No. 742,717. PATENTED OCT. 27, 1903.

W. L. McCABE.

PORTABLE CONVEYER.

APPLICATION FILED DEC. 11, 1902.

NO MODEL.

Fig. 1.

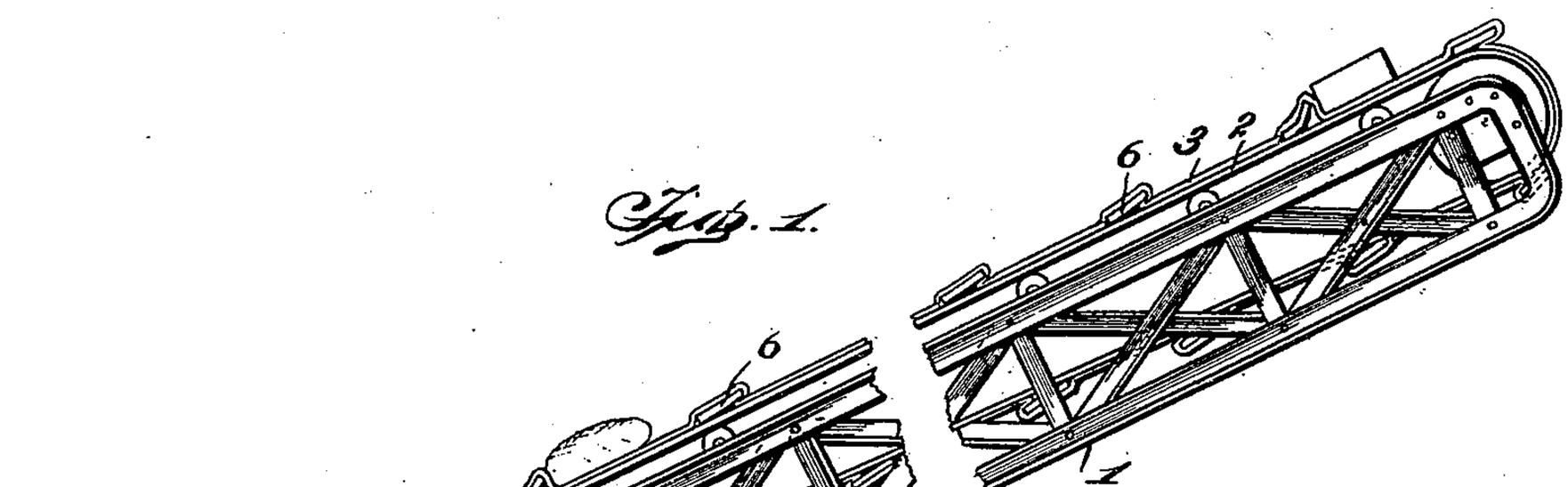


Fig. 2.

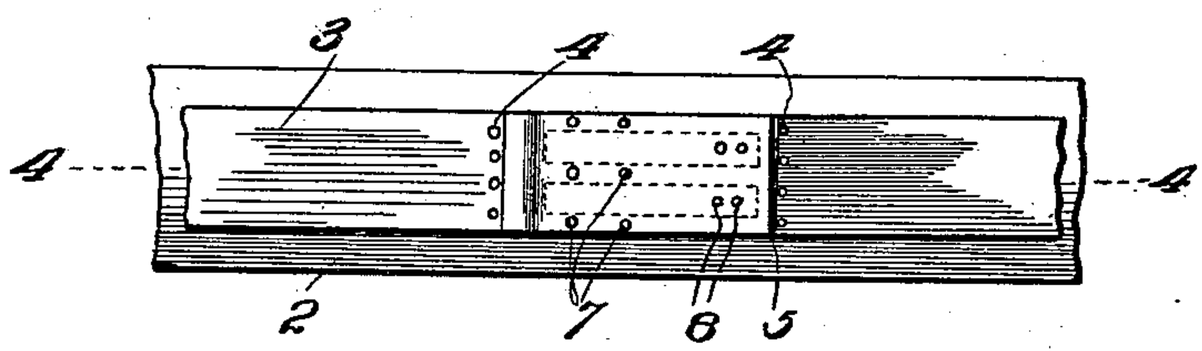


Fig. 3.

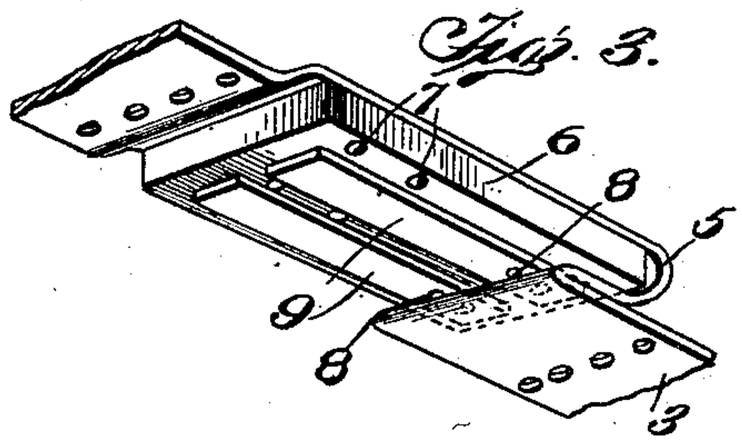


Fig. 5.

