Dec. 4, 1923. 1,476,038

C. W. BIRCH

SWING HANGER

Filed July 19, 1921

FIG. 1

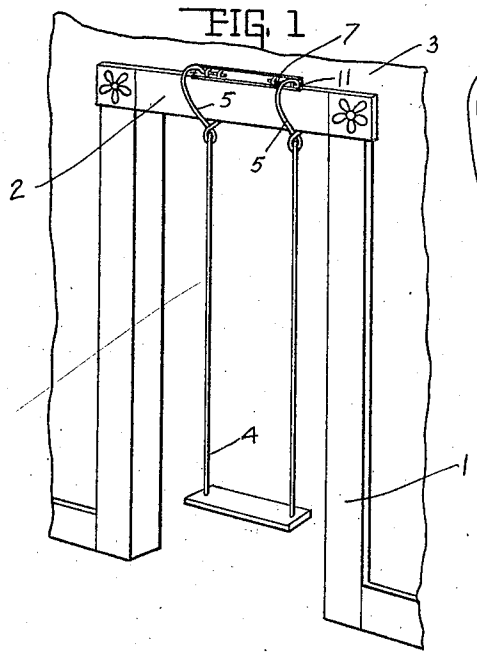


FIG. 2

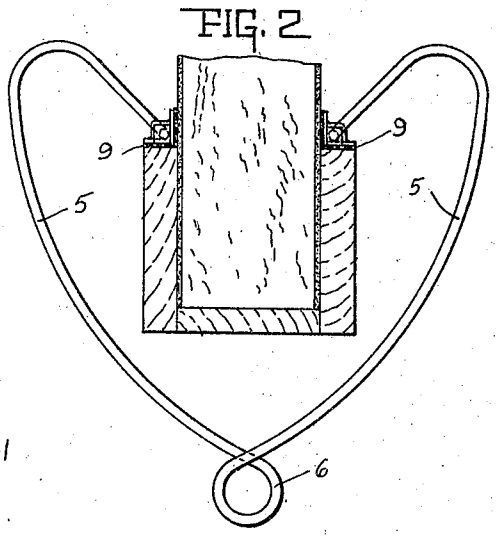


FIG. 3

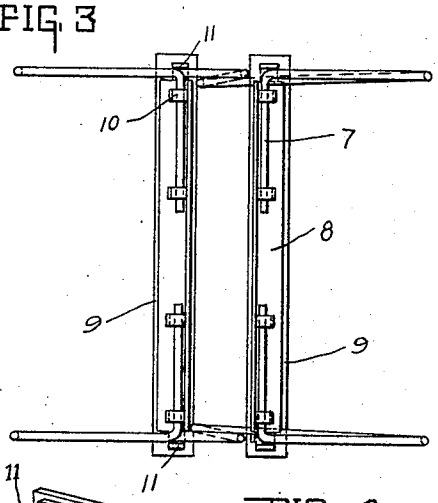


FIG. 5

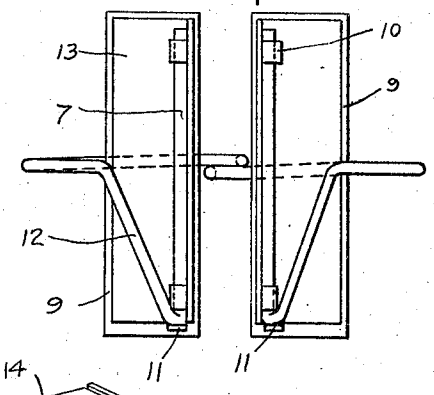


FIG. 4

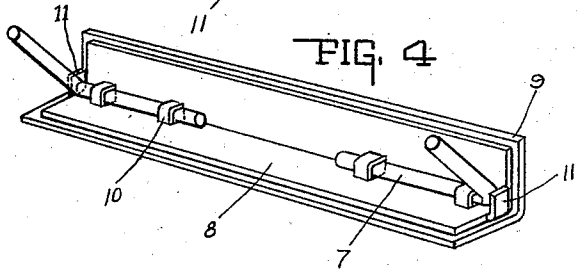
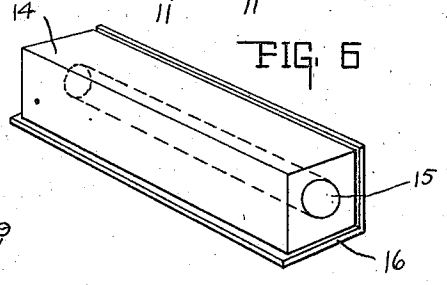


FIG. 6



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Patented Dec. 4, 1923. 1,476,038

UNITED STATES PATENT OFFICE.

CHESTER WM. BIRCH, OF CHICAGO, ILLINOIS.

SWING HANGER.

Application filed July 19, 1921. Serial No. 485,811.

To all whom it may concern:

Be it known that I, CHESTER W. BIRCH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Swing Hangers, of which the following is a specification.

This invention relates to swing hangers and is primarily an improvement over the devices shown in my prior application, Serial No. 328,556, filed October 4, 1919, the prime feature of the present invention being the provision of separated hanger sections, together with anchoring plates or members for positioning the ends of the hanger sections over a support.

A further feature of the invention is the provision of means for attaching the anchoring ends of the hanger members to the supporting plates or bars therefor.

A further feature of the invention is in so constructing the supporting parts for the hanger members that the hanger members may be attached in pairs or may be used singly.

A further feature of the invention is the provision of means in connection with the supporting members for the hanger for protecting the parts with which they engage from injury by friction or otherwise.

