

(No Model.)

P. S. NUNN.
HINGE.

No. 470,350.

Patented Mar. 8, 1892.

Fig. 1.

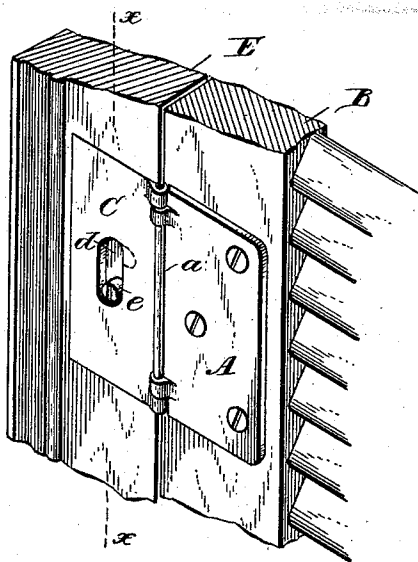


Fig. 6.

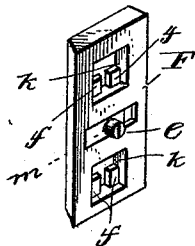


Fig. 2.

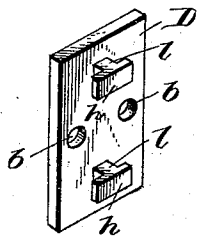


Fig. 3.

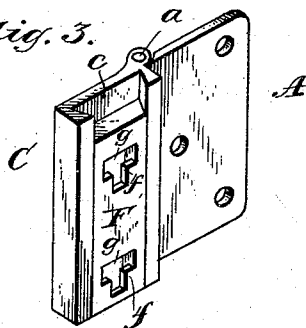


Fig. 4.

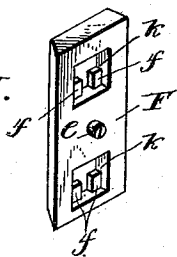
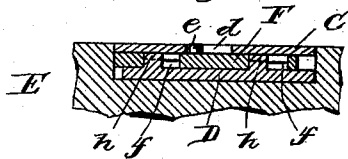


Fig. 5.



Witnesses.

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HINGE.

SPECIFICATION forming part of Letters Patent No. 470,350, dated March 8, 1892.

Application filed August 29, 1891. Serial No. 404,045. (No model.)

To all whom it may concern:

Be it known that I, PHILIP S. NUNN, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Hinges for Shutters, Doors, and the Like, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of hinges for use on doors, inside shutters, and the like where it is desirable to remove the doors or shutters temporarily from their supporting-frames for various purposes, the doors or shutters afterward to be again rehung in their original positions; and the purpose of my invention is to provide a simple, cheap, and effective hinge which can be permanently secured to one of the parts and which can be readily attached to or detached from the other at a moment's notice without the removal of the retaining bolts, screws, or nails that it is necessary to remove in the use of ordinary hinges, except in the case of the ordinary slip-butt hinge, to be referred to farther on.

With the ordinary door or inside-shutter hinge, in which each leaf of the hinge is secured permanently, the one to the frame and the other to the door or shutter, whenever it is desired to remove the door or shutter the screws which secure the hinge-leaf must be unscrewed. Where inside shutters are used in dwelling-houses and the like, it is often the custom to take down the shutters for the purpose of washing and cleaning the same, and this frequent removal of the screws used in the ordinary hinges soon tears and destroys the wood-work, so that the hinge will no longer hold to the frame. The same trouble is experienced in the temporary removal of screen-doors and other like objects. The frame soon becomes worn away, so that the screws will no longer hold in place. It is to overcome these difficulties that my invention is directed; and my improvements consist in making one leaf or side of the hinge in several parts, one of which can be permanently secured to the frame-work of door or window, another permanently hinged by the usual pin to the other leaf, and a third part sliding between the two, by means of which the hinge, and

with it the door or shutter, can be readily detached from the frame-work, whenever desired, at a moment's notice and without in any way damaging the wood-work to which the hinge is attached.

In the drawings, Figure 1 is a front perspective view of my hinge as in use and a portion of a window-frame and shutter. Fig. 2 is a front perspective view of the retaining-plate. Fig. 3 is a rear perspective view of the hinge detached from the retaining-plate. Fig. 4 is a perspective view of the sliding plate. Fig. 5 is a central longitudinal section of the detachable portion of the hinge on line *xx* of Fig. 1. Fig. 6 is a modified form of the sliding plate in perspective.

