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R. G. LOWE ET AL

1,852,353

DOOR HOOK

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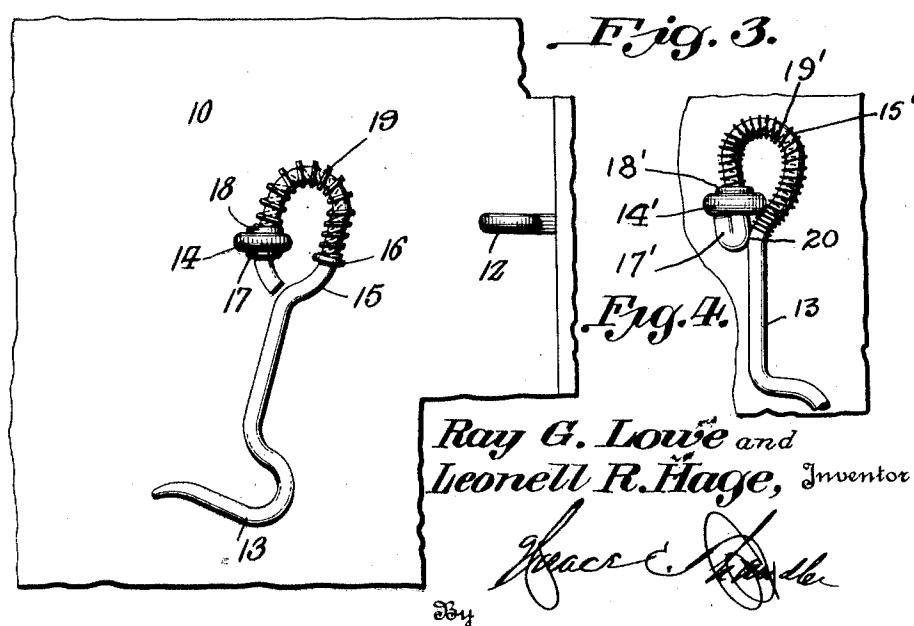
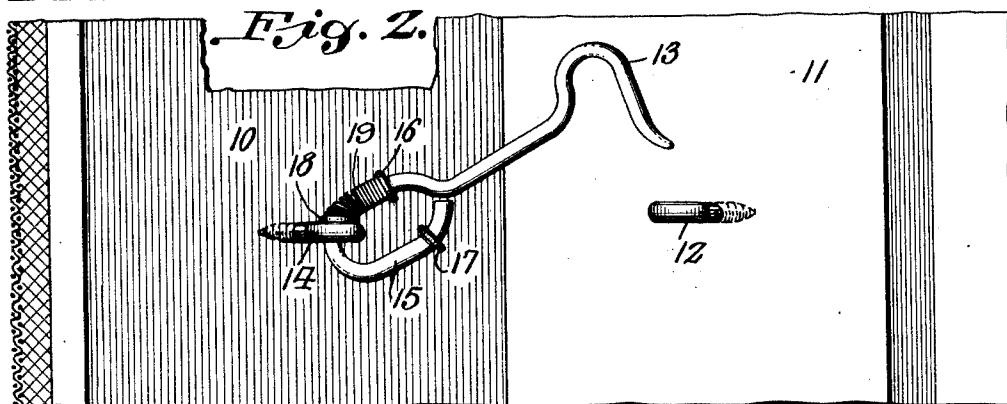
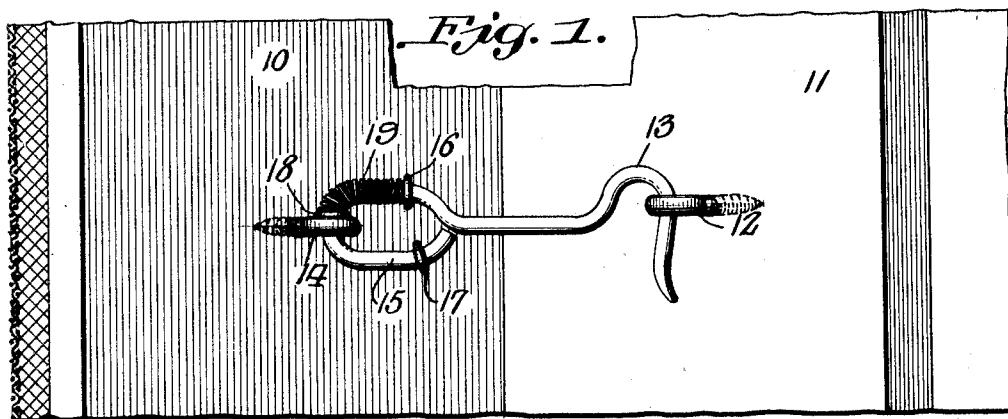
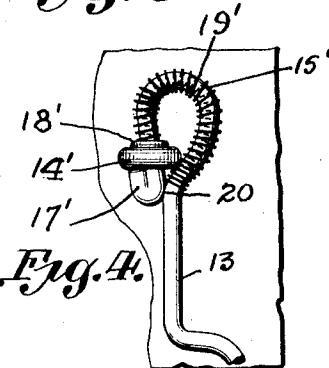


Fig. 4.



