

H. J. BUCK.

CARRIER.

APPLICATION FILED AUG. 17, 1911.

1,041,424.

Patented Oct. 15, 1912.

2 SHEETS—SHEET 1.

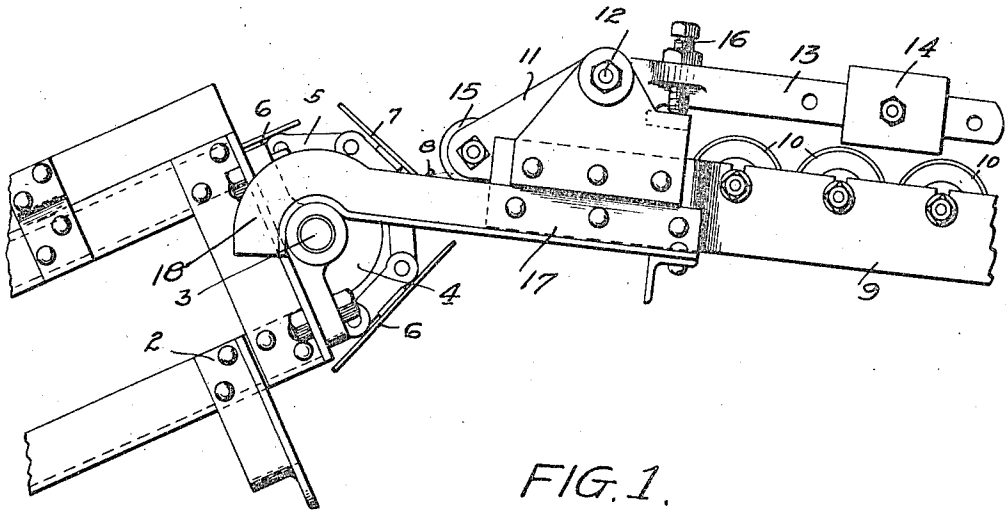


FIG. 1.

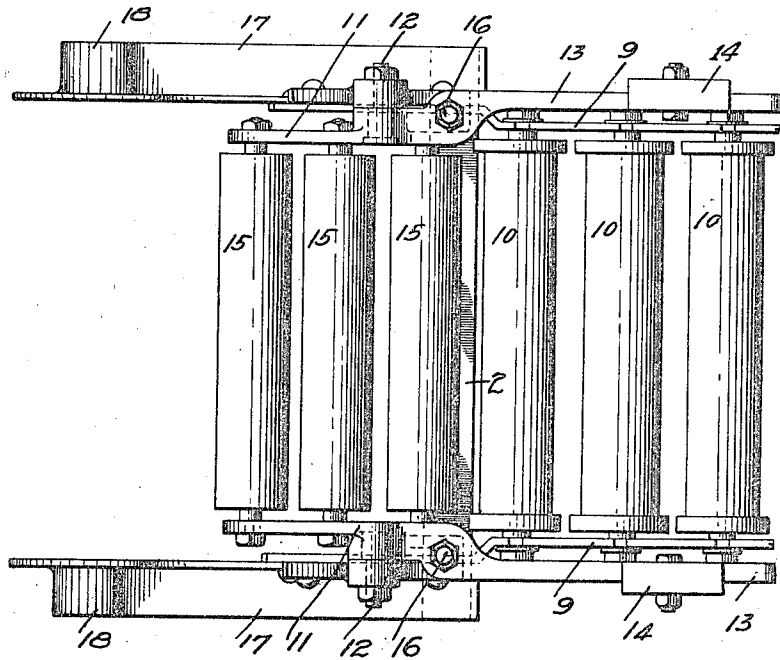


FIG. 2.

WITNESSES

W. H. H. H. H.

M. R. M. L. L.

INVENTOR

HERMAN J. BUCK.

BY *Paul Paul*
HIS ATTORNEYS

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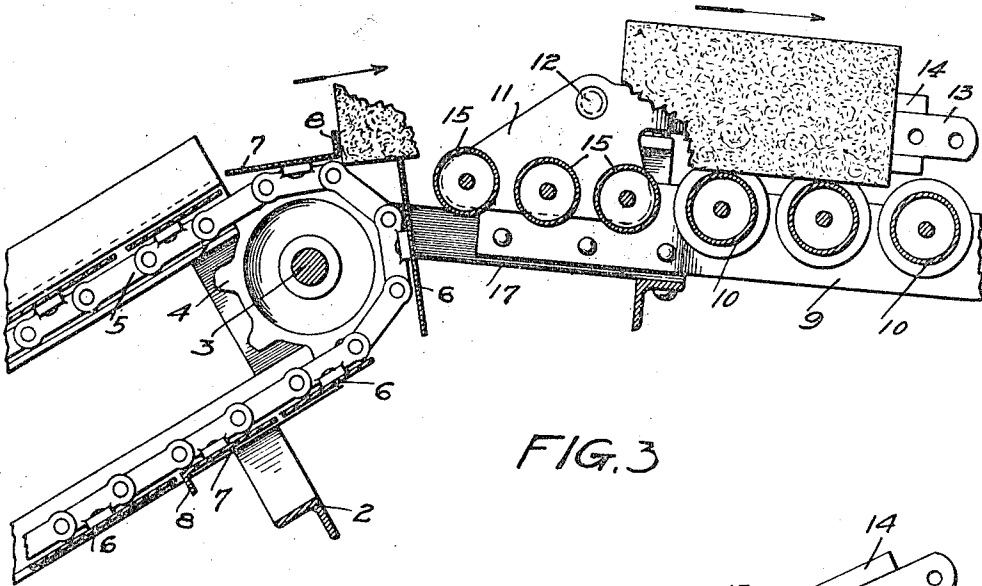


