S. SEGAL.

SPRING PIN.

APPLICATION FILED NOV. 30, 1920.

1,403,128. Patented Jan. 10, 1922.

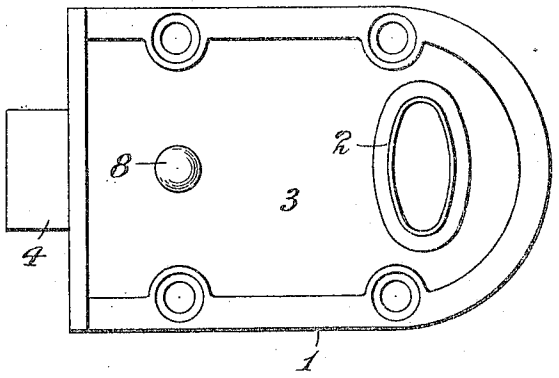


Fig. 1

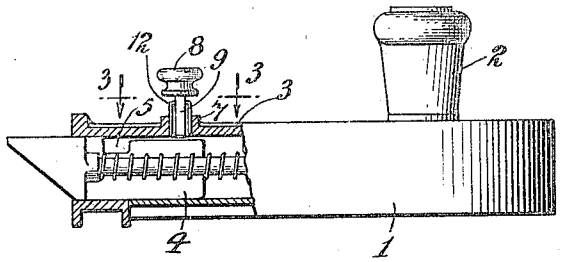


Fig. 2

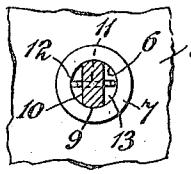


Fig. 3

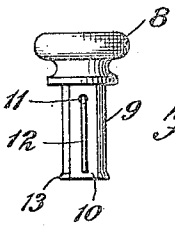


Fig. 4

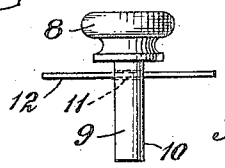


Fig. 4a

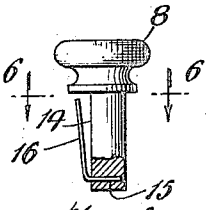


Fig. 5

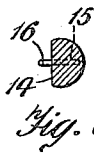


Fig. 6

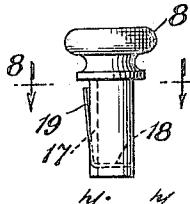


Fig. 7



Fig. 8

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SPRING PIN.

1,403,128. Specification of Letters Patent. Patented Jan. 10, 1922.

Application filed November 30, 1920. Serial No. 427,351.

To all whom it may concern:

Be it known that I, SAMUEL SEGAL, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Spring Pins, of which the following is a specification.

My invention relates to hardware and in its specific embodiment it relates more particularly to locks although in its application it is not so limited.

The invention has for its object the production of a novel, simple and inexpensive spring pin adapted to be mounted in an opening in a wall and capable of transverse movement in said opening.

In the embodiment of the invention illustrated in the accompanying drawing the invention is shown in the form of a spring pin mounted in an opening in the wall of a lock casing and adapted to act as a detent or stop to prevent movement of the latch bolt within the lock casing.

My invention consists in the details of construction and combinations of parts hereinafter more particularly described and then specified in the claims.

In the accompanying drawing:

Fig. 1 is a front elevation of a lock casing showing my invention applied thereto.

Fig. 2 is a plan view thereof, partly broken away.

Fig. 3 is a horizontal section on the line 3—3 of Fig. 2.

Fig. 4 is a front elevation of the spring pin.

Fig. 4ª is a side elevation thereof showing the spring wire of the pin before it has been bent downwardly into proper position.

Fig. 5 is a front elevation of a modified form.

Fig. 6 is a horizontal section on the line 6—6 of Fig. 5.

Fig. 7 is a front elevation of a further modification.

Fig. 8 is a horizontal section on the line 8—8 of Fig. 7.

Referring in detail to the several figures of the drawing:

1 indicates a lock casing provided with the usual operating knob 2 mounted in the wall 3 of said casing while 4 is the usual and conventional spring-actuated latch-bolt mounted within said casing and adapted to extend through an opening in the side wall thereof, as shown in Fig. 2, and provided with a shoulder 5. The parts just described are old in the art and their construction is well understood so that they require no detailed description. 6 indicates an annular opening extending through the wall 3 of said casing and 7 indicates a ring or reinforced portion adjacent said opening which is preferably integral with said wall whereby a wall of increased thickness and strength is provided at this point.

