B. R. BENJAMIN.

BUCKLE.

APPLICATION FILED MAR. 21, 1914.

1,234,718. Patented July 31, 1917.

Fig. 1.

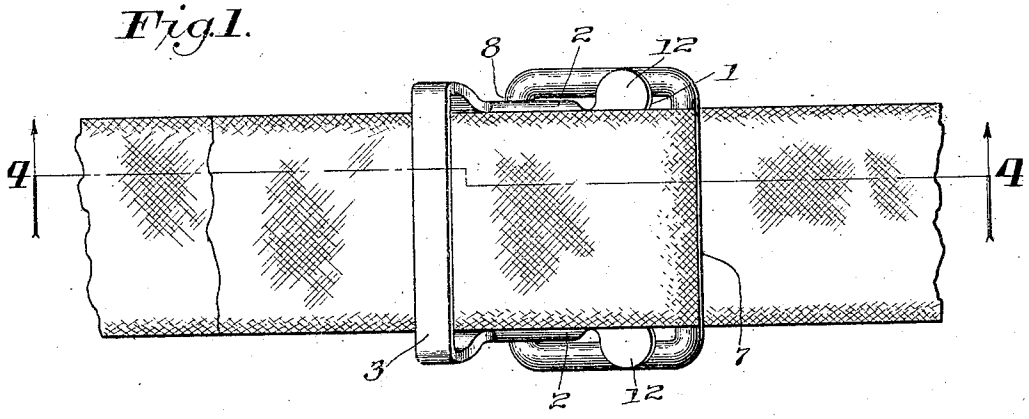


Fig. 2.

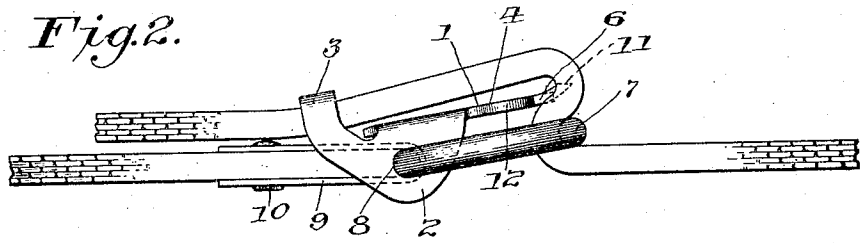


Fig. 3.

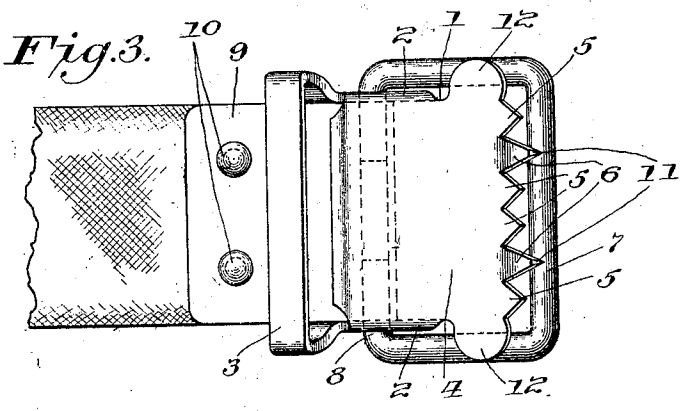
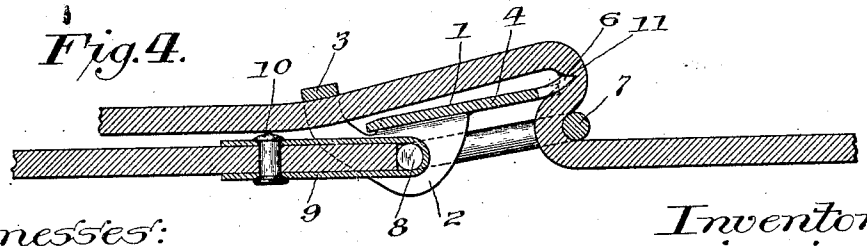


Fig. 4.



Witnesses:
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[illegible]

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UNITED STATES PATENT OFFICE.

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BUCKLE.

