No. 872,855. PATENTED DEC. 3, 1907.

J. W. SHOOK.

ELEVATOR.

APPLICATION FILED JUNE 7, 1907.

Fig. 1.

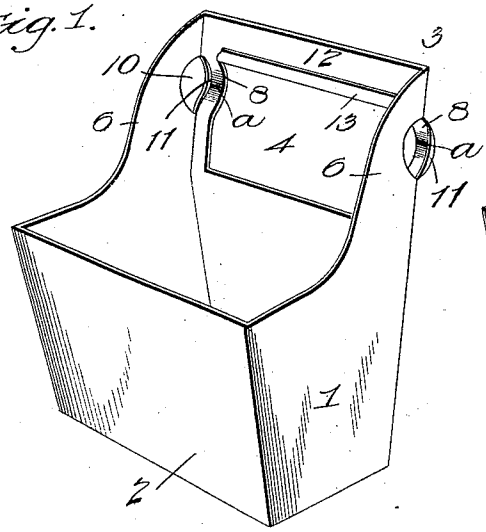


Fig. 2.

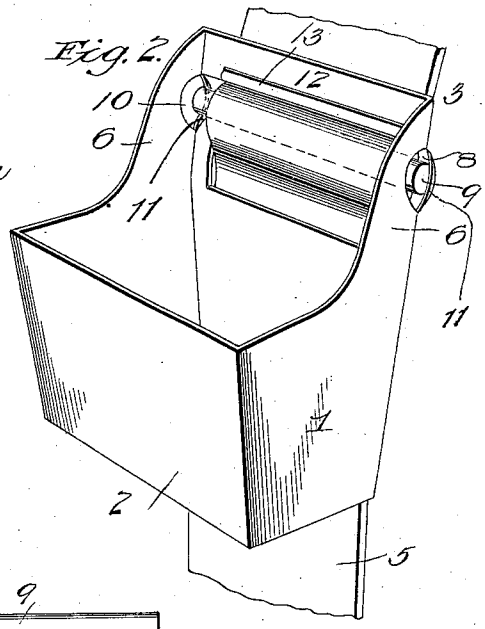


Fig. 3.

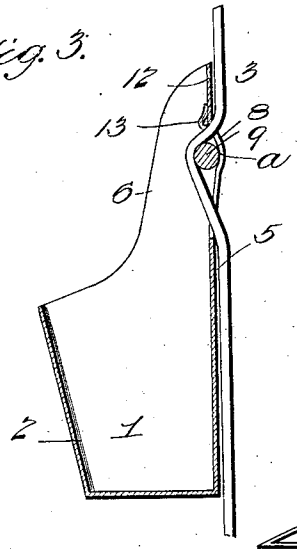




Fig. 4.

Fig. 5.

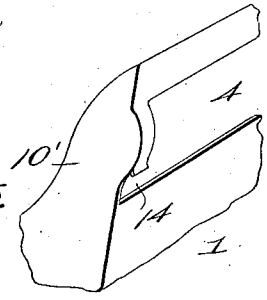
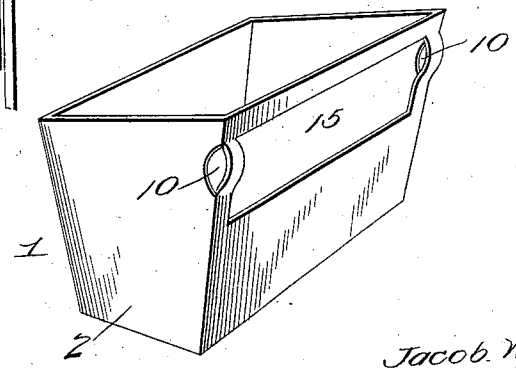


Fig. 6.



Witnesses

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ELEVATOR.

No. 872,855. Specification of Letters Patent. Patented Dec. 3, 1907.

Application filed June 7, 1907. Serial No. 377,790.

To all whom it may concern:

Be it known that I, JACOB W. SHOOK, a citizen of the United States, residing at Turbotville, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Elevators, of which the following is a specification.

This invention relates to elevators, and more particularly to grain elevators, and it contemplates an improvement in the elevator bucket, and the bucket in combination with the belt and a novel means for attaching the bucket and belt.

The object of the invention is to provide a simple and cheap bucket and means for quickly and reliably attaching the same to the belt, and removing the same when desired. It is customary in devices of this character to attach the bucket to the belt by means of rivets, which is expensive and entails a method that is objectionable in that the strain is so placed upon the belt in small areas which, in time, causes the belt at the points of attachment to give way and permit the rivets to tear out. By my contrivance the bucket can be quickly attached to the belt and when so attached the strain is evenly distributed across the whole width of material, and the strain is such that it is absolutely impossible to tear or cut the belt. With the arrangement about to be described, the attachment is such that the belt will pass over the pulleys.

In the drawings illustrating the invention; Figure 1 is a perspective view of a bucket, constructed in accordance with my invention, the belt and means for attaching the bucket to the belt being omitted; Fig. 2 is a similar view, showing the bucket attached to the belt; Fig. 3 is a central vertical section of the bucket, belt and pin; Fig. 4 is a detail view of the pin; Fig. 5 is a broken detail perspective view of the upper portion of a bucket, showing a slightly modified form, whereby the pin may be put into place in a different manner from that shown in the main figures; and Fig. 6 is a perspective view of a modified form of bucket looking at the back thereof.