FIG. 3

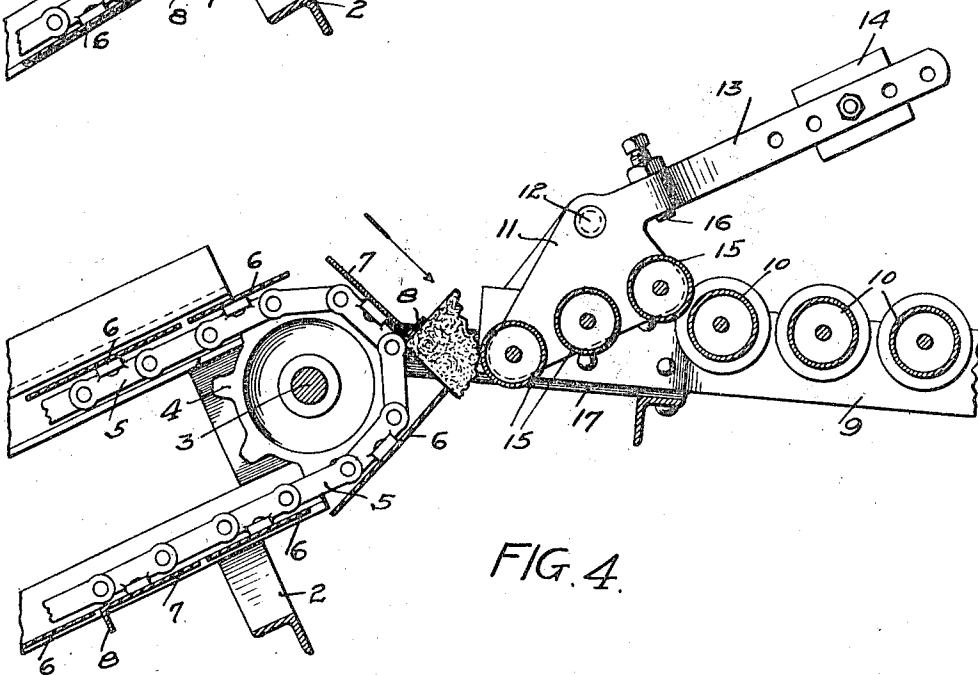


FIG. 4.

WITNESSES

M. W. Watson

M. R. M. Lewis

INVENTOR

HERMAN J. BUCK

BY *Paul H. Paul*
HIS ATTORNEYS

UNITED STATES PATENT OFFICE.

HERMAN J. BUCK, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO MATHEWS GRAVITY CARRIER COMPANY, OF ST. PAUL, MINNESOTA, A CORPORATION.

CARRIER.

1,041,424.

Specification of Letters Patent.

Patented Oct. 15, 1912.

Application filed August 17, 1911. Serial No. 644,686.

To all whom it may concern:

Be it known that I, HERMAN J. BUCK, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Carriers, of which the following is a specification.

My invention relates to carriers for transporting articles of merchandise from place to place and particularly to those carriers adapted for handling brick.

The object of my invention is to provide means in connection with an elevator and carrier to prevent damage through the mechanism when brick or other articles are delivered from the elevator to the carrier, and become lodged or wedged during the delivering operation.

A further object is to provide a mechanism which will allow the discharge of a broken piece of brick in case it should become wedged between the elevator and carrier and thereby avoid clogging or breaking the apparatus.

The invention consists generally in a carrier having a tilting section adapted to move under a predetermined pressure and relieve the strain on the elevating belt and pallets, and also on the carrier in case brick or other articles should lodge or wedge therein.

Further the invention consists in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification, Figure 1 is a side elevation of an elevator and carrier embodying my invention, Fig. 2 is a plan view of the same, Fig. 3 is a sectional view showing the tilting section of the carrier in its normal position, Fig. 4 is a similar view showing the tilting section in its tilted or discharging position.

In the drawing, 2 represents a frame supporting a shaft 3 on which sprocket wheels 4 are mounted to engage sprocket belts 5 between which pallets 6 and 7 are arranged. These pallets are pivotally supported and adapted to swing on their pivots to conform to the links of the chains as they pass around the sprocket wheels. The pallets 6 are in the form of flat plates and the pallets 7 have flanges 8 thereon.

9 represents a carrier section having anti-friction rolls 10 mounted therein in suitable

bearings and adapted to form a carrying surface for the brick or other articles delivered to the carrier.

