

(No Model.)

E. BRUNHOFF & C. LEHMANN.  
GATE LATCH.

No. 426,765.

Patented Apr. 29, 1890.

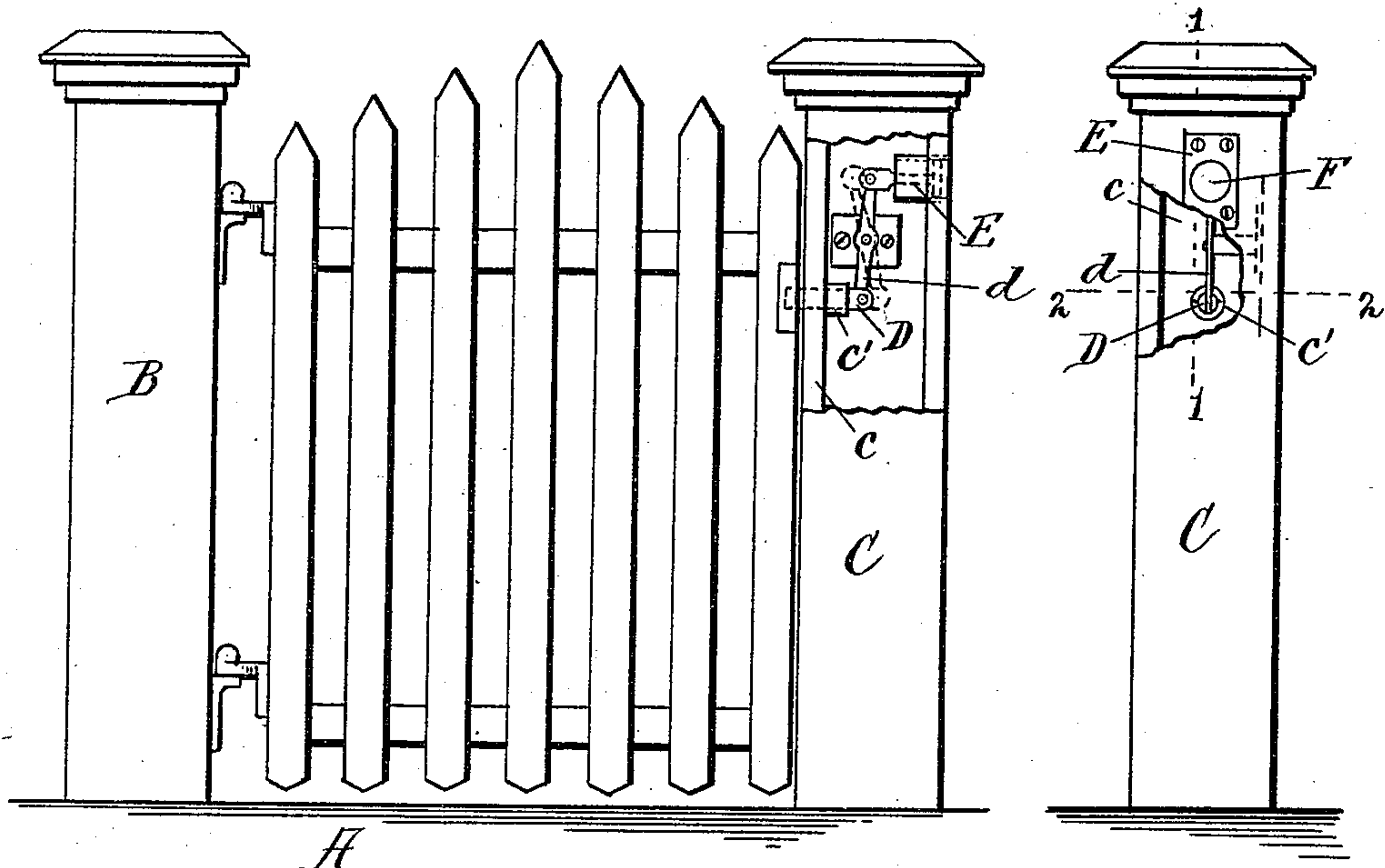
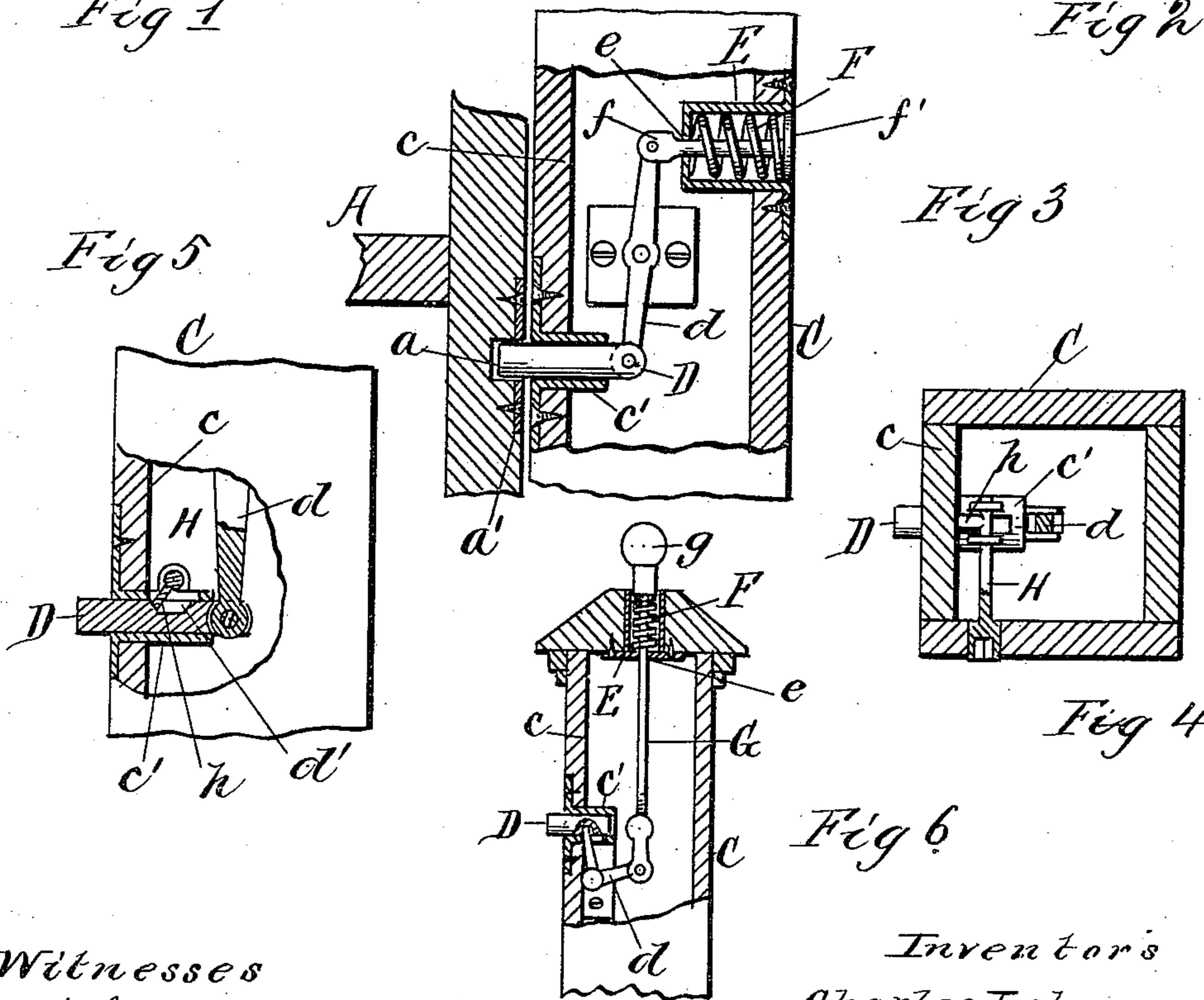