Referring to the drawings, the numeral 1 designates the bucket, formed preferably of sheet metal, the lower or receptacle part being of usual construction, as indicated at 2. I preferably provide the bucket with an extension 3 having an opening 4 therein for the reception of the belt 5, as shown in Figs. 2 and 3. The extension is preferably provided with two side flanges 6 that taper off toward the top of the extension.

On each side of the back plate 7 of the extension, opposite the opening 4, I provide a depression or seat 8 near the top of the opening. This seat receives the opposite ends of the cross bar or locking pin 9 which is inserted through either of the side openings 10, in the side flanges of the extension. The pin passes under the flexible belt which is curved rather sharply at this point, and the pin extends under the belt and its ends rest in the seats, lateral movement of the pin being prevented by shallow seat flanges 11, as shown in Figs. 1 and 2. The depressions or seats are preferably deeper at the point *a* than at other points, and run gradually into the plane of the back plate, so that the greater the strain upon the bucket, the more securely will become the fastening, as the tendency of the belt is to more firmly seat the pin in its seats. In order that the belt will not be cut or worn where it passes under the cross piece 12 of the back, I preferably bend the metal back upon itself to form a smooth edge, as shown at 13.

In Fig. 5 I show a construction wherein the pin or cross bar may be put in place from the back, and in this instance I do not cut away the side flanges 10′ of the extension, but leave them whole so as to give greater strength to the seats. In inserting the pin in this construction, its ends are put in place opposite the openings 14, and the pin is rolled into the seat under the belt.

I may do away with the extension entirely and as shown in the modification, Fig. 6, I provide an opening 15 in the back plate of the bucket, and form the seats in the material of the back plate with arms on each side or either side of the opening. In this construction, I prefer to provide the openings in the side pieces of the bucket, in all respects like those in the extension shown in Figs. 1 and 2.

Claims.

1. An elevator bucket having an opening in the rear part thereof for the reception of a belt, and a depression or seat on each side of said opening for the reception of a means adapted to attach the bucket to the belt.

2. An elevator bucket, having an opening in its rear portion for the reception of a belt, and oppositely disposed depressions or seats

for the reception of a means adapted to attach the bucket to a belt.

3. An elevator bucket having an opening in the back part thereof for the reception of a belt, and oppositely disposed depressions or seats for the reception of the ends of a pin or cross bar adapted to attach the belt to a bucket.

4. An elevator bucket having an upper extension having an opening therein for the reception of a belt, and oppositely disposed depressions or seats on each side of said opening for the reception of a pin or cross bar adapted to attach the bucket to the belt.

5. An elevator bucket having an upper extension having an opening therethrough for the reception of a belt, a depression or seat on each side of said opening for the reception of the ends of a pin or cross bar adapted to attach the bucket to the belt.

6. An elevator bucket having an upper extension with an opening therethrough for the reception of a belt, a depression or seat on each side of said opening for the reception of the ends of a pin or cross bar, whereby the bucket is attached to the belt, said seats having side portions to limit the lateral movement of the pin or cross bar.

7. An elevator bucket, having an upper extension having an opening therethrough for the passage of a belt, a depression or seat on each side of said opening, for the reception of a pin or cross bar adapted to attach the bucket to the belt, said seats each having a side portion to prevent lateral movement of the pin or cross bar, and openings adjacent to the seats through which the pin or cross bar may be inserted.

8. In an elevator of the character described, the combination of a bucket and a belt, a transverse pin or rod carried by the bucket and frictionally engaging the belt, whereby the bucket is removably attached to the belt, substantially as and for the purpose set forth.

9. In an elevator of the character described, a bucket formed with an upper extension having an opening therethrough for the reception of a belt, a depression or seat on each side of said opening, a belt having a portion extending into said opening, and means passing under said belt and adapted to seat in said depressions or seats, and means for preventing the lateral movement of said means.

10. In an elevator of the character described, a bucket having an extension with an opening therethrough for the reception of a belt, a depression or seat on each side of said opening, a belt having a portion extending into said opening, a pin or cross bar passing under the belt with its ends seated in the depressions or seats, and means for preventing the lateral movement of the pin or cross bar.

11. An elevator bucket having an upper extension with an opening therethrough for the passage of a belt, and a depression or seat on each side of said opening for the reception of a pin or cross bar adapted to attach the bucket to a belt, side flanges formed upon the extension and an opening in the back plate of the extension leading to each seat, whereby a pin or cross bar may be inserted in said depressions or seats from the back of the extension.

12. In an elevator of the character described, a bucket having an upper extension with an opening therethrough for the passage of a belt, a depression or seat on each side of said opening, a belt having a portion extending into said opening, a pin passing under the belt and having its ends seated in the depressions or seats, the said extension having side flanges and the back plate of said extension having openings leading to the seats whereby the pin or cross bar may be seated in said depressions or seats from the back of the bucket, substantially as and for the purpose set forth.

13. In an elevator of the character described, the combination of a bucket having an opening in the back part thereof for the reception of a belt, a belt, and means for frictionally attaching the bucket to the belt.

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

JACOB W. SHOOK.

Witnesses:
G. W. WILLIAMS,
H. A. REYNOLDS.