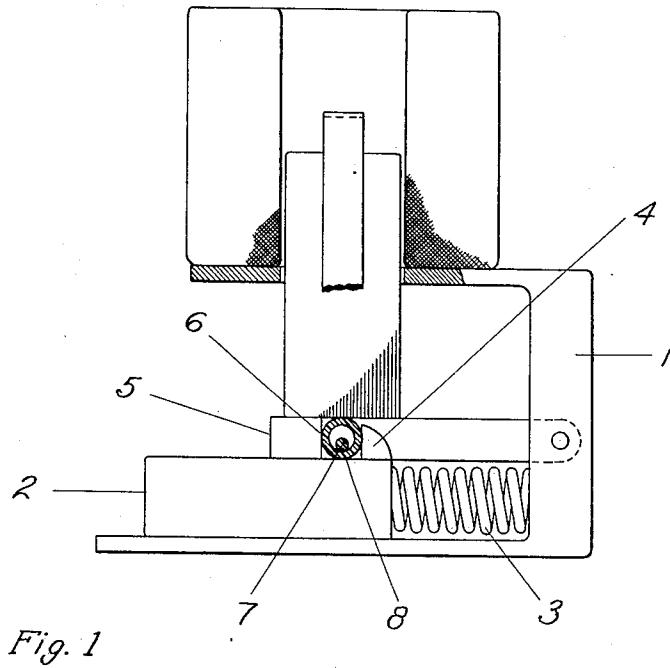
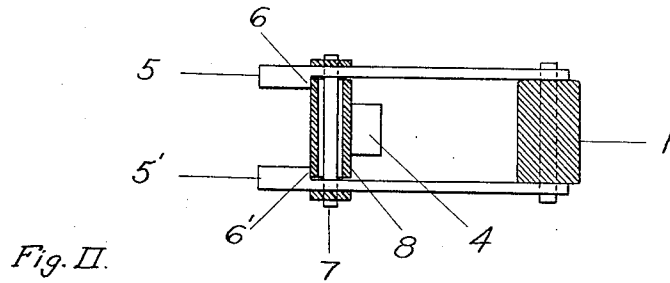


J. S. THOMPSON.
LATCH.
APPLICATION FILED OCT. 18, 1920.

1,386,382.

Patented Aug. 2, 1921.



Joseph S. Thompson
INVENTOR.

UNITED STATES PATENT OFFICE.

JOSEPH S. THOMPSON, OF MILL VALLEY, CALIFORNIA.

LATCH.

1,386,382.

Specification of Letters Patent.

Patented Aug. 2, 1921.

Application filed October 18, 1920. Serial No. 417,789.

To all whom it may concern:

Be it known that I, JOSEPH S. THOMPSON, a citizen of the United States, residing in Mill Valley, in the State of California, county of Marin, have invented a new and useful Improvement in Latches, of which the following is a specification.

My invention relates to latches released by the operating of some means such as an electro-magnet, and the object of my invention is to secure a particularly sensitive release when operated, without sacrificing positiveness of hold at all other times.

I attain this object by the device illustrated in the accompanying drawings in which Figure I is a side elevation, partly in section, and Fig. II is a plan view, partly in section, of the latch. Similar letters refer to similar parts in the two views.

In my design 1 is a suitable support, 2 is a plunger, which is here shown only to illustrate a mechanism that might be released by the latch covered by my application, 3 is a spring for actuating the plunger, 4 is a latch, and 5 and 5' are the two sides of a latch pawl with inward facing engaging surfaces 6 and 6'. Mounted loosely between the faces of the pawl (5 and 5') on the pin 7 is a roller 8, which on one of its sides, midway between the ends, is engaged by the projection (4) of the plunger (2) and on the opposite side, at each of its ends, is engaged by the two inwardly facing engaging surfaces (6 and 6') of the latch members (5 and 5'). The pin (7) is supported by the latch members (5 and 5') in such position that it passes through the roller (8) just above its lower inside surface, when the latch mechanism is in the latched position. The object of so

placing the pin (7) is to permit the pin to be used to draw up the latch members (5 and 5') without touching the roller until the group of parts has moved into the unlatched position, so that only a rolling action is exerted by the roller, yet it is retained in its proper location for a resetting. It will be seen that by raising the latch member (5), the roller (8) will be rolled off the projection (4) of the plunger (2), though, should the rolling action fail to complete the travel of the roller (8), it can be engaged on its upper, inner surface by the pin (7) which would complete its travel, releasing the plunger (2).

It will also be seen that this device makes possible an exceedingly sensitive and lightly operated release of any mechanism retained by the latch, the motion of the equipment being entirely a rolling motion and having no surface or axial friction.

What I claim is:

In a latching mechanism the combination of a pawl with two inwardly engaging faces, a latch capable of passing between the engaging faces of the pawl, a loosely supporting tubular roller member, a pin placed so that it passes through the roller member at a point just above its lower inside face when said roller is in latching position, the said roller forming the means of engagement between the latch and pawl, substantially as described.

In witness whereof, I have hereunto set my hand this 30th day of September, 1920.

JOS. S. THOMPSON.

Witnesses:

VIOLA M. HANSEN,
JAS. A. THOMPSON.