W. F. JACOBS.
BARN DOOR TRACK.
APPLICATION FILED FEB. 15, 1913.

1,090,540. Patented Mar. 17, 1914.

Fig. 1.

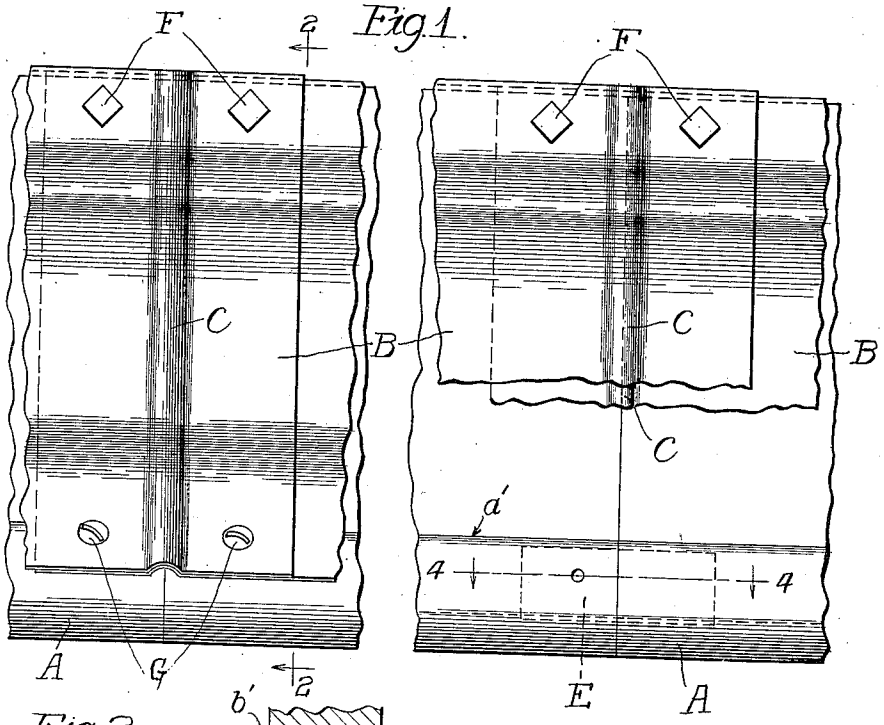


Fig. 2.

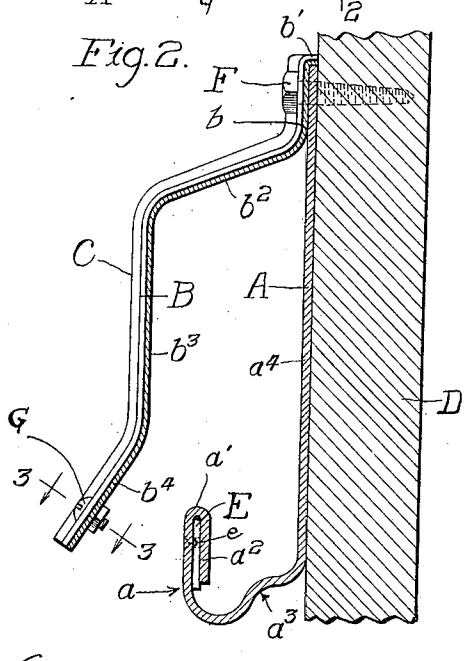


Fig. 3.

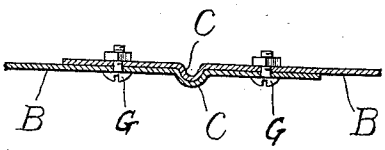
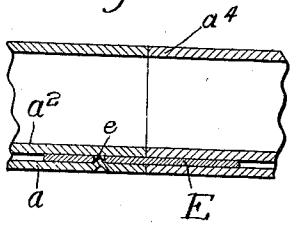


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BARN-DOOR TRACK.

1,090,540. Specification of Letters Patent. Patented Mar. 17, 1914.

Application filed February 15, 1913. Serial No. 748,548.

To all whom it may concern:

Be it known that I, WILLIAM F. JACOBS, a citizen of the United States, and a resident of Ottawa, in the county of La Salle and State of Illinois, have invented certain new and useful Improvements in Barn-Door Tracks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to door hanger supporting tracks, preferably made of sheet metal sections, and particularly adapted for sliding doors such as used on stables, barns, warehouses, and the like.

