M. KURTZON.

COMBINED ROLLER SUPPORT AND CASING FOR EDGEWISE MOVABLE DOORS.

APPLICATION FILED JULY 6, 1908.

938,493. Patented Nov. 2, 1909.

Fig. 1.

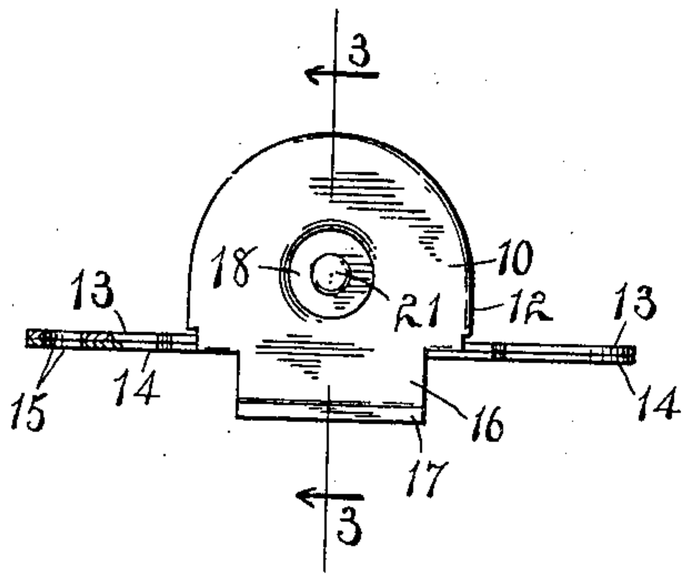


Fig. 2.

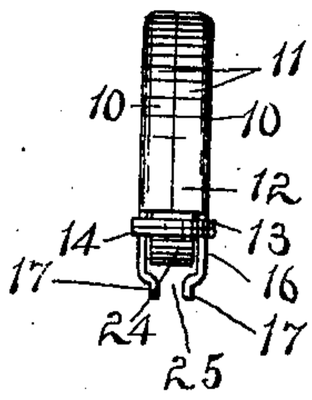


Fig. 3.

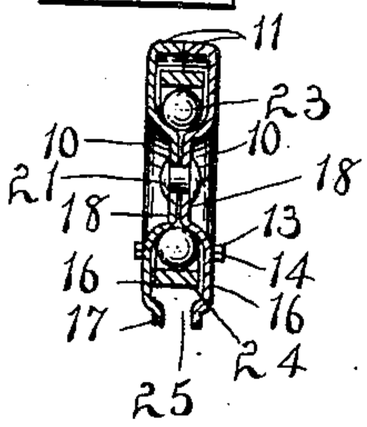
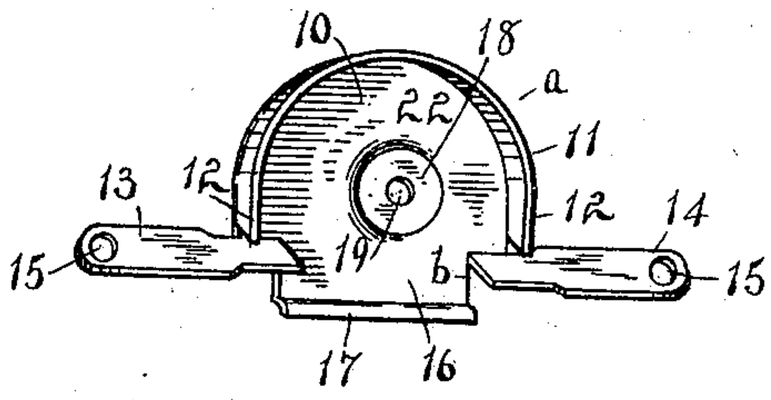


Fig. 4.



WITNESSES:

Matthew J. Marty

C. F. Bassett

INVENTOR

Morris Kurtzon

BY Frederick Peyser

ATT'Y.

UNITED STATES PATENT OFFICE.

MORRIS KURTZON, OF CHICAGO, ILLINOIS.

COMBINED ROLLER-SUPPORT AND CASING FOR EDGEWISE-MOVABLE DOORS.

938,493. Specification of Letters Patent. **Patented Nov. 2, 1909.**

Application filed July 6, 1908. Serial No. 441,998.

To all whom it may concern:

Be it known that I, MORRIS KURTZON, 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 Combined Roller Supports and Casings for Edgewise-Movable Doors, of which the following is a specification.

My invention relates to the construction of roller supports, and has especial reference to the ball bearing type of roller adapted to travel upon a track, and used largely in connection with sliding doors.

