J., J. W. & W. K. KAYE.

Latch.

No. 219,485. Patented Sept. 9, 1879.

FIG. 1.

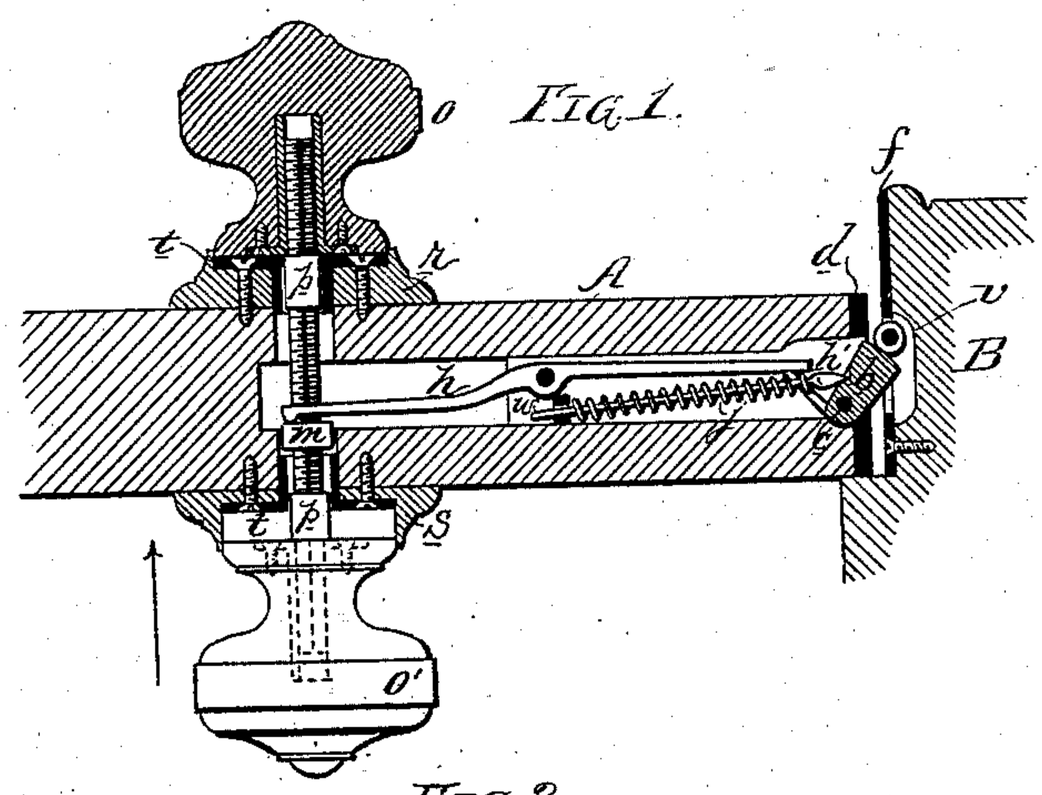


FIG. 2.

FIG. 4.

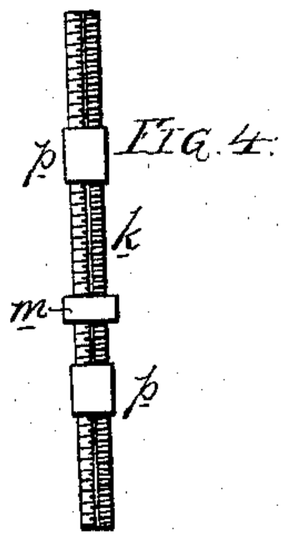


FIG. 5

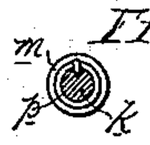


FIG. 7.