Fig 1

Fig 2



Witnesses

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# UNITED STATES PATENT OFFICE.

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## GATE-LATCH.

SPECIFICATION forming part of Letters Patent No. 426,765, dated April 29, 1890.

Application filed October 22, 1889. Serial No. 327,853. (No model.)

*To all whom it may concern:*

Be it known that we, EDWARD BRUNHOFF and CHARLES LEHMANN, subjects of the Emperor of Germany, the former residing at Chicago, in the county of Cook and State of Illinois, and the latter residing at Wayne, in the county of Wayne and State of Nebraska, have invented certain new and useful Improvements in Latches, which are fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a gate with our improved latch applied, a portion of the latch-post being broken away; Fig. 2, a side elevation of said post, partly broken away; Fig. 3, a detail vertical section taken on the line 1 1 of Fig. 2; Fig. 4, a plan section taken on the line 2 2 of Fig. 2, showing a modification in the latch; Fig. 5, a detail front elevation of the same with the front of the post partially broken away; and Fig. 6, a detail vertical section of the latch-post and latch, showing a modification in the latching device.

In the drawings, Figs. 1, 2, and 6 are upon one scale, and Figs. 3, 4, and 5 upon another and enlarged scale.

The object of our invention is to provide a concealed latch, and it is particularly intended for gates, so as in some degree to protect entrances to private grounds against tramps and other undesirable visitors.

We will now describe in detail a practical way in which our invention may be carried out, and will then point out more definitely in claims the particular improvements which we believe to be new and wish to secure by Letters Patent.

