Feb. 9, 1943. J. P. MORGAN 2,310,646

ENDLESS CONVEYER

Filed May 6, 1942 2 Sheets-Sheet 1

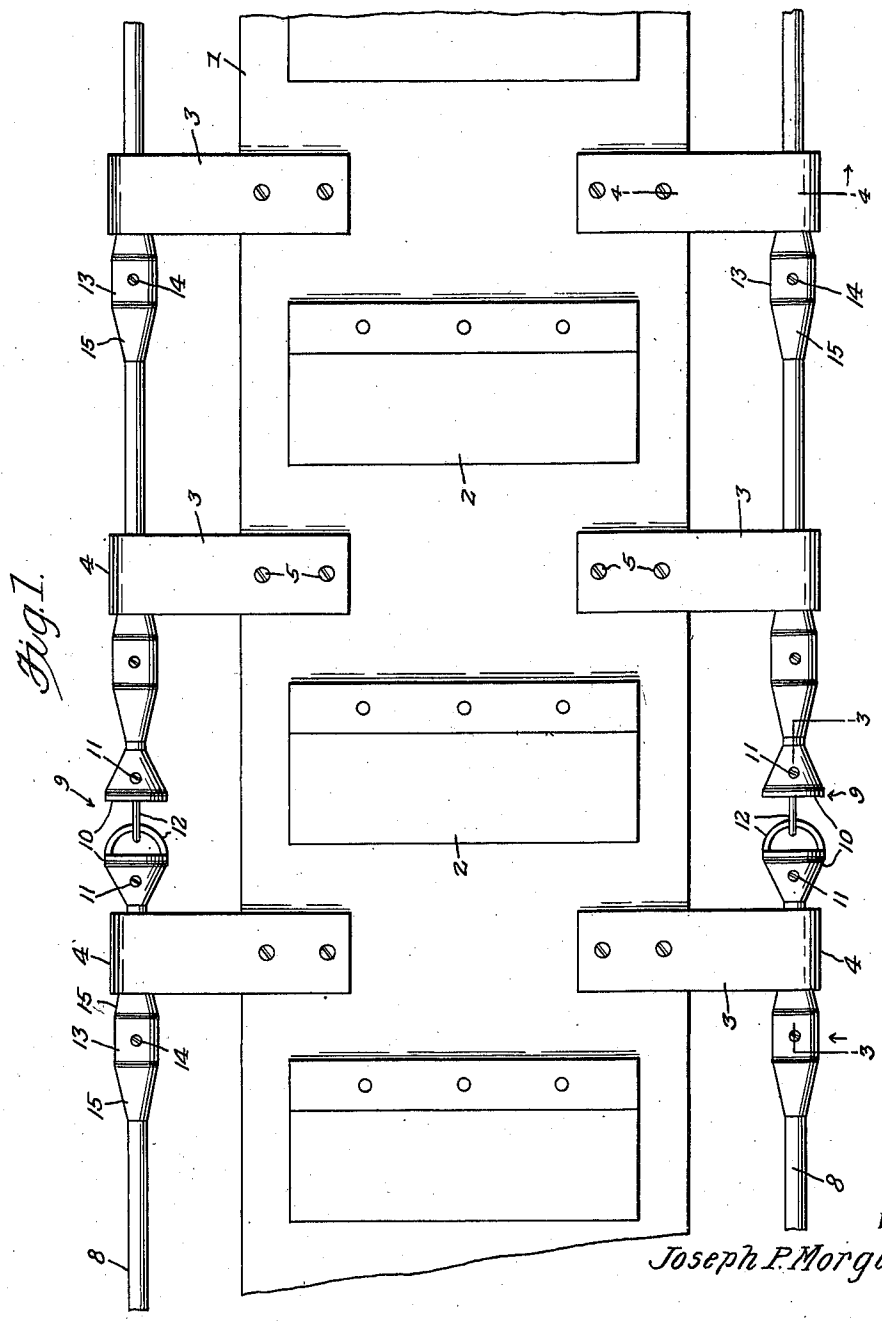


Fig. 1.

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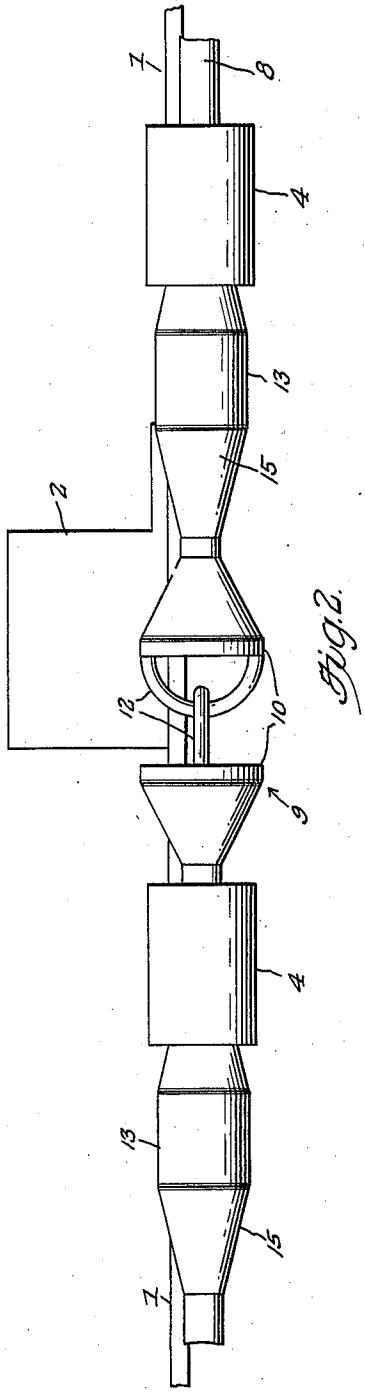


Fig. 2.