Among the objects of the invention is to improve the construction of door hangers of the kind referred to in the several particulars as will hereinafter appear, and it includes improvements in the structure of the track portion of the door hanger, and also improvements in the means for joining the track portions and maintaining the same in alinement.

The invention consists in the matters herein described and more particularly pointed out in the appended claims.

In the drawings Figure 1 is a view, in front elevation, of portions of several sections constituting the track with parts broken away to reveal the portions immediately behind; Fig. 2 is a sectional view, taken on line 2—2 of Fig. 1; Fig. 3 is a cross-sectional view, taken on line 3—3 of Fig. 2; Fig. 4 is a cross-sectional view, taken on line 4—4 of Fig. 1.

Referring to the construction constituting my invention, the same comprises two portions, to wit, the track proper or hanger supporting member A, and the hood or guard B. For purposes of convenience in shipment and manipulation, the completed track comprises a plurality of sections of sheet metal, joined end to end to constitute hanger supporting and guard members, said sections being of convenient length, and means being provided by which they may be rigidly and strongly united to form a rigid and uniform bearing surface for the rollers of the door hanger as well as an efficient protective covering for the same.

Referring now in detail to the formation and construction of the track member A, each section of the same is formed by a single strip of sheet metal, the upper portion a^4 of which is flat and is adapted to be secured in vertical position against the wall or side D of the building. The portion of said strip adjacent to its lower longitudinal margin is bent substantially into U-shape so as to form an upwardly extending narrow part a, which forms the track proper, and is provided with an upwardly facing bearing surface a', on which rests the grooved wheels or rollers by which the door is supported. The said upwardly extending part a is longitudinally stiffened or strengthened by means of a longitudinally extending stiffening strip or member a^2 arranged parallel with and integral with said part a throughout its length. Said stiffening strip or member a^2 not only serves to give rigidity to the part a, but serves with said part a itself to give such width to the bearing surface a' as is required to properly support the groove wheels or rollers which travel thereon. In the preferred construction illustrated the stiffening member a^2 is formed by bending the adjacent marginal portion of the strip inwardly and vertically downward so that a double thickness of metal is obtained and the stiffening strip a^2 is integrally connected throughout its length with the upturned part a of the strip. By this construction, moreover, the metal at the fold of the strip constitutes the bearing surface a' and gives continuous and rigid character to said bearing surface. In so bending the marginal portion of the sheet metal to form the stiffening member a^2, a space is formed between the inner adjacent surfaces of the portions a and a^2, so as to increase the width of the bearing surface a'. The space thus formed also serves to facilitate the joining of the sections in a manner to maintain the parts constituting the tracks of adjacent sections in alinement with each other. For this purpose I employ a joint-piece E consisting of a flat piece of metal, the ends of which occupy the space between the parts a, a^2 adjacent to the meeting ends of the sections, and which is rigidly secured to at least one of the sections. In the preferred construction illustrated, the joint-piece E is provided with a hole e into which the metal of the part a, of one of the metal strips, is depressed by means of a punch or otherwise in a manner to rigidly secure the joint-piece

in place. While the joint-piece made as described may be attached to the meeting ends of both sections, yet it will be usually sufficient to secure the same to one of the sections only, as illustrated.

Each section of the hood or guard B is formed from a strip of galvanized sheet metal of proper thickness bent or pressed to the desired shape. The upper portion b of the hood is flat and adapted to rest against the upper marginal portion of the track strip A. The top margin of said part b is bent inwardly at right angles, forming a flange b' extending over the top margin of the portion a^4 of the track A and adapted to bear edgewise against the wall to which said track is secured. Below the portion b of the hood the same is bent outwardly and slightly downward, throughout the portion b^2 and thence downwardly throughout the portion b^3, the same being parallel to the portion b and at a distance from the plane of the said portion b to afford ample space for the rollers and other parts of the hanger. The portion b^4 immediately adjacent to the lower margin is inclined outwardly at an angle of approximately 45° to the vertical, and extends slightly below the tread a' of the track. At either end of each section of the hood B and spaced inwardly from the end margin are formed transverse or vertically extending ribs or beads C upon the outer surface thereof, the same being semicircular in cross-section (Fig. 3) and bent outwardly, thereby forming also, corresponding grooves in the inner surface of the sections. The ribs or beads on the overlapping parts of two adjacent hood-sections are adapted to interfit. These members hereinbefore described are assembled in position in the following manner. The sections, constituting the track member A, lie flat against the wall D of the building above the opening to be closed by the sliding door, throughout the portion a^4, and are secured thereto in abutting relation at their ends. The joint-piece E, being secured to one of the sections, extends therefrom in the form of a tongue, and is engaged with the adjacent end of the other section by being inserted into the hereinbefore mentioned space between the portions a and a^2. The joint-piece thus serves to hold the ends of the part a accurately and rigidly in alinement with each other.