A is one leaf of the hinge, which is secured in the ordinary way by screws to the edge of the shutter or door B, mortised to receive it. The other portion of the hinge is made up of three parts—a flat upper plate C, which is hinged to the opposite leaf of the hinge by the pin *a* in the usual way; second, a fixed retaining-plate D, which is permanently secured to the door-jamb or window-frame E in a proper mortise by screws through the openings *b b*, and, third, a sliding plate F. The rear side of the upper plate C is cut away to form a dovetailed groove or mortise *c*, within which the plate F is arranged to slide vertically, the side edges of which plate are flaring in order to fit within the receding walls of the mortise and hold the sliding plate within the groove.

A slot *d* is cut in the upper plate C to receive the pin or screw *e*, which is secured to the sliding plate F so that the plate F may be raised and lowered by acting on the pin *e*. The head of this pin *e* is made flush with the surface of the plate C, so as not to affect the closing of the hinge.

Projecting outward from the retaining-plate D are T-shaped lugs, and in the adjacent face of the sliding plate F T-shaped slots *g g* are cut to receive these lugs. The upper parts of these slots *g g* are broad to receive and allow the passage of the heads *h h* of the lugs, while the lower parts of the slots are narrow in order to receive only the stems *l l* of the lugs. The inner portion of the slots *g g* are widened on the other side of the plate, so as to form rectangular mortises *k k* of the

same width throughout and allow free play for the broadened heads *h h* of the T-shaped lugs.

It will be manifest that the pin *e*, projecting into the slot *d* of the plate C, will hold the sliding plate F from dropping from the plate C when the hinge is detached and that the hinge can be readily attached to the retaining-plate D by sliding the plate F as high up as it will go, passing the T-shaped lugs through the broad portion of the slots *g g*, and then drawing down the sliding plate, when the broad heads of the T-shaped lugs will be held behind the projections *f f* of the slots *g g*. It will be seen from this that the hinge and the door or shutter can be thus readily detached from the supporting-frame at a moment's notice by pushing up the pin *e*, and with it the sliding plate, to bring the broad heads of the lugs to the broad openings of the slots *g g*. After one sliding plate has been raised ready to release the hinge the plate can be held up by a small block of wood until the upper hinges on the shutter or door are also ready to be released; or, if desired, the pin *e* may be held in a horizontally-sliding piece *m* in the plate F, as shown in the modified form shown in Fig. 6. A notch is then cut in the upper part of the slot *d* to receive the pin *e*, and when the sliding plate is raised the pin *e* is then pushed sidewise and held by the notch. In the construction shown also the parts have to be first put together and then the pin *e* screwed to place in the sliding plate. If desired, the slot *d* may be elongated to the upper edge of the plate C and the pin *e* permanently secured to the plate F. It will also be understood that I do not wish to be limited to the particular form of construction shown. So long as the proper relation of the various parts is retained it is not essential that the various grooves and slots should be of the particular shape and position shown, and it is also obvious that the detachable portion of the hinge could be secured to the article to be hung as well as to the supporting-frame. The advantages of my hinge can be readily seen.

I am aware that detachable hinges are old—for example, such as have long been in use for outside blinds and the like—but in such detachable hinges it is necessary to lift the

door or shutter in order to detach the parts, and contact with the upper ledge of the frame often makes this far from easy to accomplish; and, again, in rehanging the article, especially with heavy shutters or doors, it is difficult to get the parts in proper line, so that they will readily slip back to place. With my device, however, any door or shutter, no matter how heavy or cumbersome, may be instantly removed by merely pushing up the sliding plate. The article itself does not have to be raised in order to do this, and there is no difficulty about getting the parts in line when rehanging the same. The structure of my hinge is, besides, simple, cheap, and durable, and cannot get out of order. It will be further noted that it is not essential that the lugs should be on the retaining-plate, as these retaining-lugs might be conveniently placed on the sliding plate and the slots to receive them in the permanently-secured retaining-plate.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a detachable hinge, the combination, with the two leaves thereof, of a permanently-secured retaining-plate and a sliding plate secured to one leaf of the hinge, with lugs on one of said plates and slotted grooves in the other, whereby the movement of the sliding plate will lock and release the hinge from the retaining-plate, substantially as shown and described.

2. In a detachable hinge, the combination, with the two leaves thereof, of a permanently-secured retaining-plate, T-shaped lugs projecting therefrom, and a plate secured to and sliding on one of the leaves of the hinge, T-shaped openings in the adjacent face of said sliding plate, expanded into rectangular mortises within to receive and lock said T-shaped lugs, and a pin attached to said sliding plate and projecting into a slot in the hinge-leaf, whereby said sliding plate may be raised or lowered and the hinge detached from or secured to the retaining-plate, substantially as shown and described.

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