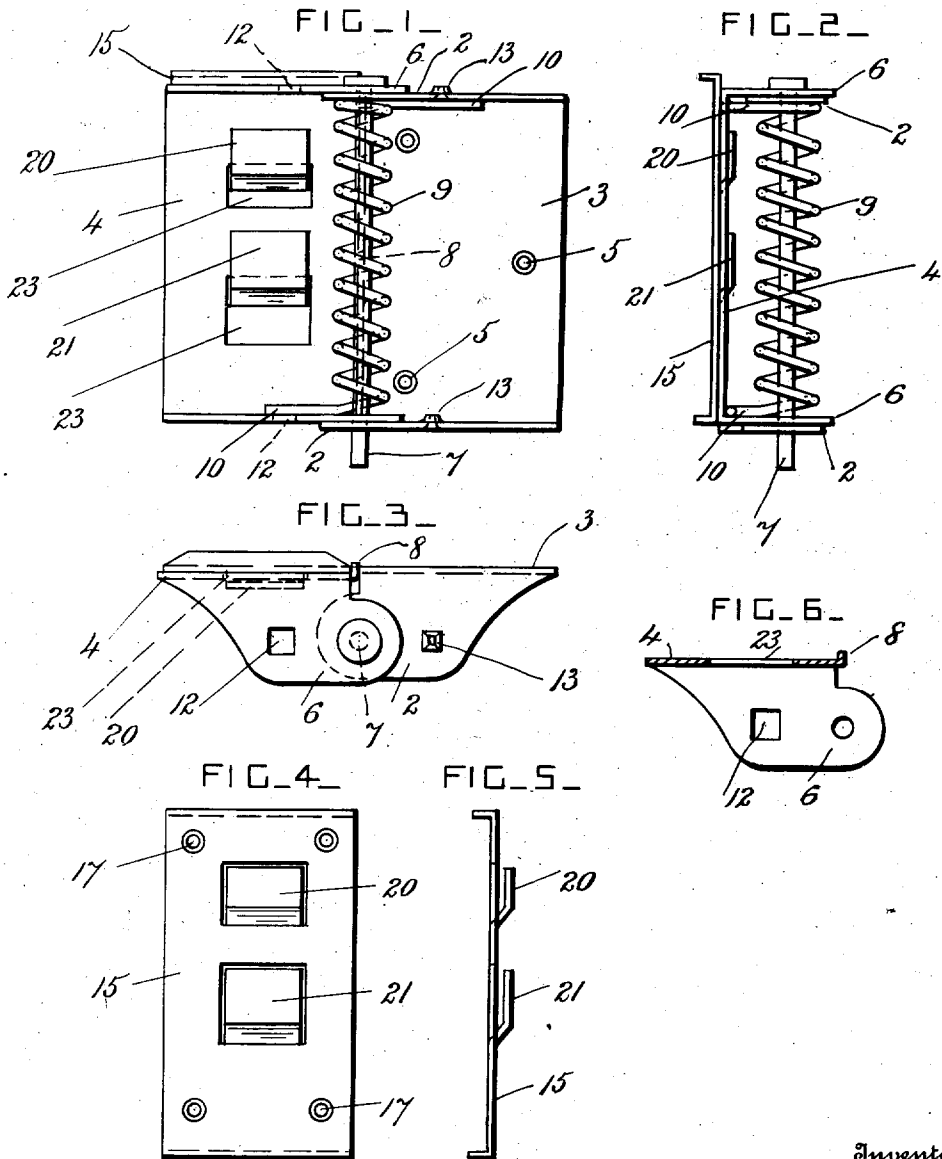


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HINGE.
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1,018,449.

Patented Feb. 27, 1912.



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HINGE.

1,018,449.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRED N. SHARP, a citizen of the United States, residing at Ossian, in the county of Wells and State of Indiana, have invented certain new and useful Improvements in Hinges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to spring hinges for screen-doors and other similar doors or shutters; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed whereby the door is held open and whereby it may readily be detached from the door-jamb.

