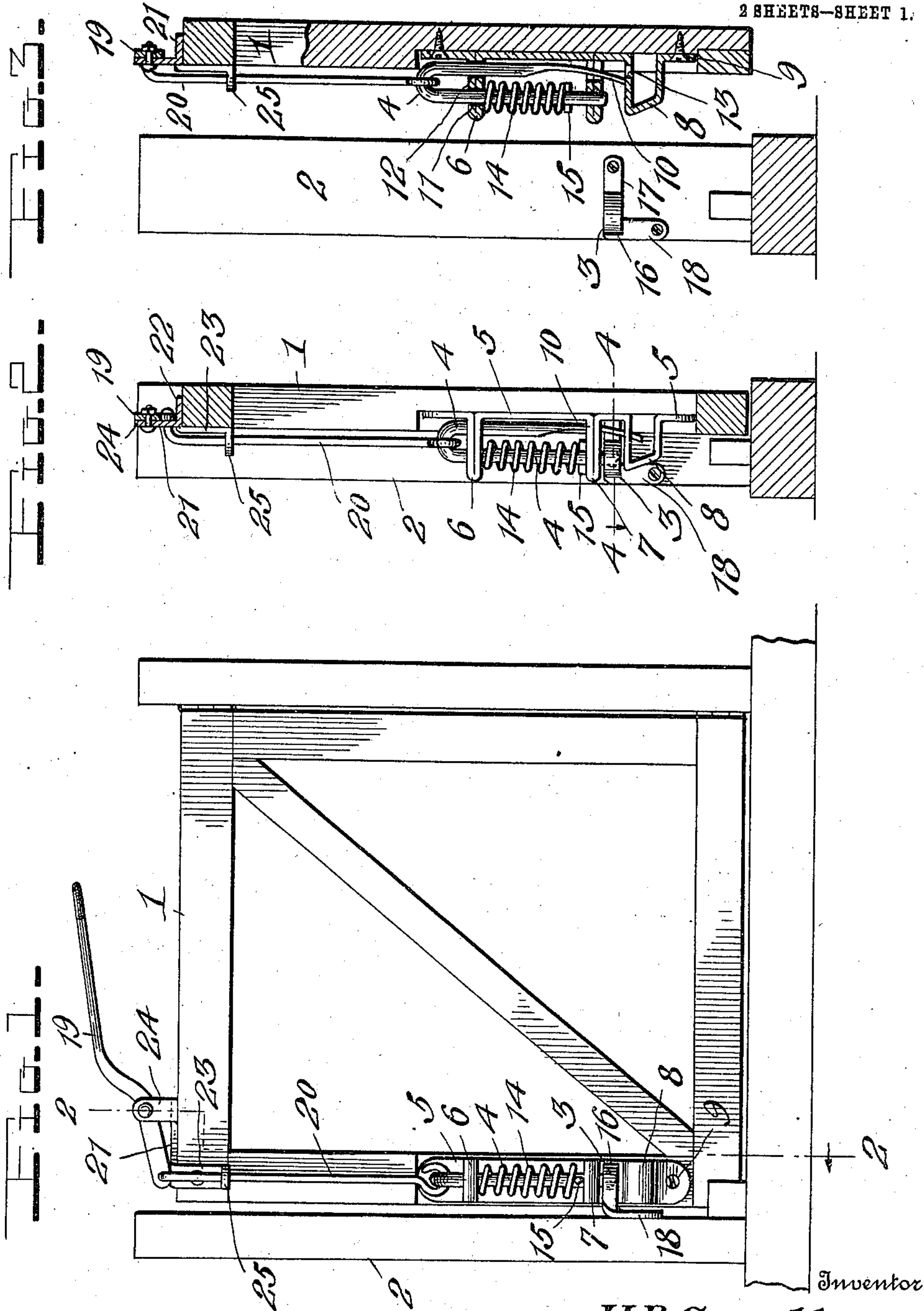


H. B. CROWELL.
GATE LATCH.
APPLICATION FILED FEB. 19, 1910.

963,997.

