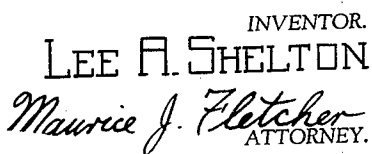


2,238,348

Filed Aug. 28, 1939



UNITED STATES PATENT OFFICE

2,238,348

RAIL SUPPORT

Lee A. Shelton, Des Moines, Iowa, assignor to New
Monarch Machine & Stamping Co., Des Moines,
Iowa

Application August 28, 1939, Serial No. 292,368

4 Claims. (Cl. 312-140.4)

The principal object of this invention is to provide a rail support which may be secured to a supporting surface which will adequately support a plurality of rails or bars and which may be formed from one sheet of material.

A further object of this invention is to provide a rail support that will not weave and which has great inherent strength.

A still further object of my invention is to provide a rail support formed of a single sheet of material which does not have any sharp or jagged edges or corners.

A still further object of this invention is to provide a rail support which minimizes the labor necessary of placing a rail about a supporting surface.

A still further object of my invention is to provide a rail support that is extremely economical in manufacture, durable and efficient in use and refined in appearance.

These and other objects will be apparent to those skilled in the art.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of my rail supports in use with the railings in place and held thereby.

Fig. 2 is an enlarged side view of the corner rail support.

Fig. 3 is an enlarged top cross sectional view of the corner rail support and is taken on the line 3-3 of Fig. 2.

Fig. 4 is an enlarged longitudinal cross sectional view of a portion of the corner rail support as taken on the line 4-4 of Fig. 3.

Fig. 5 is a plan view of the blank from which the corner rail support is formed more fully illustrating its structure.

Fig. 6 is an enlarged rear elevational view of one of the single rail supports showing its structure.

Fig. 7 is an elevational view of the blank used in forming the single rail support.

In display racks, counters, shelving and the like, it is desirable to place a multiplicity of rails about the rack in order to keep merchandise from falling from the supporting surface. These railings and their supporting members should be refined in appearance and should have adequate strength to prevent the bending or disengagement of the rails should a load be applied

against them. It is also desirable that there be more than one railing to prevent the products from being removed from the shelf or supporting surface underneath what is known as the top rail. It is necessary in such an article of manufacture that the rail supports be rigid, simple and easily attached to the supporting surface. Heretofore, such supporting means have been of makeshift design and not capable of adequately supporting these railings or reinforcing the same at the corners.

Furthermore, for an article of manufacture in great quantities, these supporting pieces have been complicated and do not adequately fulfill their function. It is to overcome such disadvantages that I have provided my rail supports as will hereinafter be more fully set forth.

Referring to the drawing, I have used the numeral 10 to designate a supporting surface which I have shown by dotted lines in Fig. 1. It is to such a supporting surface that I secure my rail supports which I will now describe.

The numeral 11 indicates the main backing portion of the corner rail support of my device. This plate is bent so that its side marginal portions extend at right angles to each other to form the two side walls 12 and 13, as shown in the drawing.

The numerals 14 and 15 designate two flange portions adjacent the side walls 12 and 13 respectively and bent at right angles thereto to form the rail supporting members, the function of which will hereinafter be described.

The numerals 16 and 17 indicate holes cut in these rail supporting members 14 and 15 respectively. The numerals 18 and 19 designate two tunnels or tubes formed from the tabs extending upwardly from the side walls 12 and 13 and designed to receive rails. The numerals 20 and 21 indicate two base tabs formed on the side walls 12 and 13 and designed to be bent at right angles thereto for forming a base for the complete bracket or rail support.

The numeral 22 designates notches cut in the tabs 20 and 21 which form, when the bracket is formed to its proper shape, a square hole through the base for permitting the base portion to be secured to the supporting member 10 by the use of a square shouldered bolt 23, as shown by dotted lines in Fig. 1.

The numeral 24 indicates the center portion of the individual or single rail support illustrated in Figs. 1, 6 and 7. This rail support has the two flanges 25 and 26 integrally formed thereon and which may be bent at right angles,

as shown in the drawing. The numerals 27 and 28 designate holes cut through these flanges 26 and 25 respectively for receiving a rail or like, as will hereinafter be described.

I have used the numeral 29 for designating a tube formed on the upper end of the sheet member 24 receiving a second rail, as will hereinafter be described.

The numerals 30 and 31 indicate the base portion of the device integrally formed with the flanges 25 and 26 respectively and capable of being bent at right angles thereto for forming the supporting base. The numerals 32 indicate notches cut in the base portions 30 and 31 so that when these portions are bent to their proper attitude for supporting the complete rail assembly, a square hole is formed. The numeral 33 indicates a square shouldered bolt which may be introduced through the square hole 32 for securing the rail support to a supporting structure, as shown by dotted lines in Fig. 1.

I have used the numerals 34 to designate a top rail having its end portion introduced into the tube 19 and extending through the tube 29. Similarly, the numeral 35 indicates a second top rail extending into the tube 18 at right angles to the rail 34.