The chief objects of the improvements which form the subject matter of this application are:—to provide a two-piece frame or housing for a sheave that will be simple in construction, convenient to assemble, strong and rigid, and so designed as to have functions in addition to that of merely supporting the attached parts. Thus the component members form a complete casing or housing for the anti-friction devices associated therewith and at the same time enter into the formation of the ball rails. A further office served by the casing members is to furnish guides for preventing unnecessary side motion and thus aiding in maintaining the wheel upon the track. Certain parts which bear the maximum stress are overlapped to give greater strength and thus permit of the employment of relatively thinner material than if the metal required to be gaged for the parts subjected to the greatest strain. A further advantage to be derived from this circumstance, taken in connection with the manner of construction, permits of the employment of dies in producing the combined housing and bracket, and a novel feature of considerable value from the manufacturing standpoint lies in my ability to produce the device by the use of a single die since the pieces comprising the casing are duplicates of each other.

I accomplish the objects sought through the employment of the devices hereinafter described and illustrated in the accompanying drawing, forming a part of this application, and in which:—

Figure 1 is a side elevation of an assembled roller and casing embodying important features of my improvements; Fig. 2 is an end elevation; Fig. 3 is a sectional view on the line 3—3 of Fig. 1, and Fig. 4 is a perspective view of one of the casing members.

Referring to the details of the drawing, the reference character *a* indicates one of the sections of a housing composed of two complementary parts, which are duplicates, and may be formed by the same die, thus making them interchangeable. Each section *a* is formed of a single piece of metal of suitable gage, and in appliances of moderate dimensions I prefer to employ sheet metal and form the parts by means of suitable cutting and bending dies. By this method I am enabled to produce these parts at a moderate cost. Each section is formed of a plate 10, one margin being semi-circular and having its edge turned at a right angle to form a flange 11. The remaining margins of said plate are straight and said flange 11 is continued a short distance upon the straight edges adjacent thereto as shown at 12. The straight margin opposite to the semi-circular portion is slitted at the point *b*. The outer flaps 13, 14, thus formed, are then bent at a right angle with the plate upon the same side as the flange 11, and serve as attaching plates for the casing or housing. The flaps extend beyond the plate 10 in a direction parallel with its plane and their extremities are provided with screw holes 15. As seen by reference to Fig. 1 the slits at *b*, are of different lengths, that upon the right hand side in said figure being extended higher than the one upon the left, and the attaching plate 13 is bent so that it lies in a plane higher than, but parallel with, the opposite plate 14. The portion 16 of the plate 10, between the slits *b*, has its lower margin bent inwardly to form a retaining flange 17. The plate 10 is provided with a circular elevation or boss 18 upon its inner surface, and in the center of this boss is a hole 19, both hole and boss being concentric with the curvature of the flange 11.

The housing is formed by assembling two sections with their flanged or inner faces in apposition so that the central holes 19 register and the free margins of the flanges 11 meet to form a casing, as shown in Fig. 2. The attaching plates 13, 14 being at different planes, the higher plate 13 of each section will overlie the plate 14 of its companion, and the holes 15 will then register to permit a screw to pass through both plates. When the sections are thus assembled the inner faces of the bosses 18 engage each other and a single rivet 21 holds the said sections firmly together. The inclined sides

of the bosses 18 form a ball race 22 in which are assembled balls 23, held in place by a retaining ring 24, the latter traveling upon the track which occupies the interval 25 between the extensions or rail guides 16, said track not being shown as it forms no part of the invention.

Having thus described my invention what I claim as new, is:—

1. A roller housing consisting of two connected corresponding complementary sections, each section comprising a vertical portion having an inwardly extending flange along its upper edge, and attaching members extending inwardly from and at right-angles to the vertical portion and from opposite edges thereof, whereby the attaching members of one section will overlie the corresponding members of the complementary section at both edges of the housing.

2. A roller housing consisting of two connected corresponding complementary sections, each section formed from a single piece of metal cut and bent to provide a vertical side portion, a flange extending inwardly from the upper edge of said portion, two attaching members extending horizontally from and at right angles to the plane of the vertical portion, and a retaining flange at the lower edge of the vertical portion, said flanges arranged to meet at the median line of the housing, and said attaching members adapted to overlie each other, whereby the attaching portion of the housing will be of two superimposed layers of metal on each side of the housing.

In testimony whereof I affix my signature in the presence of two witnesses.

MORRIS KURTZON.

Witnesses:
F. BENJAMIN,
M. A. MILORD.