Patented July 12, 1910

2 SHEETS—SHEET 1.



Witnesses

Chas. P. Giesbauer.
E. M. Ricketts

H. B. Crowell,

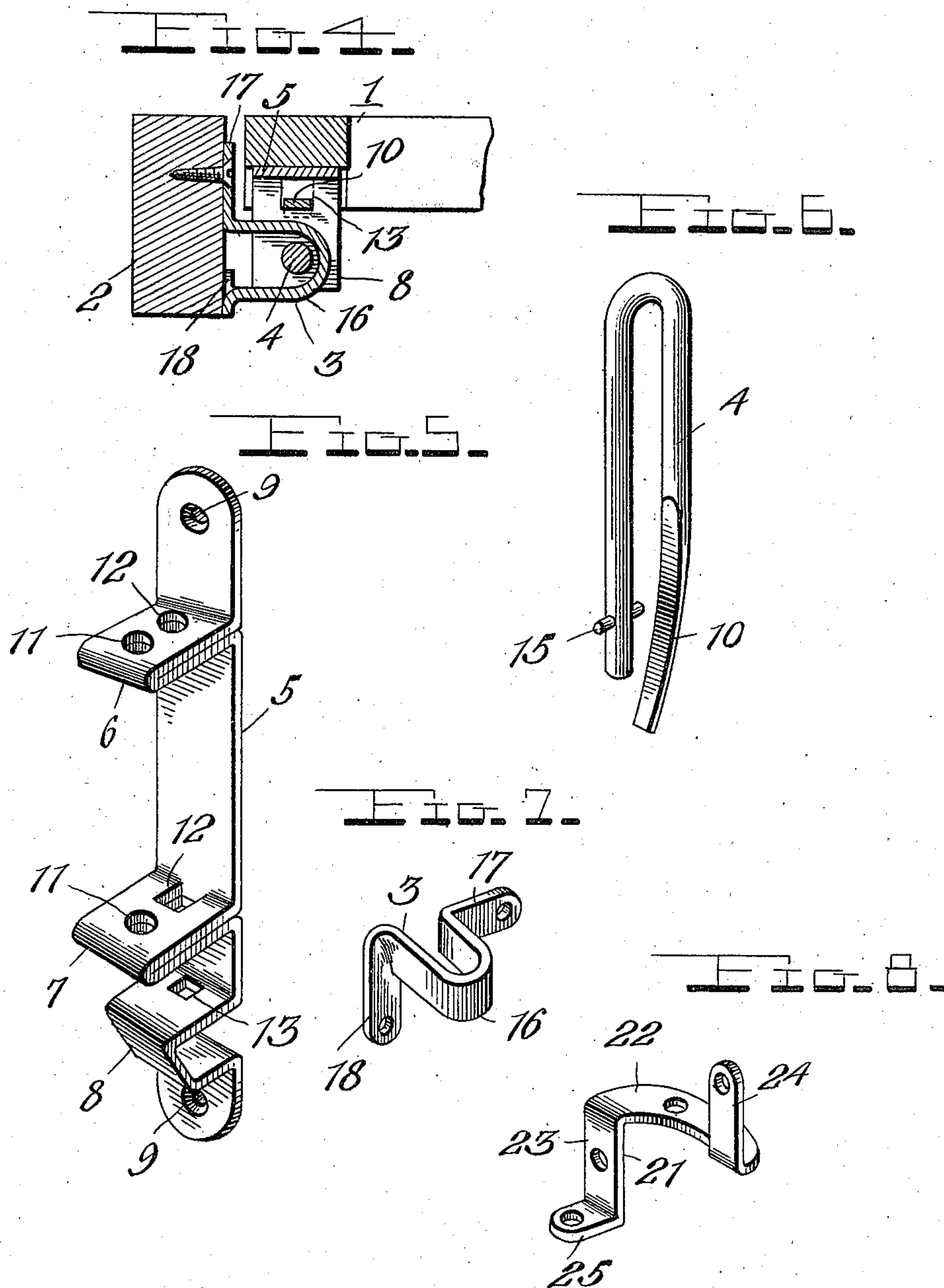
By Watson C. Coleman
Attorney

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E. M. Ricketts

Inventor

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UNITED STATES PATENT OFFICE.

HENRY B. CROWELL, OF WALTHALL, MISSISSIPPI.

GATE-LATCH.

963,997.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed February 19, 1910. Serial No. 544,760.