The numeral 36 indicates a bottom rail introduced into the hole 17 of the rail support 11 and extending through the holes 27 and 28 of the individual rail support 24. Similarly, the numeral 37 indicates a lower rail extending at right angles to the rail 36 and parallel with the rail 35 and engaged in the hole 16, as shown in Fig. 1 of the drawing.

In the manufacture of my rail supports, a blank, as shown in Fig. 5, is cut and is then bent so that the side walls 12 and 13 are at right angles to each other. The flanges or rail supporting members 14 and 15 are then bent at right angles to the side walls 12 and 13. The tubes 18 and 19 are formed and the tabs 20 and 21 are bent upwardly at right angles to the side walls 12 and 13 forming the base of the rail support. When a square shouldered bolt is introduced through the hole 22 for securing the rail support to a supporting structure, this corner rail support cannot turn and, due to the angle at which the tab portions 20 and 21 are bent with relation to the side walls 12 and 13 respectively, a rigid, non-vibrating and simple rail support is provided for a plurality of rails. Any number of rails can be used with my rail support, it merely being necessary to drill additional holes in the members 14 and 15 and many unique and ornamental, as well as useful, designs may be had by providing various numbers of rails about a supporting structure. In use, one of these corner rail supports is placed at each corner of the shelving or like and the railings introduced into the holes 16 and 17. Where great stretches are experienced between these corner posts 11, and it is desired to gain additional support, my rail support 24 is used. This is called a single rail support because it supports but one pair or set of railings whereas the corner support 11 supports two sets. This individual railing support is formed from one sheet of material having the main or base portion 24 from which the tube 29 is formed. The rail supporting walls 25 and 26 are bent at right angles to the main body portion 24 and the tabs 33 and 31 are then bent upwardly at right angles to the side walls 25 and 26 forming the base of the rail support.

By having this base portion rigidly secured to

the side walls 25 and 26, adequate support is maintained for insuring a rigid support that will not weave or twist and which can be easily secured to a supporting surface by the use of a square shouldered bolt or the like as the notches 32 form a square hole or the like in the base member. The top railing is introduced through the tube 29 and the lower railing is introduced through the holes 27 and 28. Obviously, any number of holes may be drilled in the side flanges 25 and 26 for supporting any number of railings in accordance with the specific design of the railing placed around the supporting structure. Thus, the railing supports are each formed of a single sheet of material and are of extremely simple design but, due to their unique structure, possess great strength and can be secured to a structure with but one bolt or like. The inherent design of the rail supports permits the use of light sheet metal and permits entire railing assemblies to be easily erected as it is but necessary to introduce the upper railing through the tubes 29 and 19 and through the holes 27 and 28 into the hole 17.

Thus, it will be seen that I have provided a rail support which fulfills all of my objects, and which is so designed that it will, with a minimum of weight and material, be of great strength and easy to construct and which is flexible in its utility.

Obviously, there are many variations of design of my rail support for accomplishing the results desired. The complete rail support may be stamped of a single sheet of material and may be of varying sizes and shapes and I have described but one method of providing a rigid, non-vibrating and easily assembled rail support which fulfills my purposes.

Some changes may be made in the construction and arrangement of my improved rail support without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim:

1. In a device of the class described, a railing support formed of a single sheet of material and comprising, two side wall portions at right angles to each other, tubes formed on the upper ends of said side wall portions, a flange formed on the outer edge of each of said side wall portions extending at right angles thereto and having a hole therein, tabs formed on the lower ends of said side wall portions extending at right angles to said side wall portions respectively, and a notch cut in each of said tabs for forming an opening in the base portion formed by said tabs; said tubes and said holes each capable of receiving a railing or the like.

2. In a rail support formed of a single sheet of material, two side walls formed at right angles to each other, tubes formed on the upper end of each of said side walls and each capable of receiving a rail, rail supporting flanges integrally formed on the outer marginal edges of said side walls extending at right angles to said side walls respectively and having rail receiving openings cut therein, a tab formed on the lower end of each of said side walls extending inwardly at right angles to said side walls for forming a base and an opening in said formed base for permitting its securement to a supporting structure.

3. In a rail support, a backing portion, tubes formed on the upper end of said backing per-

tion extending at right angles to each other and capable of receiving rails, flanges formed on the side marginal edges of said backing portion each extending at right angles to a portion of the backing and having a hole cut therein for receiving a rail, and a base portion integrally formed on the lower end of said backing portion.

4. In a rail support formed of a single sheet of material, two side walls formed at right angles to each other, rail supporting means formed on the upper end of each of said side walls and

each capable of receiving a rail, flanges integrally formed on the outer marginal edges of said side walls extending at right angles to said side walls respectively and having rail receiving openings cut therein, a tab formed on the lower end of each of said side walls extending inwardly at right angles to said side walls for forming a base, and a notch cut in each of said tabs for forming an opening in the base portion adjacent the junction line of said tabs.

LEE A. SHELTON.