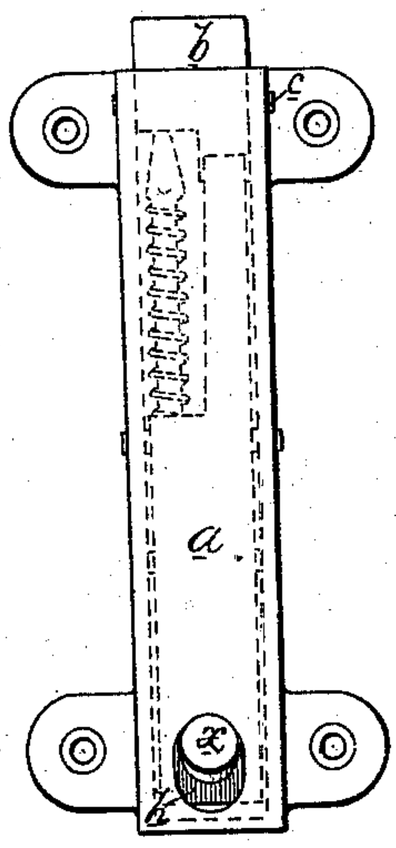
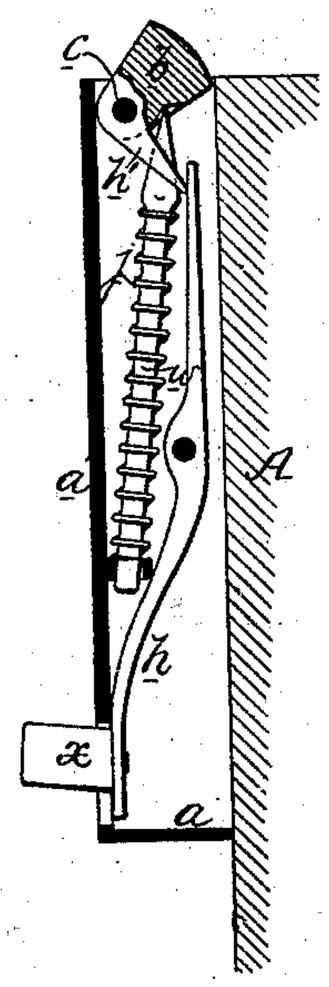


FIG. 6.



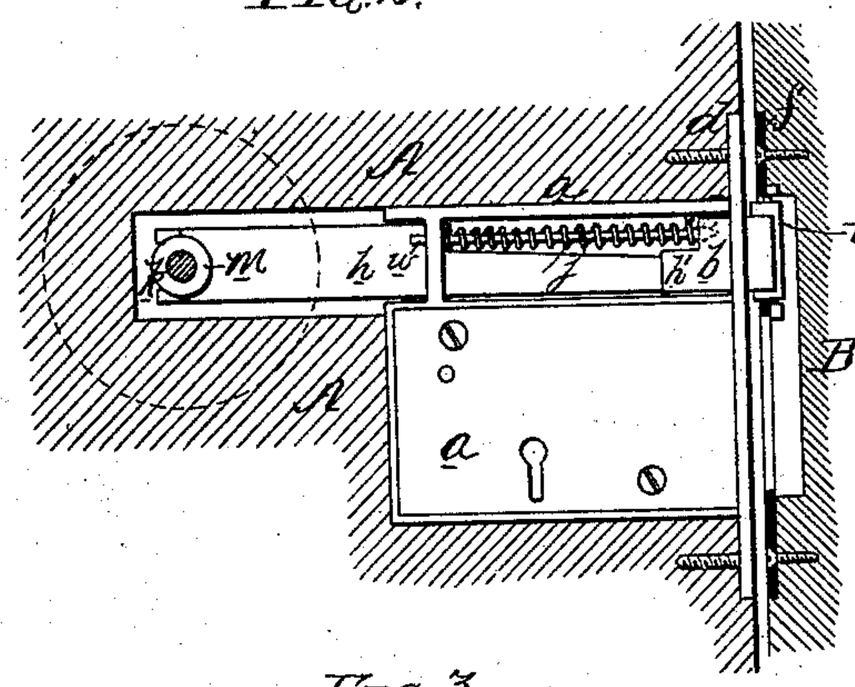


FIG. 3.

Witnesses
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Harry Smith

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Jink Wainwright Kaye
and
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Howson and Howson

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UNITED STATES PATENT OFFICE.

JOSEPH KAYE, JIM W. KAYE, AND WALTER K. KAYE, OF KIRKSTALL, LEEDS, COUNTY OF YORK, GREAT BRITAIN.

IMPROVEMENT IN LATCHES.

Specification forming part of Letters Patent No. **219,485**, dated September 9, 1879; application filed December 20, 1878; patented in England, December 22, 1877.