11 is a frame pivoted at 12 and provided with a balancing arm 13 on which a weight 14 is adjustably mounted. This frame normally lies in a substantially horizontal position and carries a series of rollers 15 which form continuations of the carrying surfaces of the rollers 10. A set screw 16 is provided to engage a suitable stop on the frame 9 and limit the downward tilting movement of the frame 11.

In the operation of the device bricks are placed on the elevator and are carried up thereby to the rollers 15, and from thence to the rollers 10, bricks resting upon the pallets being discharged from the elevator carrier upon the horizontal carrier as the elevating belt makes the turn at the point where the elevating carrier joins the end of the horizontal carrier. It will be evident that as the bricks are delivered from the elevator to the horizontal carrier, one or more of them might wedge or lodge and break the pallets of the elevator or the belt itself, or damage the horizontal carrier, and sometimes broken brick of irregular shape will drop down between the elevator and carrier. In case brick of full size should become lodged the frame 11 would tilt sufficiently to relieve the pressure of the pallets, and the brick will be thrown up to a point where they will move on to the rollers of the carriers and pass on into the car or to any other point where the brick is to be delivered. If, however, a broken piece of brick, or even a whole one, should drop down so that it could not pass on to the horizontal carrier, the frame 11 will tilt sufficiently to allow the discharge of the lodged article to the carrier upon the ground beneath. In this way I am able to prevent breakage of the elevator or the carrier, and insure the continuous delivery of the brick from the elevator to the carrier without attention on the part of the operator.

The carrier frame 9 may be attached to the frame 2 of the elevator by any suitable means, such as the bars 17 having curved ends 18 which have bearings on the projecting ends of the shaft 3, thereby holding the carrier and elevator in proper relative position but allowing, at any time, the con-

venient separation of the carrier from the elevator frame. In case the tilting section does not move easily, the weight 14 may be readjusted to cause the section to tilt under less pressure.

I do not limit myself to the details of the construction herein shown and described, as it is obvious the same may be varied in many particulars without departing from my invention.

I claim as my invention;

1. The combination, with an elevating carrier and pallets mounted thereon, of a carrier forming a continuation of said elevating carrier, a tilting section mounted in said second named carrier and having anti-friction rollers, said section being tilted by the pressure of an article becoming wedged between one of said pallets and said section.

2. The combination, with an elevating carrier, and pallets mounted thereon, having upwardly turned lips at their forward edges, of a carrier forming a continuation of said elevating carrier, a tilting section mounted in said second named carrier, said section being tilted by the pressure of an article lodging between the lip of the pallet and said section, for the purpose specified.

3. The combination, with a driven carrier having pallets mounted thereon, of a gravity carrier forming a continuation of said driven carrier, a tilting section interposed in said gravity carrier between it and said driven carrier and tilted by the pressure of an article lodging between it and said driven carrier, for the purpose specified.

4. The combination, with an elevating carrier, and pallets mounted thereon, of a horizontal carrier forming a continuation of said elevating carrier, a tilting section mounted in said second named carrier and having anti-friction rollers, a counter balance weight mounted on said tilting section, said section being tilted by the pressure of an article wedged between one of said pallets and said section.

5. The combination, with an elevating carrier, pallets mounted thereon, having upwardly turned lips, of a horizontal carrier forming a continuation of said elevating carrier, a pivoted frame mounted on said second named carrier and having anti-friction rollers mounted thereon, a counter balance for said pivoted frame normally hold-

ing it and its rollers in line with said second named carrier, said pivoted section being tilted by the pressure of an article becoming wedged between the lip of a pallet and a roller of said tilting frame.

6. The combination, with an elevating carrier, of a horizontal carrier forming a continuation of said horizontal carrier and having anti-friction rollers mounted thereon, said horizontal carrier having a tilting section adapted to operate automatically and relieve the pressure on said pallets in case an article becomes wedged between a pallet and said tilting section.

7. The combination, with an elevating carrier and pallets mounted thereon, said pallets consisting of plates arranged near together and of varying widths, the narrower plates having upwardly turned or flanged forward edges, of a horizontal carrier forming a continuation of said elevating carrier and having anti-friction rollers mounted thereon, the brick or other article placed on said carrier being supported by said wider plates and the flanges of said narrower plates contacting with the rear of the articles and discharging them from said elevating carrier upon said horizontal carrier.

8. The combination, with an elevating carrier, and a series of pallets mounted thereon, said pallets consisting of plates of different widths, the narrower plates having upwardly turned or flanged forward edges adapted to contact with the rear of the articles on the wider plates, of a horizontal carrier having anti-friction rollers adapted to receive the articles from said elevating carrier and said horizontal carrier having a tilting section in the path of the articles delivered from said elevating carrier.

9. The combination, with a driven carrier, of a gravity carrier forming a continuation of said driven carrier, a tilting section interposed in said gravity carrier and operated by the pressure of an article lodging between it and said driven carrier to allow the discharge of such article.

In witness whereof, I have hereunto set my hand this 27th day of July 1911.

HERMAN J. BUCK.

Witnesses:

GENEVIEVE E. SORENSEN,
C. H. REHFUSS.