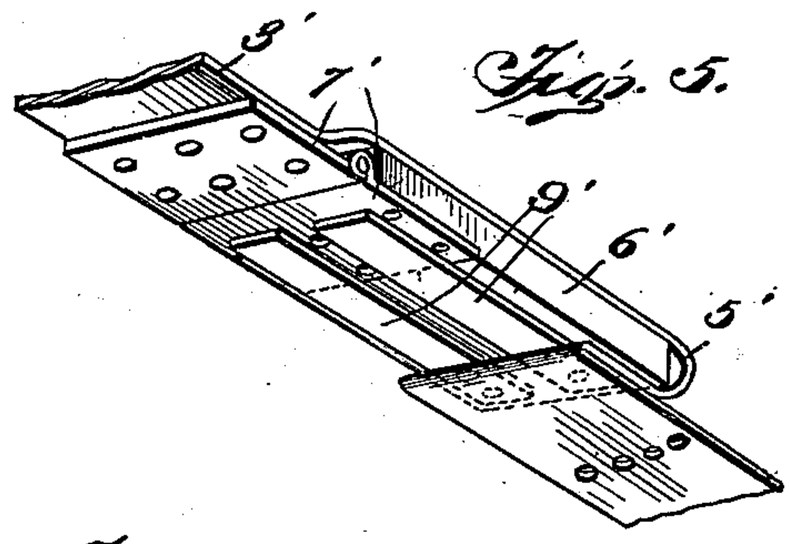
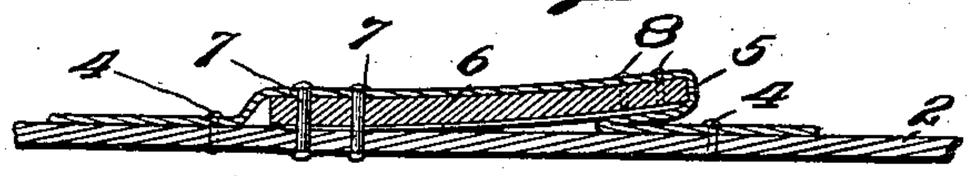


Fig. 4.



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No. 742,717. Patented October 27, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM L. McCABE, OF SEATTLE, WASHINGTON.

PORTABLE CONVEYER.

SPECIFICATION forming part of Letters Patent No. 742,717, dated October 27, 1903.

Application filed December 11, 1902. Serial No. 134,858. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. McCABE, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Portable Conveyers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to improvements in endless conveyers, and particularly to brackets or carrying devices secured to the belt of a conveyer.

The object in view is the provision of a suitable bracket capable of being raised from the plane of the belt for sustaining a load and provided with means when freed for causing the bracket to assume a position close to the belt whereby a minimum of space will be occupied by the bracket.

With this and other objects in view the invention consists, in combination with a suitable conveyer-belt, of a bracket carried thereby, and means normally retaining the same in contact with the belt.

It further consists in certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a perspective view of a portion of a conveyer provided with a belt carrying a series of brackets embodying the features of the present invention. Fig. 2 represents an enlarged detail fragmentary top plan view disclosing one of the brackets. Fig. 3 represents a perspective view of the same detached. Fig. 4 represents a longitudinal central section taken on the plane of line 4 4 of Fig. 2. Fig. 5 represents a similar view to Fig. 3 of a slightly-modified construction.

In the present art it is common to provide means on a conveyer-belt for sustaining packages in position thereon while being raised or moved along the conveyer, but the common devices are usually left free and extend outwardly from the belt while on their return movement, and thereby requiring a considerable space for their accommodation. In order to obviate the necessity for such space and permit the belt to move between the parts of the framework supporting the same without danger of engaging the same, I employ the construction disclosed in the accompanying drawings, in which—

1 indicates any suitable conveyer-framework carrying any preferred form of endless conveyer-belt 2, arranged longitudinally, centrally of which and extending the entire length of the same is a web 3. The web 3 is riveted or otherwise suitably attached at a number of points of the belt 2, as at 4 4, between certain of which points is provided a fold 5, a strip of stiffening material 6, preferably leather, being interposed between the belt 2 and the web 3 at the point of each of the folds 5. For the sake of convenience I shall call that end of the conveyer toward which the articles are conveyed the "front" end and the opposite end thereof the "rear" end, the elements mentioned herein being designated "front" and "rear" relative to their position on the conveyer. The strip 6 is in the preferred construction secured at its rear end by any suitable means, as rivets 7, to the belt 2 and the web 3, the front end thereof being secured, as at 8 8, to the web 3, but left free from belt 2, leaving the loose portion of the fold 5 capable of being folded beneath the same, as indicated in Fig. 4. Suitable springs 9 are secured to the strip 6 at its front end by the securing means 8 and extend rearwardly between the rivets 7, so as to slide longitudinally therebetween. Of course it will be understood that a single spring may be substituted for the plurality of springs shown without the slightest deviation from the present invention. The rivets 7 clamp the parts tightly together, and the springs 9, normally maintaining a straight condition, give a normal tendency to the strip 6 to lie as nearly as possible in a plane parallel to the belt 2, whereby when the said strip is freed it will automatically assume a condition as compact as is permissible when the fold 5 is in the condition shown in Fig. 4, the springs 9 moving slightly longitudinally to accommodate the movement of the strip 6.

