E. HICKOK.

DOOR HANGER.

APPLICATION FILED NOV. 2, 1920.

1,379,565. Patented May 24, 1921.

Fig. 1.

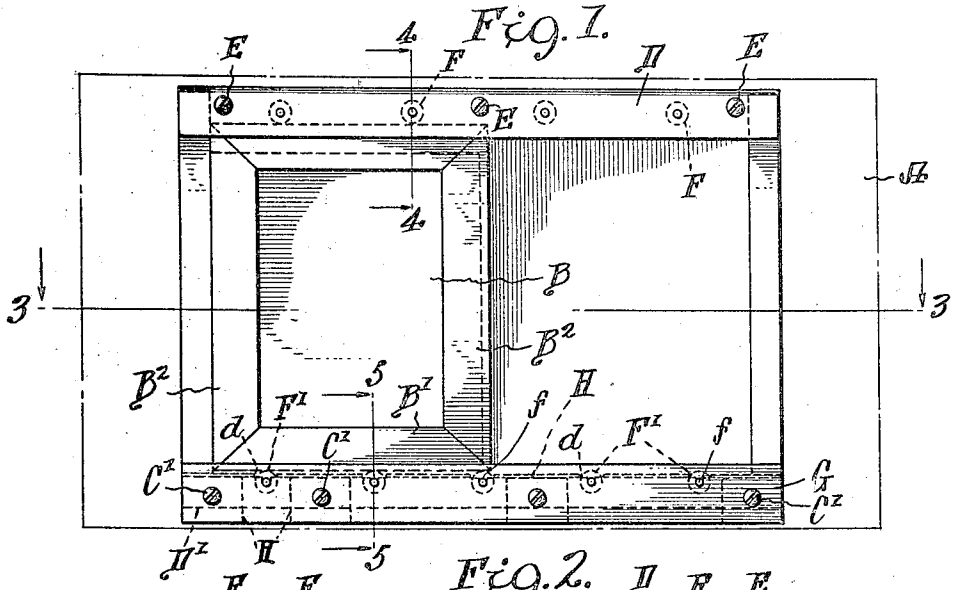


Fig. 2.

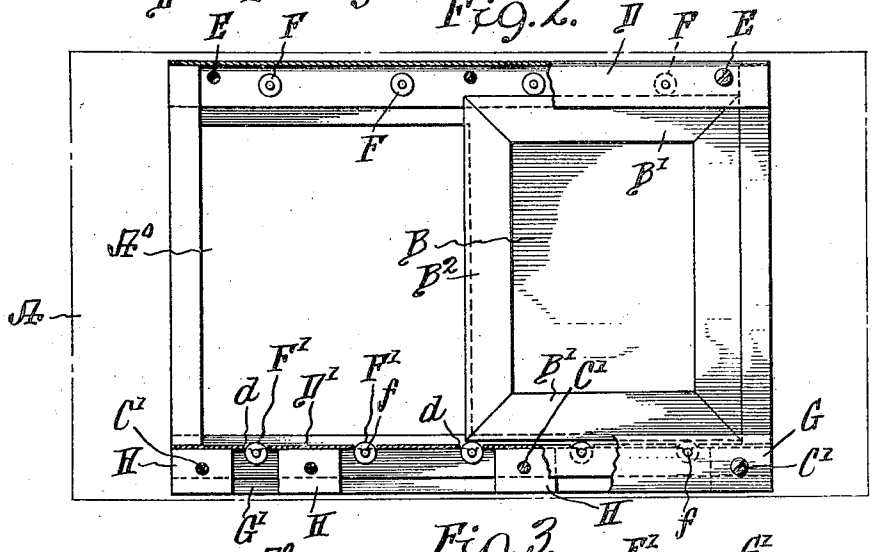


Fig. 3.

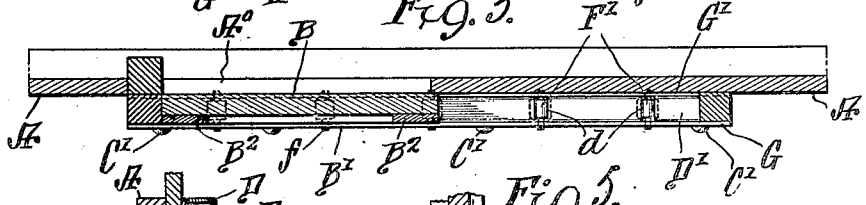


Fig. 4.

