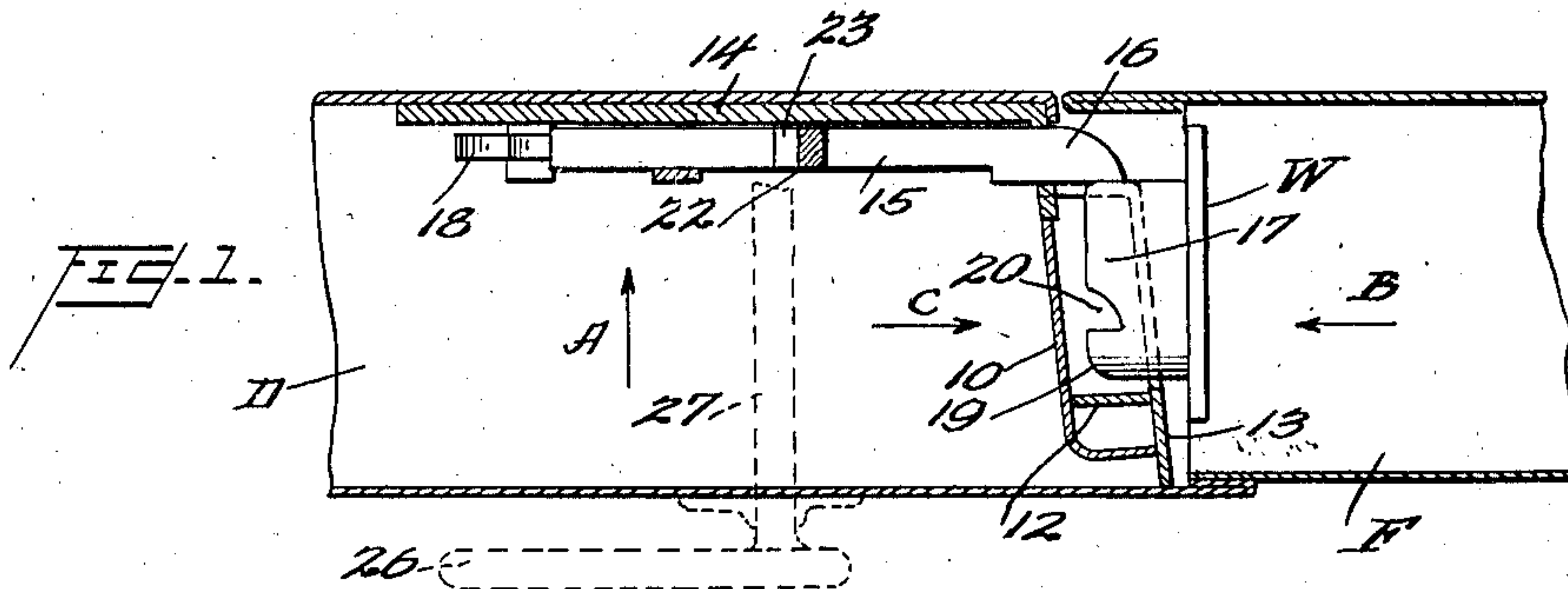
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COMBINED LOCK AND DOOR RETAINER FOR AUTOMOBILE DOORS

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COMBINED LOCK AND DOOR RETAINER FOR AUTOMOBILE DOORS

Application filed July 6, 1929. Serial No. 376,425.

This invention relates to a combined lock and door retainer or dove-tail for automobile doors. The objects of the invention are to produce a simple and inexpensive lock combined with a dove-tail adapted to securely hold the door against vibration and rattling and to reduce the number of parts now used to accomplish these purposes.

The invention will be described in connection with the accompanying drawing in which

Figure 1 is a partial horizontal section through an automobile door and door frame about on the line 1—1 of Figure 2;

Figure 2 is a view of the lock looking in the direction of the arrow A, Figure 1;

Figure 3 is a view of the face of the lock looking in the direction of the arrow B, Figure 1, showing the dove-tail, and

Figure 4 is a view of the dove-tail tongue or wedge which is mounted on the door, jamb, looking in the direction of the arrow C, Figure 1.

Referring to the drawing, D indicates an automobile door, F a part of the door frame or door jamb, L the combined lock and dove-tail, and W the wedge or tongue of the dove-tail.

The dove-tail may be of any conventional form now commonly used comprising two opposed resilient jaws, adapted to receive between them a tongue or wedge to hold the door against vibration. As illustrated it comprises a casing 10 within which are spaced rubber blocks 11 faced with a spring metal strip 12. As shown, the dove-tail is attached to the face plate 13 of the lock, which also forms the front plate of the dove-tail to confine the rubber blocks and metal strip 12 in the casing 10.

The lock mechanism is mounted on a base plate 14 which is preferably integral with the face plate 13. A sliding latch bolt 15 is located in a plane between the resilient jaws of the dove-tail with its bevelled end 16 normally projecting into the path of the wedge or tongue 17 of the part W as it enters the dove-tail. The latch bolt 15 is held in its normal position against a suitable stop by a light spring 18.