In the drawings, Figure 1 is a front view of a hinge constructed according to this invention. Fig. 2 is a side view, and Fig. 3 is an end view, of the hinge. Fig. 4 is a detail front view, and Fig. 5 is a detail side view, of the jamb-plate. Fig. 6 is a cross-section through plate 4.

The hinge has two hinge plates 3 and 4. The plate 3 has lugs 2 at its top and bottom, and holes 5 for the screws which attach it to the door. The plate 4 has similar lugs 6 at its top and bottom which are arranged to one side of the lugs 2. A pivot pin 7 passes through holes in the lugs 2 and 6, and connects the two hinge-members together. The lugs 6 are shorter than the lugs 2 so that the plate 4 is parallel to the plate 2 when the hinge is open, but is not in the same plane with it. The plate 4 is provided with a vertical flange 8 along its inner side edge which projects rearwardly, and which bears against the adjacent edge of the plate 2 when the hinge is open, as shown in Fig. 1. A helical spring 9 is coiled about the middle part of the pivot pin, and has projecting pieces 10 at its ends which project in opposite directions and which normally hold the hinge open. The coils of the spring also hold the lugs 2 and 6 in engagement with each other. These lugs are provided with a catch which locks the hinge members when they are folded together. Each lug 6 has a hole 12 and each lug 2 has a projection 13 on it which engages with the hole 12 when the door is opened fully so as to fold the sheet-metal hinge-plates together. One or both of the pairs of lugs may be provided with a hole and a projection in this manner,

and the projection is struck up from the surface of the sheet-metal lug by indenting the lug on one side. The helical spring holds the projections in engagement with the holes, and a little force is required to overcome the spring so as to disengage them. These hinges are usually used in pairs. On an ordinary screen door the two springs of one pair of hinges are sufficient to support the weight of the screen door. On larger screen doors three or more hinges may be used, or stronger springs may be provided.

A plate 15 is provided and has flanges on its top and bottom for engaging with the door-jamb, and it also has holes 17 for the screws which secure it to the door-jamb. This plate 15 also has rectangular hooks 20 and 21 struck up from it, or partially punched out of it, and projecting forwardly and adapted to pass through two rectangular holes 23 in the hinge-plate 4, so as to engage with the said hinge-plate. The upper hook 20 is shorter than the hook 21, so that the hooks may engage with the hinge-plate one after the other and be more easily connected and disconnected.

When the detachable hinge-plate 4 is secured in position the vertical guide flange 8 bears against one edge of the jamb-plate 15, and the hinge-plate 3 is supported in the same plane as the jamb-plate 15. The vertical flange 8 also prevents the screen-door from sagging in ordinary use. When the screen-door is to be removed it is opened wide so as to lock the catch, and the screen-door is then unhooked from the hooks of the jamb-plate 15.

What I claim is:

1. In a hinge, the combination, with two pivoted spring-pressed hinge-plates, one hinge-plate being normally arranged out of line with the other hinge-plate and having holes in it and having also a rearwardly projecting flange which bears against the edge of the other hinge-plate, of a plate provided with hooks which are partially punched out from it and arranged with their points projecting in the same direction, and which engage slidably with the hinge-plate having holes in it, said plate being normally arranged in the same plane as the hinge-plate to which it is not directly connected and being slidable against the said flange on the other hinge-plate.

2. In a hinge, the combination, with a

hinge-plate adapted to be secured to a door,
of a spring-pressed hinge-plate pivoted to
the said hinge-plate and provided with
holes and a guide flange, and a plate, for
5 attachment to the door-jamb, arranged to
bear against the said flange and provided
with hooks which have their points project-
ing in the same direction and which engage

slidably with the hinge-plate having holes
in it. 10

In testimony whereof I have affixed my
signature in the presence of two witnesses.

FRED N. SHARP.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