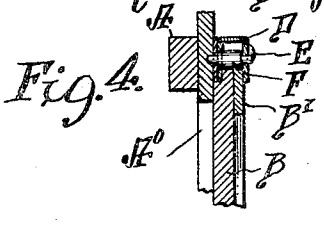
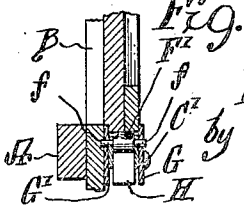


Fig. 5.



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UNITED STATES PATENT OFFICE.

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DOOR-HANGER.

1,379,565. Specification of Letters Patent. Patented May 24, 1921.

Application filed November 2, 1920. Serial No. 421,369.

To all whom it may concern:

Be it known that I, EMORY HICKOK, a citizen of the United States, residing at Engle, county of Sierra, and State of New Mexico, have invented certain new and useful Improvements in Door-Hangers; 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.

My present invention relates to improvements in antifriction door arrangements, and it consists in providing a simple, strong, durable and efficient antifriction device adapted for use with heavy doors, such as freight car doors, barn doors, doors of garages, or the like.

The invention will be more clearly understood after reference to the accompanying drawings, in which like parts are indicated by similar reference symbols throughout the several views, and in which:—

Figure 1 is a front elevation of the door frame with a single sliding door mounted therein.

Fig. 2 is a similar view to Fig. 1, but showing parts of the door frame broken away and the door in the open position.

Fig. 3 shows a section along the line 3—3 of Fig. 1, and looking in the direction of the arrows.

Fig. 4 shows a section along the line 4—4 of Fig. 1, and looking in the direction of the arrows, and

Fig. 5 shows a section along the line 5—5 of Fig. 1, and looking in the direction of the arrows.

In the embodiment of the invention as shown the front wall A of the building is provided with the usual opening A° normally covered by the door B, as shown in Figs. 1 and 3. This door is provided top and bottom with reinforcing strips B′, and also similar reinforcing strips B^2 are preferably provided for the side edges of the door to stiffen the same. The door travels on antifriction bearings or guideways which will now be described.

D represents an inverted trough, substantially U-shaped in cross section, which is secured to the front of the building in any convenient way as by the bolts E. Mounted in this trough are antifriction guide rollers F which serve to guide the top of the door and keep it from tilting as it is moved back and forth.

The bottom of the door rests upon similar antifriction rollers F′, whose edges project up slightly through slots *d* in the lower inverted trough D′. The weight of the door rests on these lower rollers F′. This lower trough is mounted between the reinforcing plates G and G′, shown most clearly in Figs. 2 and 5, and projecting into the bottom of the trough D′ are spacing blocks H which serve to support the lower trough D′ in place, and the parts are held together and attached to the front of the building by means of the bolts C′ and also the axles *f* of the antifriction rollers F′, as shown in Fig. 5.

It will be seen that the door will slide freely on the bottom rollers and will be guided against tilting by the top rollers, and that the whole structure will be stiff and strong and not likely to warp or get out of order.

By having the two troughs D and D′ inverted as shown, with the lower rollers F′ projecting through slots *d* in the lower trough D′, the accumulation of dust, dirt, trash, or other foreign matter in the runway for the door is provided against and the door will be permitted to slide freely without encountering such obstructions.

It will be noted that the herein described door frame and doorway can be readily attached to or removed from a freight car or a building of any ordinary construction, and these parts may be of standard make and size, and sold separately as desired, to be attached to any building requiring such attachments.

While I have shown a single door as the simplest form or embodiment of the invention, it will be evident that the track may be long enough to carry two doors, and that these doors may slide freely, for instance as used with freight car doors, barn doors, garage doors, or the like.

It will also be obvious that various other modifications might be made in the herein described construction, and in the combination and arrangement of parts which could be used without departing from the spirit of my invention; and I do not mean to limit the invention to such details except as particularly pointed out in the claim.

Having thus described my invention what

I claim and desire to secure by Letters Patent of the United States is:—

An antifriction arrangement for sliding doors, comprising an inverted metal trough substantially U-shaped in cross section, and having a series of transverse slots in the top thereof, a series of antifriction rollers mounted in said trough and having their cylindrical surfaces projecting through said slots and extending slightly above the top of said trough, reinforcing plates mounted at each side of said trough, and spacing blocks mounted in said trough between said rollers, with bolts securing said plates, said blocks, and said trough together and to the parts of the building surrounding the doorway, and guide rollers mounted above and parallel to said first mentioned rollers, in combination with a door having its upper and lower sides parallel, with its lower edge adapted to rest upon said lower rollers, and its upper edge engaging said guide rollers.

EMORY HICKOK.