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UNITED STATES PATENT OFFICE

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DOOR HOOK

Application filed March 20, 1931. Serial No. 524,152.

This invention relates to new and useful improvements in door fastening devices, and particularly to hook and eye fastening devices, generally employed in connection with screen doors.

It is well known that, when the hook is detached from the eye, said hook will sometimes assume a position where it will extend between the door and door frame, with the result that when the door is closed a number of times, the hook will have made cuts, dents, and scratches in the door and frame. Sometimes, the hook will assume a vertical position so that when the door is closed, said hook will fall into engagement with the eye, thereby locking the door, to the great annoyance and inconvenience to the person who wishes to return immediately.

The principal object of the present invention is to provide a hook which, when detached from the eye, will be automatically held in such position that it cannot interpose itself between the door and frame, and cannot accidentally drop back into engagement with the eye.

Another object is to provide a hook, of the character named, which will be more effectively maintained in engagement with the eye, with the danger of the hook being accidentally lifted therefrom reduced to a minimum.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawings.

In the drawings:

Figure 1 is a view of a portion of a screen door, and the adjacent portion of the door frame, showing the invention in engagement with the eye.

Figure 2 is a similar view, but showing the hook raised from engagement with the eye.

Figure 3 is a similar view, but showing the hook in the position it would assume when completely disengaged from the eye, and permitted to hang.

Figure 4 is a detail view of a modified form of the hook.

Referring particularly to the accompany-

ing drawings, 10 represents a portion of a screen door, while 11 represents the adjacent portion of the door frame, against which said door abuts, when in closed position. Screwed into the face of the door frame is a screw-eye 12, of the conventional type, for receiving the bit of the hook 13, which is supported on the door by means of the screw eye 14, also of the conventional type. Ordinarily the end of the hook is provided with a small eye which is interlocked with the eye of the door-carried screw eye, but in the present hook this eye is of considerably greater dimensions, and is in the form of an oval loop, shown at 15. On each side of the loop, adjacent the shank of the hook, are the peripheral flanges 16 and 17, and loosely slidably on said loop, between the eye portion of the screw eye 14, and the flange 16, is a small ring 18, the same being of a diameter too great to pass through the said eye portion. Encircling the loop 15, and having its ends bearing against the flange 16, and the ring 18, respectively, is a coil spring 19, which, when in completely expanded condition, forces the ring 18 against the screw eye 14, whereby to hold the hook in a stationary pendent position, so that said hook cannot assume a position where it will be caught between the door and frame, when the door is permitted to swing into closed position, or into a vertical position where it would accidentally fall into engagement with the screw eye 12, when the door closes.

When the hook is engaged in the eye 12, it will be noted that the coil spring 19 is under tension, thereby holding the said hook against accidental disengagement from said eye, the pressure of the spring normally urging the hook downwardly into said eye.

Upon grasping the hook, and elevating the same from the eye 12, the operator releases said hook, whereupon the hook will be forced into a pendent position, and held against the face of the door by said spring. It will, of course, be understood that the hook can move, pivotally, within the eye 14, so as to lie at either side of said eye, or project outwardly therefrom, while at the same time being held in its downwardly extending position.

There is thus provided a simple hook which will automatically hold itself engaged with a screw eye, when in locked position, and also hold itself out of interfering relation to the door and frame, while the door is being opened and closed, whereby to prevent marks being made on the door and frame.

In the modification shown in Figure 4, the loop 15', of the hook 13, is engaged through the ordinary screw eye 14', but the flanges 16 and 17 are omitted. In place of the flange 17, the end of the wire is rebent or doubled on itself, as shown at 17', so that said end of the loop cannot pass through the eye of the screw 14'. This rebent portion is disposed in close contact with the other end of the loop, as shown at 20, so as to prevent one end of the coil spring 19' from slipping down on the shank of the hook. The other end of the spring is engaged with a loosely mounted washer plate 18', on the loop, for engagement with the upper side of the eye of the screw 14', and of a diameter too great to pass through said eye.

25. What is claimed is:

1. A fastening device including a hook for engagement with a stationary eye, a loop on an end of the shank of the hook, a supporting eye for the hook engaged with said loop, a stop member on the loop, and a spring on the loop between the stop and supporting eye for holding the hook engaged with the said stationary eye, at times, and in a vertical position, at times.
30. 2. The combination with a door carried eye and a door-frame carried eye, of a hook having a terminal loop interengaged with the door eye and having a terminal hook for engagement with the door-frame eye, and means on the said loop engaged therewith and with the door eye for holding the hook in eye engaging position, at times, and in angular relation to the attaching eye, at times.
35. 3. The combination with a door carried eye and a door-frame carried eye, of a hook having a terminal loop interengaged with the door eye and having a terminal hook for engagement with the door-frame eye, a stop on the loop, and means on the loop engaging therewith and with the door eye for yieldably holding the hook engaged with the door-frame eye, at times, and the stop engaged with the door eye, at times.
40. 45. In testimony whereof, we affix our signatures.
50. 55. RAY G. LOWE.
LEONELL R. HAGE.