The elements just described constitute what

I have hereinbefore mentioned as a "bracket," and in operation while the conveyer-belt 2 is being driven by any suitable power a package is placed upon the same and contacting with the web 3 at the front end of the spring 6 will raise the same, whereby the package will be prevented from slipping backwardly upon the belt, as indicated in Fig. 1, such package being discharged at the front end of the conveyer and leaving the bracket free to be sprung into its normal flat condition out of the way of the contiguous parts of the supporting-framework.

Of course it will be understood that many slight modifications may be made within the spirit of the present invention, and one of such modifications is indicated in Fig. 5 in the accompanying drawings, in which 3′ indicates any suitable webbing designed to be attached to the conveyer-belt and provided with a fold 5′, beneath which is arranged a stiffening-strip 6′, pivotally attached at its rear end by a hinge 7′ to the said fold of the web 3, said strip being thus left free to swing outwardly, but being normally retained in a plane parallel to the belt by suitable springs 9′ 9′ in a similar manner to that described with reference to the action of springs 9.

The bracket or cleat described is, as will be observed from the drawings, of less width than the width of the belt, which leaves the edges of the belt free to be engaged during its return movement by side-supporting pulleys, which thus retain the belt in position and support the same against sagging.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the class described, the combination with a suitable belt, of a bracket carried thereby, and means carried by the bracket normally retaining the same when free in contact with the belt, substantially as described.

2. In a device of the class described, the combination with a suitable belt, of a bracket carried thereby, and a spring normally retaining said bracket in contact with the belt.

3. In a device of the class described, the combination with a suitable belt, of a bracket secured thereto at one end, and a spring carried by said bracket for normally retaining the free end thereof in contact with the belt.

4. In a device of the class described, the combination with a suitable belt, of a bracket carried thereby and secured at one end thereto, the opposite end of said bracket being left free, and a spring fixed to the free end of said bracket and extending longitudinally thereof.

5. In a device of the class described, the combination with a suitable belt, of a web arranged longitudinally of the belt, a stiffening-strip arranged between said web and belt, and means normally retaining said stiffening-strip in a plane approximately to the belt.

6. In a device of the class described, the combination with a suitable belt, of a web extending longitudinally thereof and provided with a fold, a stiffening-strip within said fold, and means securing the strip and web together.

7. In a device of the class described, the combination with a suitable belt, of a web extending longitudinally thereof, a stiffening-strip between said web and belt, and means securing said strip to said belt at one end.

8. In a device of the class described, the combination with a suitable belt, of a web extending longitudinally thereof, a stiffening-strip between said web and belt, and means securing the stiffening-strip to the belt.

9. In a device of the class described, the combination with a suitable belt, of a web extending longitudinally thereof, a stiffening-strip between the web and belt, means securing the stiffening-strip and web, and means securing the web to the belt.

10. In a device of the class described, the combination with a suitable belt, of a web extending longitudinally thereof and provided with a fold, a stiffening-strip within said fold, means securing the stiffening-strip at its front end to the material of the web, and means securing the rear end of said stiffening-strip to the belt.

11. In a device of the class described, the combination with a suitable belt, of a stiffening-strip secured thereto, and a spring secured to said stiffening-strip, extending longitudinally thereof and between the securing means of said strip with said belt.

12. In a device of the class described, the combination with a suitable belt, of a web extending throughout the length thereof, and a plurality of stiffening-strips spaced apart and arranged between said web and belt.

13. In a device of the class described, the combination with a suitable belt, of a strip of material secured thereto, and a spring fixed to the free end of said strip between the strip and the belt.

14. In a device of the class described, the combination with a suitable belt, of a strip of material fixed at one end to the belt, and a spring fixed to the other end of said strip and extending longitudinally thereof between the belt and the strip.

15. In a device of the class described, the combination with a suitable belt, of a strip secured thereto, a spring fixed to said strip and having a free end, and means for guiding and limiting said free end against lateral movement.

16. In a device of the class described, the combination with a suitable belt, of a bracket carried thereby and capable of being positioned at an angle to said belt, and means carried by the bracket normally retaining the same when free substantially parallel to the belt, substantially as described.

17. In a device of the class described, the combination with a suitable belt, of a bracket carried thereby, and means incased by said bracket normally retaining the same when free in contact with the belt, substantially as described.

18. In a device of the class described, the combination with a belt, of a cleat normally self-retained in contact with and of less width than the belt, substantially as described.

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

WILLIAM L. McCABE.

Witnesses:
ERNEST B. HERALD,
ROBERT U. CULBERSON.