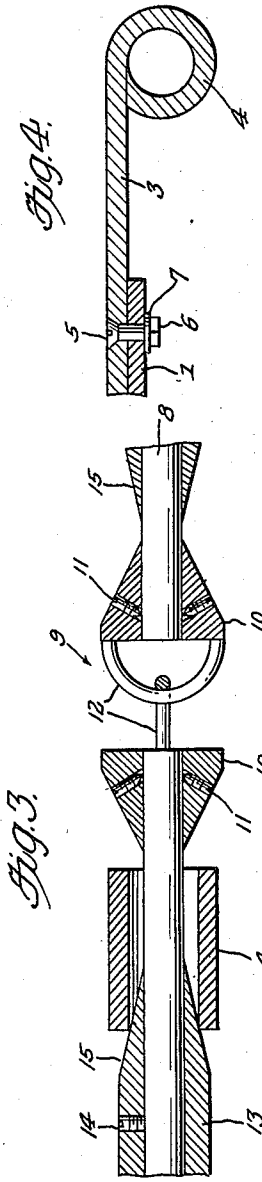


Fig. 4.

Fig. 3.

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ENDLESS CONVEYER

Joseph P. Morgan, New Castle, Pa.

Application May 6, 1942, Serial No. 441,944

3 Claims. (Cl. 198—184)

The present invention relates to new and useful improvements in endless elevators or conveyers, and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character comprising novel means for supporting the belt in the event that it should break.

Other objects of the invention are to provide a safety endless elevator or conveyer of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, and which may be manufactured and installed at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a top plan view of a portion of an endless elevator or conveyer constructed in accordance with the present invention.

Figure 2 is a side view in side elevation thereof.

Figure 3 is a view in vertical longitudinal section, taken substantially on the line 3—3 of Figure 1.

Figure 4 is a cross-sectional view, taken substantially on the line 4—4 of Figure 1.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises an endless belt 1 of suitable material, said belt being provided, at spaced points, with transverse cleats or slats 2. Mounted transversely on the marginal side portions of the belt 1 and projecting beyond the edges of said belt are series of metallic brackets 3. The brackets 3 are in the form of flat metallic bars and terminate, at their outer ends, in downturned loops or eyes 4. Countersunk bolts 5 secure the brackets 3 in position on the belt 1, said bolts being provided with securing nuts 6 and washers 7 (see Fig. 4).

The eyes or loops 4 of the brackets 3 have extending therethrough endless cables 8. The ends of the cables 8 are connected through the medium of couplings 9. As illustrated to advantage in Figure 3 of the drawings, couplings 9 comprise substantially conical sleeves 10 of suitable metal which are secured on the end portions of the cables 8 by set screws 11. Then, the opposed or adjacent ends of the sleeves 10 have fixed thereon connected bails 12.

Collars 13 are secured on the cables 8 between the brackets 3 through the medium of set screws 14. The collars 13 include conical end portions 15 which are engageable in the eyes 4 of the brackets 3.

It is thought that the manner in which the device functions will be readily apparent from a consideration of the foregoing. Briefly, should the belt 1 break, the only portion of said belt which will be permitted to fall is that which is between the adjacent brackets 3, the rest of said belt being supported by the cables 8. To assemble the elevator or conveyer, the cables 8 are threaded through the eyes 4 of the brackets 3, one of the collars 13 being slipped on said cables between said brackets. The ends of the cables 8 are then brought together and connected by the couplings 9, after which the set screws 14 are tightened for securing the collars 13 in position.

It is believed that the many advantages of an endless elevator or conveyer constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A conveyer of the character described comprising an endless belt, eyes mounted on the side portions of said belt, endless cables passing through said eyes, collars fixed on said cables between the eyes, and set screws securing the collars in position on the cables, said collars including substantially conical end portions engageable in the eyes.

2. A conveyer of the character described comprising an endless belt, metallic brackets mounted transversely on the marginal side portions of said belt and projecting outwardly therefrom, integral eyes on the outer ends of said brackets, endless cables extending through said eyes, collars mounted on said cables between the brackets, said collars including substantially conical end portions engageable in the eyes, and means for securing the collars in position on the cables.

3. A conveyer of the character described comprising an endless belt, eyes mounted on the sides of said belt, cables extending through said eyes, collars fixed on said cables between the eyes, and couplings connecting the ends of the cables, said couplings including substantially conical sleeves mounted on the end portions of the cables, set screws securing said sleeves on the cables, and connected bails on the adjacent ends of said sleeves.

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