When the door is being closed the latch bolt 15 is forced back by contact of its end 16 with the bevelled or rounded corner 19 of the fixed tongue or wedge 17. The tongue may be provided with a notch 20 to receive the latch bolt when the door is partly closed to form a safety catch. When the door is fully closed the latch bolt springs in behind the tongue 17, as shown in Figure 1, and securely locks the door. The latch bolt may be withdrawn to unlock the door by any suitable means a preferred form of which will now be described.

A slide 21 is arranged on the lock base parallel to the latch bolt 15 and carries a shoulder 22 which abuts a shoulder 23 on the latch bolt. The slide 21 is urged forward by a stiff spring 24 to its normal position as determined by a stop 25. The slide may be retracted to withdraw the latch bolt by turning a handle 26 the shaft 27 of which engages the hub 28 of an arm 29. Arm 29 engages a pin or shoulder 30 on the slide 21, hence by turning the handle 26 the latch 16 may be withdrawn from behind the tongue 17, and the door thus unlocked. The rearward movement of the latch bolt is limited by a shoulder 15^a on the bar and a stop 15^b.

To prevent the handle from rattling the stop 25 is preferably applied to the arm 29 but it will be obvious that it also serves as a stop for the slide 21 and indirectly for the latch bolt 15. If it be desired to operate the lock from a handle inside the car such handle may be located wherever desired on the door and connected by suitable means to the slide 21, for instance, at the point 31. The door may be locked by locking the outside handle 26 in the usual manner. The latch bolt 15 and slide 21 are provided with suitable guides 32 and held in their guideways by a yolk 33.

The operation of the lock will be readily understood from the foregoing description. It will be evident that by combining the lock and dove-tail in a single mechanism the labor and expense of mounting the hardware on a door will be considerably reduced as only two parts will have to be fitted instead of four, as at present. By using a light spring

on the latch the door can be closed and locked easily whereas by using a stiff spring on the slide 21 accidental unlocking of the door is prevented.

5 Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. An automobile door lock having on its face two opposed spaced resilient jaws adapted to receive between them a tongue or wedge fixed on the door jamb and having a sliding latch bolt arranged in a plane between said jaws and normally projecting to be engaged by said tongue or wedge, a slide parallel with the latch, means on the slide to engage and withdraw the latch when the slide is moved in one direction, a light spring urging the latch to operative position and a heavier spring urging the slide to inoperative position, for the purpose set forth.

2. A combined lock and retainer for doors comprising a tongue or wedge adapted to be rigidly secured to a door frame, and a device adapted to be secured to a door to cooperate with said tongue in holding the door in closed position and in supporting the same against vibration in the plane of the door, said device including elements adapted to slidingly engage opposite sides of the tongue, resilient means opposing separating of said elements and which is active to cause the said elements to clamp said tongue between them when the door is closed, and a latch bolt for operatively engaging said tongue to hold the door in closed position.

3. The combination set forth in claim 2 in which the said tongue is provided with a notch in its outer end surface and an edge surface, which notch and surface are adapted to be successively engaged by the latch bolt as the door is closed and either of which may be operatively engaged thereby.

4. A combined lock and retainer for doors comprising a dovetail and a latch bolt mounted on the door, and a single member mounted on the door frame and adapted to be engaged by both the dovetail and latch bolt when the door is closed.

5. A combined lock and retainer for doors comprising a tongue adapted to be rigidly secured to a door frame, said tongue having a series of surfaces, any one of which may be engaged by a latch bolt, and a device adapted to be secured to a door to cooperate with the tongue in holding the door in closed position and in supporting the same against vibration in the plane of the door, said device including elements adapted to slidingly engage opposite sides of the tongue, resilient means opposing separation of said elements and which is active to cause the said elements to clamp said tongue between them when the door is closed, and a latch bolt adapted to engage

any one of the surfaces of the tongue to secure the door.

6. A combination lock and retainer for doors which comprises spaced relatively movable mutually facing jaws mounted on the door, means to resiliently oppose separation of said jaws, a latch bolt mounted on the door, and a single tongue-like member mounted on the door frame and adapted to be resiliently gripped between said jaws and operatively engaged by said latch bolt when the door is closed.

7. The combination with door and door frame members, of a locking and supporting device therefor, said device comprising a lock portion mounted on one of said members and having spaced relatively movable jaws, means resiliently opposing separation of said jaws, and a manually operable latch bolt and a single retainer element rigidly mounted on the other of said members and adapted to be resiliently gripped between said jaws and operatively engaged by the latch bolt when the door is closed.

8. The combination with door and door frame members, of a locking and supporting device therefor, said device comprising a lock portion mounted on one of said members and having spaced relatively movable jaws, means resiliently opposing separation of said jaws, and a manually operable latch bolt and a single retainer element rigidly mounted on the other of said members and adapted to be resiliently gripped between said jaws and operatively engaged by the latch bolt when the door is closed, said retainer element having substantially parallel faces for engagement by said jaws and a plurality of surfaces normal to said faces for engagement by said latch bolt.

In testimony whereof I hereunto affix my signature.

JAMES A. WATSON.