To all whom it may concern:

Be it known that we, JOSEPH KAYE, JIM WAINWRIGHT KAYE, and WALTER KELITA KAYE, of Kirkstall, Leeds, in the county of York, in the Kingdom of Great Britain and Ireland, have invented a new and useful Improvement for Fastening and Unfastening Doors, Windows, &c., of which the following is a specification.

The object of our invention, for which Letters Patent No. 4,873 were granted to us in England, December 22, 1877, is to make a device by which doors, gates, lids, and other like objects can be readily fastened and unfastened, the main feature of the invention being the combination, in a lock or other fastening, of a pivoted latch, an independent pivoted lever for operating the same, and a spring acting directly on the said latch in the manner described hereinafter, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional plan of part of a door and door-frame with our improved fastening and releasing device; Fig. 2, a front view of Fig. 1, showing part of the door and door-frame in section; Figs. 3, 4, and 5, views of detached portions of the invention; and Figs. 6 and 7, views illustrating the application of our invention to a cupboard-fastener.

This invention is an improvement on the class of latches illustrated in Imray's English Patent No. 1,160 of 1871, in which a pivoted latch securely connected to an operating-lever is combined with a spring acting on an arm of said lever.

In Figs. 1, 2, 3, 4, and 5 of the accompanying drawings, *a* represents the shell or casing of our improved lock fitted in the door A, and to this casing is pivoted the latch *b* by a pin, *c*, a spring acting directly on the latch, so that a portion of it shall project through the front edge, *d*, of the casing and into the keeper *f*, secured to the door-frame B.

A spiral spring, *j*, in the present instance, acts on the pivoted latch through the medium of a guide-rod, *w*, the point of which fits in a recess in the said latch.

A lever, *h*, is pivoted to the casing, one arm of this lever bearing against a projection, *h'*, on the latch, and the other arm against a projection or collar, *m*, on the knob-spindle *k*, to which are secured knobs *o o'*, the latter being at such a distance apart that the spindle can have a limited longitudinal play through the door.

It will be seen that the arm of the lever *h*, which bears against a projection, *h'*, on the latch, is not secured to the latch in any way, but is capable of being moved independently thereof, the object of this being to allow the catch to have a free and unobstructed movement inward when the door is closed, and to permit the latch and other parts of the lock to be put together and taken apart and replaced more readily than if the parts were connected together.

By arranging the spring to act directly on the latch in the manner described we obtain a direct and positive action of the latch.

On pulling the knob *o*, or pushing the knob *o'* in the direction of the arrow, Fig. 1, the collar *m* on the spindle will so operate the lever *h* that the latch will be turned on its pivot and freed from the keeper, when the door can be opened.

On closing the door, by simply pulling the knob *o'* or pushing the knob *o*, or the door itself, the pivoted latch will resume its former position in the keeper.

We prefer to cut a screw-thread in the spindle *k*, as shown in Fig. 4, for the nuts *p*, which serve to maintain the knobs at a proper distance apart, the nuts being secured after adjustment by keys adapted to grooves in the spindle as well as in the said nuts. (See Figs. 4 and 5.)

The roses *r* and *s* may be secured to the door in the usual manner, but are made by preference as shown in Fig. 1, and provided with guide-plates for the spindle.

The keeper *f* is preferably provided with a roller, *v*, to insure the easy withdrawal of the pivoted latch. (See Figs. 1 and 2.)

Our invention may be applied to different kinds of locks and fastenings. In Figs. 6 and 7, for instance, it is illustrated as applied to a fastening for a cupboard-door, in a manner which will be readily understood without explanation, a knob projecting through the casing

being in the present instance secured directly to the lever *h*.

If desired the lever may be operated by means of a key in place of knobs or projections.

We claim as our invention—

1. The combination, in a lock, of a latch pivoted to the casing and a spring acting directly on the latch to project it outwardly with a pivoted lever *h*, adapted to so act on a projection on the latch as to withdraw it into the casing, said lever being disconnected from the latch, and with a device for actuating said pivoted lever, all substantially as set forth.

2. The latch pivoted to the casing and having a projection, *h'*, in combination with a pivoted lever, *h*, acting on said projection, but disconnected therefrom, and with a rod, *w*, and spring for acting directly on the said pivoted latch, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOSEPH KAYE.
J. W. KAYE.
W. K. KAYE.

Witnesses:
WILLIAM WARD,
CHAS. GILLIARD.