In the drawings, A represents a gate, which is hinged in any suitable way to one of the gate-posts B, which may be called the "hinge-post." As the gate here represented is a single one, the other gate-post C will be provided with the fastening device, and may be called the "latch-post." The latch-post C is hollow, as shown in the drawings, and in the inner face *c*, next to the gate, is set a tubular keeper *c'*, which is secured to the face of the post by an outer flange-plate, as shown in Figs. 3, 5, and 6 of the drawings. Within this keeper

is mounted a latch-bolt D, to the inner end of which is hinged one end of a lever *d*, centrally pivoted to a suitable support inside of the post. A tubular socket E is set in the outer face of the post—that is, the one opposite to the face *c*. This socket is open at its outer end, but closed at its inner end, with the exception of a small aperture *e* through the bottom of the socket, and the latter extends into the interior of the post. A spiral spring F is set in this socket, and a rod *f* passes through the spring and aperture in the bottom of the socket and is pivoted to the end of the lever *d*. The rod *f* is provided at its outer end with a head *f'*, which just fits the socket, and the spring is held between the bottom of the latter and this head on the rod, the parts being adjusted so that the head of the rod will normally stand flush with the outer flange-plate of the socket, by which it is fastened to the post, as seen in Fig. 3 of the drawings. It is obvious that by pushing in the rod by pressing on the head the lever inside of the post will be vibrated in a direction to pull the bolt inward, and that when the head is released the spring will force it outward again, thereby vibrating the lever in the opposite direction to throw the bolt outward. The parts are arranged so that normally the bolt will be thrust out somewhat beyond the inner face of the post, as seen in the drawings, so that it will engage in a recess *a* in the outer upright bar of the gate, as shown in Figs. 1 and 3 of the drawings. This recess for the bolt may be protected by a plate *a'*, extending around the bar and perforated for the recess. Preferably the plate is curved, and the bar is rounded at this point to facilitate the engagement of the latch-bolt as the gate swings.

The operation of the parts in withdrawing the bolt to unlatch the gate is illustrated by dotted lines in Fig. 1 of the drawings. It will be seen that with these devices the mechanism which operates the latch-bolt is concealed within the post and the device for moving them is also partially concealed, being at the side of the post away from the bolt. If desired, it may be put upon the back side of the post, so that it will be entirely out of the sight of any one approaching in front. The



levers must of course be arranged to accommodate such position. There will thus be provided a kind of blind-latch for the gate, the operation of which will not be readily discovered by strangers, and so annoyance from tramps and other disagreeable visitors will be largely prevented, as they cannot open the gate unless the secret devices are discovered.

The arrangement of the device for vibrating the pivoted bolt-lever may be varied. As already intimated, when arranged as shown in Figs. 1 and 3 of the drawings it may be located on any side of the post with a proper change in the levers. In Fig. 6 of the drawings another modification is shown, in which the socket and spring are set in the top of the post, and a rod *G* passes down through the top of the post into the interior thereof, and is pivoted at its lower end to one arm of the pivoted lever *d*, which in this instance is an angular or bell-crank lever, and may be pivoted to the bolt or engage in a notch in the under side thereof, as shown in Fig. 6. The upper end of the rod projects above the post and terminates in a knob *g*, which gives an ornamental appearance to the post, thus aiding in concealing the latch device, and in order to assist in the deception the companion post may be ornamented by a similar knob. By pressing down the knob *g* it is obvious that the latch-bolt will be operated the same as described above.

If desired, this device may also be provided with a private key for withdrawing the bolt, as shown in Figs. 4 and 5 of the drawings, in which case the bolt *D* is provided with a notch *d'* in its upper or lower side, and the stem of the key *H* is mounted in the post and lugs on the bolt-keeper, being free to turn therein and provided with a bit *h*, arranged to engage with the notch in the bolt, the bolt-keeper being provided with an aperture to permit the key-bit to pass through it, as seen in Fig. 5 of the drawings. The outer end of the key-stem extends through the side of the post and is provided with the well-known expedient of a recess or other device of peculiar shape to

which the bow of the key, which is separate, is fitted.

This latch mechanism is shown in the drawings applied to a single gate; but it is also applicable to double gates, in which case of course one of the center or meeting posts will be made hollow and sufficiently large to receive the latch mechanism, while the other is constructed to engage the bolt, as described above.

There may be many variations in the particular construction and arrangement of the special devices by which our invention is carried out, due to the different positions of the outer knob or plate, which may require modification in the construction and arrangement of the lever, and perhaps in some cases the addition of one or more connecting-levers. We do not wish to be understood, therefore, as limiting ourselves to the particular construction and arrangement of the devices described and shown in the drawings; nor do we intend to limit our invention to gates, but desire to claim it wherever applicable.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The swing-gate *A*, in combination with the hollow post *C*, the latch-bolt *D*, mounted in a keeper set in the side of the post and free to slide therein, the lever *d*, arranged within the post and pivoted thereto and connected at one end to the inner end of the bolt, the cup-shaped socket *E*, set in the post, the spiral spring *F*, arranged within the socket, and the rod *f*, provided with a head *f'*, and passing through the socket within the spring into the interior of the post and there connected to the other end of the lever *d*, substantially as and for the purposes specified.

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Witnesses:

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