Nov. 27, 1928. 1,692,832

W. H. HARRISON

CONVEYER BELT GUIDE

Filed July 13, 1927

Fig. 1.

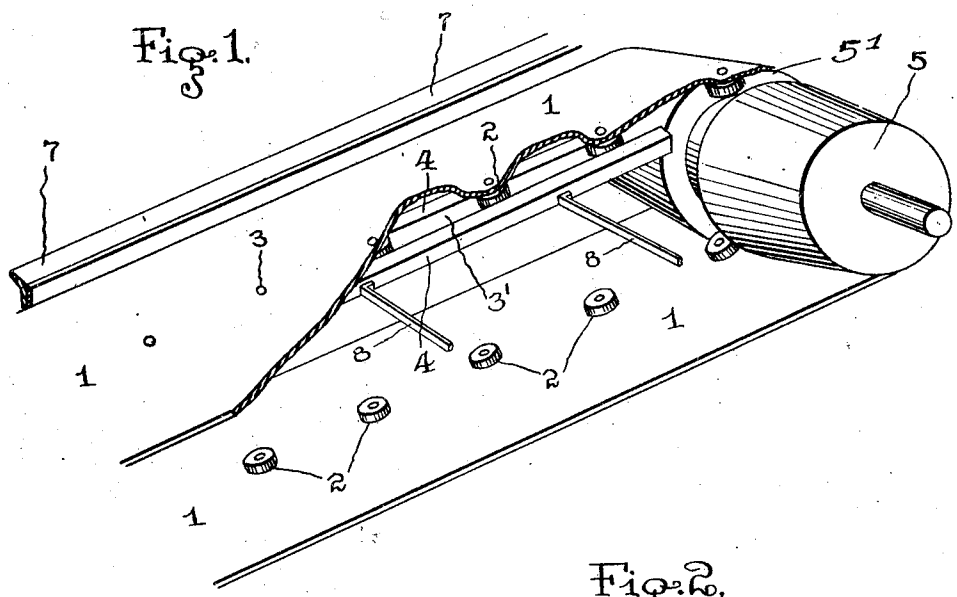


Fig. 2.

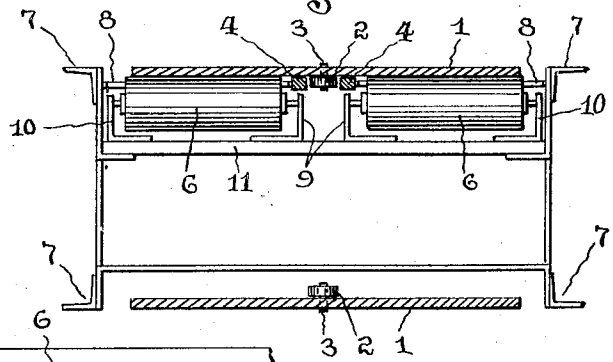
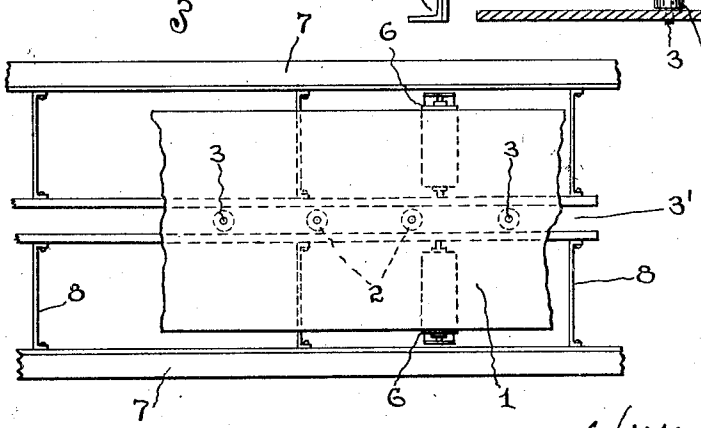


Fig. 3.



Inventor

William H. Harrison

By his Attorney

Andrew Smith Jr.

Patented Nov. 27, 1928. 1,692,832

UNITED STATES PATENT OFFICE.