To all whom it may concern:

Be it known that I, HENRY B. CROWELL, a citizen of the United States, residing at Walthall, in the county of Webster and State of Mississippi, have invented certain new and useful Improvements in Gate-Latches, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in latches or fastenings for sliding and swinging members such as fences, gates, doors, windows and the like.

The object of the invention is to provide a simple and practical device of this character which will be self-locking when the closure or member is moved to its closed position, and in which the locking member or bolt when retracted will be automatically held in retracted position until the member or closure is moved to its closed position.

With the above and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, hereinafter fully described and claimed, and illustrated in the accompanying drawings in which:—

Figure 1 is a view in elevation illustrating one embodiment of my invention which is especially adapted for use as a gate latch, the invention being shown applied; Fig. 2 is a vertical section taken on the plane indicated by the line 2—2 in Fig. 1 showing the bolt or locking member in locking position; Fig. 3 is a vertical section through the gate and the latch showing the gate in a partially open position and the locking bolt in its retracted position; Fig. 4 is a detail horizontal section taken on the plane indicated by the line 4—4 in Fig. 2; Fig. 5 is a perspective view of the supporting and guiding member for the bolt; Fig. 6 is a perspective view of the bolt; Fig. 7 is a similar view of the keeper; and Fig. 8 is a perspective view of the lever supporting bracket.

In the embodiment illustrated 1 denotes a horizontally swinging gate, and 2 its latch post. The latter carries a keeper member 3 which co-acts with my improved locking member or bolt 4 which is spring projected and adapted to be manually retracted. This bolt is slidably mounted in a supporting and guiding member 5 suitably arranged on and secured to the gate, and as here shown it is formed from a metal strap bent or doubled

upon itself at suitable points intermediate its ends to provide parallel guiding lugs 6, 7, and also having a portion of it bent to form a third lug or projection 8 disposed in spaced relation to and parallel with the lugs 6, 7 and adapted to serve as a stop as presently explained, the two ends of the metal strap being apertured at 9 to receive screws or other fastenings. The bolt 4 carries a resilient member or finger 10 for engagement with the stop lug 8 to retain the bolt in retracted position, and said member 10 is formed preferably integral with the bolt by making the latter of a resilient metal rod and doubling it upon itself, one of its ends being reduced in width and curved longitudinally to provide the resilient finger or member 10. The lugs 6, 7, are formed with pairs of openings 11, 12, to receive and guide the bolt 4 and its retaining member or finger 10. The lug 8 is formed with an opening 13 adapted to receive the extremity of the member or finger 10 when the bolt moves to its projected position.

It will be noted that the finger 10 extends across the space between the lugs 7, 8, into which space the keeper 3 is adapted to enter, and that when the bolt is in retracted position shown in Fig. 3 the extremity of the finger 10 engages the lug 8 close to its opening 13 in order that when the gate is swung to closed position the finger 10 will strike against the keeper 3 and be moved opposite the opening 13, whereupon the bolt will be moved to locked position and into engagement with the keeper 3 by reason of the spring which actuates said bolt. This spring is preferably in the form of a coil arranged on the bolt, as shown at 14 and between the lugs 6 and a stop 15 on said bolt, which stop may also be utilized to limit the movement of the bolt under the action of the spring by so placing said stop that it will engage the lug 7 when the bolt is in projected position.

The keeper 3 may be of any form and construction but I preferably construct it of a metal strap which has its intermediate portion bent into U-form to provide a loop which enters the space between the lugs 7, 8, and which receive the end of the bolt 4, the ends of said strap being bent at right angles to each other to provide apertured attaching flanges 17, 18.

Any suitable means may be provided for

retracting the bolt but when the latter is disposed in vertical position on the gate as in the embodiment illustrated, I preferably arrange on the top or upper portion of the gate a hand lever 19 and connect the latter by a link 20 to the upper end of said bolt. This lever 19 is here shown pivoted intermediate its ends on a bracket 21, which latter is formed from a metal strap and has horizontally and vertically disposed portions 22, 23, apertured to receive fastenings which secure it to the gate. The portion 22 has one of its ends bent upwardly to provide a lug 24 for supporting the pivot 19 and the portion 23 having a horizontally projecting guide lug 25 apertured to receive and guide the link 20. Said link 20 has its upper end loosely connected to the short arm of the hand lever 19, and its lower end formed with an eye which engages the U-shaped portion of the rod which forms the bolt and finger 10.