A further feature of the invention is in so constructing the hangers when used singly, as to prevent tilting action of the supporting plates upon the support.

Other objects and advantages will be hereinafter more fully set forth and pointed out in the accompanying specification.

In the accompanying drawings,

Figure 1 is a perspective view of the swing structure applied to use,

Figure 2 is an enlarged detail sectional view showing the hanger mounted upon a door frame,

Figure 3 is top plan view of the hanger, together with the supporting plates therefor,

Figure 4 is a detail perspective view of one of the supporting plates,

Figure 5 is a top plan view showing the manner of constructing and mounting a single hanger, and

Figure 6 is a perspective view of a modified form of supporting member for the hangers.

Referring to the drawings, 1 indicates a door frame which may be of the conventional or any preferred construction and having a top rail 2 which rests against the wall 3 of the building, and in order to suspend a swing 4 from the top rail 2, hanger members 5 are provided, which are substantially heart-shaped, said hanger members being preferably constructed from spring metal in the form of a rod or wire, the lower extremity of each hanger member being preferably provided with a loop 6, to give tension to the arms of the hanger member and to provide a convenient means for attaching the swing to the hanger. The upper ends of the arms of the hanger members 5 are preferably bent at right angles to the remainder of the hanger member and extended in a horizontal plane to provide bearing shanks 7, these shanks fitting over the upper edges of the top rail 2 and suspending the hanger members from the rail.

When a swing structure is suspended from the top rail 2, it is preferable to use a pair of the hanger members 5, and as the hanger members are formed separate from each other, supporting plates, bearing members or bars 8 are provided which are substantially angular in cross section and extend from one hanger member to the other, one arm of the plate or bar resting upon the upper edge of the top rail 2, while the other arm extends vertically and rests against the face of the wall 3, and to protect the top rail and wall against injury from the supporting plates, as they are preferably constructed of metal, a strip of felt 9, or similar material, is secured over the faces of the supporting plates which contacts with the top rail and wall, the strips of felt preferably projecting slightly beyond the edges and ends of the supporting members, or if desired the felt may be placed over the entire surface of the plates.

The shanks 7 of the hanger members preferably rest in the crotch formed by the supporting plates, and in order to hold the shanks in fixed relation with the supporting plates, sockets 10 are formed on the supporting plates by striking up strips or sections of the plates, severing the side edges of the struck up portions, but leaving the ends of the struck up portions integral with the plates; consequently the shanks 7 may be readily entered through the sockets thus formed. After the shanks have been properly entered through the sockets 10, tongues 11, formed at the ends of the supporting

plates, are bent upwardly and extended into the path of the hanger members so as to prevent the shanks 7 from casually leaving the sockets, and when the supporting plates are formed in one continuous piece the two hanger members are held in fixed relation with each other.

In some instances it is desired to use a hanger singly as when suspending a baby jumper, or devices of a similar nature, and under such conditions that form of hanger shown in Figure 5 is preferably used, and in this instance an offset portion 12 is formed between the curved portion of the hanger proper and the shank 7, so as to bring the hanger to a point approximately midway between the ends of the supporting plates or bars 13, which, in this instance, are shorter than the plates 8, although constructed in the same manner otherwise. By placing the hanger substantially at the longitudinal center of plates 13, said plates will not have a tendency to tilt as might otherwise occur if the hanger was positioned at the ends of the plates.

Instead of providing the angle-shaped metallic supporting plates, that form of support for the hanger members shown in Figure 6 may be employed, which consists of an oblong block 14 preferably of wood, having a bore 15 centrally of its axis, into which the shanks of the hanger members are entered, the faces of the block having a cushioning strip of felt 16 or the like for protecting the parts with which it comes in contact, and if desired any suitable means may be provided for securing or anchoring the ends of the shanks within the bore.

Applying this form of device to use, after the hanger members have been secured to the supporting bars or plates, said plates are manually separated and engaged with the top sill of the door frame, the supporting plates resting upon the top edge of the sill and against the face of the wall of the building, one plate on each side of the wall, and when the force required to separate the supporting plates is released, the tension of the hanger members will securely clamp the supporting members in position and hold them against undue movement due to the swinging operation. It will likewise be seen that by forming the hanger members separate from each other they can be more expeditiously and more cheaply manufactured, and when connected with the supporting plates or bars, as shown, will be as efficient as the structure shown in my former application.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent, is:

1. A support for cooperation with door frames or the like comprising a bearing member on each side of the frame, a hanger having its terminals bent at right angles with the main portion thereof to extend along the bearing members, said hanger being bent backwardly upon itself to position the main portion thereof substantially midway of the shank, the arms of said hanger being arranged for directing inward and downward pressure on the bearing members, substantially as set forth.

2. A support for cooperation with door frames having a top rail or the like comprising a pair of bearing members substantially angular in cross section and having legs bent to conform with the top rail and wall of the door frame respectively, a hanger member having its opposite ends bent to extend along the crotch of the bearing members, said bearing members having sockets formed along the crotch by striking up strips along each leg of the angular bearing member and integral therewith whereby said bent portions of the hanger member are held within the sockets, the arms of said hanger member being arranged for directing downward and inward pressure along the crotch of the angular bearing members, substantially as set forth.

In witness whereof, I have hereunto set my hand and seal at Chicago, Illinois, A. D. nineteen hundred and twenty-one.

CHESTER WM. BIRCH. [L. S.]

Witnesses:
ROSE ODDY BIRCH,
G. C. TAVENNER.