WILLIAM H. HARRISON, OF PATERSON, NEW JERSEY, ASSIGNOR TO PORTABLE MACHINERY COMPANY INC., OF CLIFTON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CONVEYER-BELT GUIDE.

Application filed July 13, 1927. Serial No. 205,297.

My invention relates to improvements in belt conveyers.

In devices of the character specified adapted to transport merchandise on a traveling belt, it is usual to employ a frame having a drive pulley at one end and an idler pulley at the opposite end with an endless belt carried on said pulleys and supported by idlers intermediate the end pulleys.

The merchandise to be transported is placed upon the belt and carried thereon from end to end of the frame.

Two or more of these frames may be placed end to end if desired and the merchandise to be conveyed thus delivered from one unit to another

The units may be operated horizontally or in an inclined position.

Efficient operation requires that the belt run true on the pulleys and that unnecessary friction be avoided.

In the transportation of boxes, cases and large objects having a width greater than that of the belt, it is desirable that projections above the plane of the belt surface be avoided so that there may be no frictional contact between the articles being conveyed and other surfaces.

An object of my invention is to provide a new and useful belt conveyer.

A further object of my invention is to provide a belt conveyer in which the belt will run true and be prevented from running to the sides of the frame.

A further object of my invention is to provide a belt conveyer in which obstructions may be avoided in the path of the articles being conveyed.

Other objects and advantages of the invention will become apparent during the course of the following specification and claims.

My invention in its preferred form is embodied in the device illustrated in the accompanying drawings forming a part hereof, in which

Figure 1 is a perspective view of the device with parts broken away,

Figure 2 is a cross section of the device, and

Figure 3 is a plan view of the same.

Similar characters refer to similar parts throughout the several views.

The endless conveyer belt 1, is provided with spaced guide lugs 2 positioned on its under side and extending along its medial line for its entire length. These lugs may be of circular form and secured to the belt by means of rivets 3.

On the conveyer frame, adjacent the under surface of the belt 1 I provide a pair of rails 4, 4 forming a channel 3^1 in which the guide lugs 2 travel.

At the ends of the frame are provided pulleys 5 for the belt, one of which may be a drive pulley operated in any desired manner, the other being an idler.

The belt 1 is supported intermediate the end pulleys 5 by idlers 6 journalled in supports 9, 10 in the frame arranged in pairs end to end, each pair being spaced to permit the guide lugs 2 to pass between them. As many of these pairs of idlers may be used as conditions may require. The supports 9, 10 for the idlers 6 are carried on cross bars 11 anchored to the side rails 7 of the frame.

The rails 4, 4 may be supported by braces 8 carried by the side rails 7.

The end pulleys 5 which carry the belt 1, one only being shown in the drawings, are provided with peripheral grooves 5^1 positioned equi-distant from their ends and forming a continuation of the channel 3^1 to permit the guide lugs 2 to pass over the pulleys.

The device being thus assembled, the guide lugs on the belt 2 running in the channel 3^1 between the rails 3, 3 will keep the belt true between the side rails 7 and prevent it from running to either side.

I have also found it desirable in practice to form the end pulleys with a bulge toward the center and of smaller diameter at the ends than in the center.

Having thus described my invention, what I claim is:

1. In a device of the character described, the combination of a frame, an endless belt thereon, pulleys for said belt, guide lugs on the under side of the belt, and rails extending longitudinally of the belt and spaced to form a channel for said guide lugs.

2. In a device of the character described, the combination of a frame, an endless belt thereon, a channel below the belt and guide lugs on the belt adapted to travel in said channel.

3. In a device of the character described, the combination of a belt, a channel below the

belt and guide lugs on the belt adapted to travel in said channel to position the belt.

4. In a device of the character described, the combination of a frame, an endless belt thereon, a channel below the belt, lugs on the belt adapted to travel in said channel, pulleys carrying the belt and having grooves to permit said lugs to pass the pulleys and spaced idlers intermediate the said pulleys adapted to support the belt.

Signed at Clifton, in the county of Passaic and State of New Jersey, this 17 day of May, A. D. 1927.

WILLIAM H. HARRISON.