8 indicates the head of a pin having a cylindrical shank 9 of a size permitting it to slidably interfit with the opening 6 in the wall 3. Said shank of said pin is provided with opposite flattened sides 10, as illustrated, whereby a space obtains intermediate said flattened sides and the wall of the annular opening 6 when the pin is mounted in said opening. Said shank is perforated as at 11 and is adapted to receive a spring wire 12.

For mounting the pin in the annular opening 6 the spring wire is first inserted in the perforation 11 in the shank 9 as shown in Fig. 4ª. The ends of the wire are then bent downwardly adjacent the flattened sides 10 of the shank and the shank carrying the wire is inserted in the annular opening. The pin is then pressed forwardly whereby the head 8 thereof will seat against the ring 7, said head 8 providing a stop to limit the forward movement of said pin. The end of the shank 9 is then hammered to offset the same and provide a flange 13 (see Fig. 4) acting as a stop to prevent withdrawal of the pin from the opening.

When the pin is thus mounted in proper position the ends of the spring wire 12 lie in the spaces intermediate the flattened sides 10 and the wall of the opening 6 and the spring action in said wire tends to flare the ends thereof outwardly whereby said wire will at all times engage the wall of the opening 6. The frictional resistance provided by this engagement prevents the pin from working loose within the opening and retains it in forward, intermediate or rear position, as desired, until it is manually changed to a different position, the head 8 providing a convenient gripping means for operating said pin. The engagement of the spring wire 12 with the wall of the opening 6 also prevents the withdrawal of the spring wire from the perforation 11 as is obvious.

In the modification illustrated in Figs. 5 and 6, the shank of the pin is provided with but one flattened side indicated at 14 and the perforation in said shank which is indicated at 15 is adjacent the forward end of said shank instead of adjacent the rear end or operating knob as in the preferred form of the invention. Said perforation is closed in any desirable manner at the rounded side of the shank and one end of a spring wire 16 is inserted in said perforation and the spring wire bent over towards the flattened side as indicated, after which the pin carrying said spring wire is inserted and mounted in the annular opening in the wall of the casing as in the previous case.

In the modification illustrated in Figs. 7 and 8 the shank is provided with a groove or slot 17 and with a perforation 18 registering with said groove or slot and extending through said shank and closed at the end remote from said groove. One end of a spring wire 19 is inserted within said perforation and the wire is then bent over whereby it enters said groove or slot. The pin is then inserted and mounted in the annular opening in the wall of the casing as in the previous case.

In all the forms shown and described, when the latch bolt 4 is in retracted position within the lock casing, it may be positively held in this position against the action of its spring by merely pressing the head 8 of the pin whereby the end of the shank thereof will be brought within the casing for engagement with the shoulder 5 on said latch bolt to prevent movement thereof in an obvious manner.

It will be apparent that my improved device is particularly desirable because of its simplicity of construction. None of the parts require welding or soldering to properly assemble them and mount them and it is not necessary in any case to rigidly or positively fasten the spring wire to the shank of the pin in order to accomplish the desired results.

What I claim as my invention is:—

1. In a device of the character described, the combination with a wall having an opening therein, of a pin provided with a perforation and a spring wire loosely extending in said perforation in a direction transverse to the direction of said pin and bent over and engaging the wall of said opening.

2. In a device of the character described, the combination with a wall having an opening therein, of a pin provided with a shank having a perforation, a head on one end of said shank and a stop on the other end whereby withdrawal of said pin from said opening is prevented and a spring wire extending in said perforation in a direction transverse to the direction of said shank and bent over adjacent said shank and engaging the wall of said opening.

3. In a device of the character described, the combination with a wall having an annular opening therein, of a cylindrical pin having a flattened side and a perforation in said flattened side and a spring wire extending in said perforation and bent over adjacent said flattened side and engaging the wall of said opening.

4. In a device of the character described, the combination with a wall having an annular opening therein, of a cylindrical pin having opposite flattened sides and a perforation and a spring wire extending transversely through said perforation and having the ends thereof bent over adjacent said flattened sides and engaging the wall of said opening.

5. In a lock, the combination with a casing having an opening in a wall thereof, a bolt mounted in said casing, a pin extending through said opening and adapted to engage said bolt and provided with a perforation therein and a spring wire extending in said perforation in a direction transverse to the direction of said shank and bent over adjacent said shank and engaging the wall of said opening.

Signed at New York in the county of New York and State of New York this 27th day of November A. D. 1920.

SAMUEL SEGAL.

Witnesses:
F. B. Townsend,
Irene Lefkowitz.