The sections of the hood are slightly longer than the corresponding sections of the track member, and are adapted to overlap in such a manner as to bring the ribs or beads C, at either end of each section, into engagement with each other, substantially in the transverse plane of the track-joints. A plurality of screws F are inserted through the upper margins of the track member A and the hood B, at suitable intervals, and are firmly secured in the wall D of the building. When said screws are driven in securely, the upper portion b of the hood B is drawn firmly against the outer face of the portion a^4 of the track, the flange b' being forced against or slightly embedded in the wood of the building, forming thereby a tight joint between the track and the building adapted to prevent the passage of water therebetween.

I prefer to provide a screw bolt F at either side of the ribs or beads C, in such manner that both will pass through the overlapping portions of the adjacent sections of the hood, thus drawing the same tightly together. The closely engaged ribs or beads thereby serve to prevent the passage of water between the overlapping margins of the sections. The ribs or beads C also serve to transversely stiffen the section of the hood, at their ends, and thereby enable the hood to be made sufficiently stiff or rigid, without employing unduly heavy sheet metal in its construction. I also preferably provide bolts G, similarly located with reference to the ribs or beads, but adjacent to the lower margin of the hood.

An important advantage gained by the construction described in the sheet metal track, whereby the upturned marginal part thereof is made of a double thickness of metal, or provided with a longitudinal stiffening strip, is that any bending or yielding of the upturned part, due to the downward pressure of the wheels or rollers on one portion thereof, is prevented by the stiffness or rigidity thereby given to such upturned part, whereby the downward strain of the roller is transmitted to the adjacent parts of the track to a considerable distance longitudinally, in both directions, from the point at which the downward pressure is applied or acts. By reason of the stiffness so imparted to the upturned part a, or track proper, the sections constituting the track may be made of lighter or thinner sheet metal than would otherwise be necessary, with a corresponding saving in cost of construction. The formation of the stiffening member by the bending or folding upon itself of the sheet metal has the advantage of enabling the track sections to be easily and cheaply made, and of affording a smooth and durable bearing surface for the grooved wheels or rollers which engage the track.

Inasmuch as a track structure embodying my invention may be variously modified in its details without departing from the spirit of my invention, I do not wish to be limited to the particular features of detail and design described and illustrated, except in so far as specified in the appended claims.

I claim as my invention:

1. A door hanger supporting track, comprising sheet metal sectional track members adapted to be secured to the wall of a build-

ing, each of said track members being provided with an upright track portion the margin of which being folded upon itself to provide a space between the folded parts; the upwardly facing surface formed by the fold constituting the tread of the track, and a joint plate inserted within the spaces between said folded parts at the ends of said track members, and said joint plate being secured to at least one of said track members.

2. In a door-hanger supporting track, the combination with a hood member, of sheet metal sectional track members adapted to be secured in abutting relation at their ends to the wall of a building, each of said track members having its lower portion bent outwardly and upwardly, and having the vertical marginal portion thereof bent inwardly and downwardly upon itself, there being formed a space between the adjacent surfaces of said vertical folded parts, and a joint for said track members comprising plates inserted in the spaces between the said folded parts and at the abutting ends of said track members, and means for securing said joint plates.

3. In a door-hanger supporting track, the combination with a hood member, of sheet metal sectional track members adapted to be secured in abutting relation at their ends to the wall of a building, each of said track members having its lower portion bent outwardly and upwardly, and having the vertical marginal portion thereof bent inwardly and downwardly upon itself, there being formed a space between the adjacent surfaces of the vertical folded parts, and a joint for said track members comprising joint plates inserted in the spaces between the said folded parts and at the abutting ends of said track members, said plates being provided with apertures into which the metal of one of the track members is pressed to rigidly hold the joint plate in position.

In testimony, that I, claim the foregoing as my invention I affix my signature in the presence of two witnesses, this eleventh day of February, A. D. 1913.

WILLIAM F. JACOBS.

Witnesses:
GLENN SHULER,
CARL STOLTE.

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