In operation, when the handle end of the lever 19 is depressed the link 20 will lift the bolt 4 against the tension of the spring 14 when out of engagement with the keeper 3 to unfasten the gate, and when said bolt is thus elevated its resilient retaining finger will leave the opening 13 in the lug 8 and spring laterally into engagement with the clevis of said lug, thereby retaining the bolt in retracted position, as shown in Fig. 3. When the gate is swung to closed position the keeper 3 enters the space between the lugs 7, 8, and engages and actuates the spring finger 10 to move it into the opening 13, whereupon the spring 14 projects the bolt into the keeper 3 to securely fasten the gate in closed position.

While I have shown and described in detail the preferred embodiment of my invention I wish it understood that I do not limit myself to the construction set forth, since various changes in the form, proportion and arrangements of parts, and in the details of construction, may be resorted to within the spirit and scope of the invention; and I wish it further understood that while I have shown and described the invention as applied to a swinging gate it may be used on various other kinds of swinging and sliding members.

Having thus described the invention what is claimed is:

1. The combination of a spring projected bolt, a supporting and guiding means for said bolt, a stop, and a spring finger carried by the bolt and movable therewith, said spring finger being adapted to engage said stop to hold the bolt in retracted position and being arranged to project beyond the end of the bolt, whereby it will be engaged and actuated by a keeper which co-acts with the bolt.

2. The combination of a supporting and

guiding member having spaced guiding lugs and a third lug spaced from one of the first mentioned lugs and adapted to serve as a stop, a bolt slidable in said guiding lugs, a spring for projecting the bolt, and a resilient retaining finger carried by the bolt and adapted to engage said stop lug to hold the bolt in retracted position, the free end of said finger projecting beyond the end of the bolt and arranged in the path of the keeper which co-acts with the bolt.

3. The combination with stationary and movable members, of a keeper carried by one of said members, a spring projected bolt, a guiding and supporting means for the bolt carried by the other of said members, and a spring finger carried by the bolt and adapted to retain the latter in retracted position and to be engaged and actuated by said keeper.

4. The combination with a swinging gate and its latch post, of a keeper upon the latch post, a spring projected bolt, a supporting and guiding member for the bolt carried by the gate, and a spring finger carried by the bolt for retaining it in retracted position the free end of the finger projecting beyond the bolt and adapted to be engaged and actuated by said keeper.

5. The combination with a swinging gate and its latch post, of a keeper upon the latch post, a spring projected bolt, a supporting and guiding member for the bolt carried by the gate, a spring finger carried by the bolt for retaining it in retracted position the free end of the finger projecting beyond the bolt and adapted to be engaged and actuated by said keeper, and means upon the gate for retracting said bolt.

6. The combination with a swinging gate and its latch post, of a keeper upon the latch post, a bolt supporting and guiding member arranged vertically on the gate, a rod bent into U-form and having one end forming a bolt arranged for vertical movement in said member and its other end forming a spring retaining finger, a stop on said member to co-act with said finger, a spring for projecting the bolt, a hand lever fulcrumed intermediate its ends on top of the gate, and a link having its upper end connected to one end of said hand lever and its other end engaged with the U-shaped portion of the rod forming the bolt.

7. The combination of a supporting and guiding member having spaced guiding lugs and a third lug spaced from one of the first mentioned lugs and adapted to serve as a stop, a rod bent upon itself to form a bolt and a resilient retaining finger, said rod being slidable in said guide lugs and said finger being adapted to engage said stop lug to hold the bolt in retracted position, and a spring for projecting the bolt.

8. The combination of a supporting and guiding member formed from a metal strap

doubled upon itself at intermediate points
to provide spaced guiding lugs, and a stop
lug, the latter being spaced from one of said
guiding lugs, a spring projected bolt in said
5 guiding lugs, and a spring finger carried by
said bolt and engaging said stop lug to re-
tain the bolt in retracted position.

In testimony whereof I hereunto affix my
signature in the presence of two witnesses.

HENRY B. CROWELL.

Witnesses:

H. A. GOULD,
E. D. EDWARDS.