1,234,718. Specification of Letters Patent. Patented July 31, 1917.

Application filed March 21, 1914. Serial No. 826,192.

To all whom it may concern:

Be it known that I, BERT R. BENJAMIN, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Buckles, of which the following is a full, clear, and exact specification.

My invention relates to buckles.

It has for its object to eliminate the slipping of the buckles on the straps of conveyers such as those used on harvesters or the like, and thereby facilitate the work of an operator of the machine and increase the efficiency of the machine and the capacity of the same in a given time by removing the necessity for the operator to interrupt the operation of the machine in order that the buckles may be adjusted. A further object of my invention is to reduce the wear and tear on the straps of the conveyers in such a manner as to enable a cheaper strap to be employed at the same time that the efficiency of the buckle and strap is increased. I attain these objects by providing a buckle of improved construction hereinafter fully set forth.

In order that my invention may be fully and clearly disclosed, I have illustrated in the accompanying drawings one embodiment which the same may assume in practice.

Figure 1 is a top plan view of a strap equipped with my improved buckle;

Fig. 2 is a side elevation of the same;

Fig. 3 is a top plan view of the buckle carrying end of the strap;

Fig. 4 is a longitudinal sectional view taken on line 4—4 of Fig. 1.

The buckle as shown includes a body member 1 having downwardly extending ears 2 on its opposite sides and a loop 3, preferably integral with the ears and connecting the same as shown, which loop is disposed at the rear of the body 1 and in a plane above the same. The body 1 is also provided with a flat forwardly protruding portion 4 having teeth 5 and 6 on the front edge thereof which coöperate with an underlying bail 7, in turn pivotally mounted in the ears 2 and having a strap engaging portion 8 attached to and rotatably mounted in any suitable manner on the buckle end of the strap, as by a clip 9 and rivets 10. As shown, the free end of the strap is brought in under the bail 7, over the teeth 5 and 6 and the part 4 of the buckle body, and under the loop 3 so that as tension is applied to the strap the teeth 5 and 6 on the edge of the part 4 are driven into the material of the strap in the position shown in Figs. 2 and 4.

It is to be noted that the teeth 5 are blunt and protrude substantially forward in the plane of the body portion 4 to a point substantially in the plane of the inner side of the bail 7. The teeth 6 are, preferably, interposed between certain of the teeth 5 on opposite sides of the median line of the strap or buckle, and are bent upward at an angle to the teeth 5 and made slightly longer than the latter, extending over the bail 7, as shown, and being provided at their ends with beveled tops 11 in such a manner that sharp points are formed thereon which will penetrate the strap. In other words, long, sharpened, strap piercing teeth 6 are provided which penetrate the strap at points on opposite sides of its center or median line and coöperate with shorter, blunt, non-penetrating, squeezing or gripping teeth 5 disposed between the teeth 6 and on opposides of the same. Obviously, in order to assist in holding the strap in place and in releasing the same, upwardly inclined ears 12 may be formed on the body portion at one or both ends of the toothed portion thereof, as shown in Figs. 1 and 3.

In practice it has been found that the penetrating teeth 6 coöperate with the holding or non-penetrating teeth 5 in such a manner as to prevent effectually any slipping of the buckle on even a cheap cotton strap, and this same efficiency continues under the most trying service conditions, such as, for instance, when the strap is wet. Attention is here also directed to the fact that the strap is securely clamped between the long teeth 6 and the bail 7 in the position shown in Fig. 4, in such a manner as not only to prevent relative movement between the buckle and strap, but to prevent these teeth from being pulled too far through the strap and thereby wearing out the same, and that these teeth do not cut or break the fiber of the strap but only push it to one side as they enter the strap, with the result that the life of the latter is thereby prolonged.

While I have in this application described one embodiment which my invention may assume, it is, of course, to be understood that the form chosen for purposes of illustration

is susceptible of modification without departing from the spirit of the invention.

What I claim as my invention, and desire to secure by Letters Patent, is:

1. A buckle comprising a body portion provided at one end with a plurality of transversely spaced longitudinally disposed elongated teeth on opposite sides of its median line and depending ear portions on opposite sides of said body portion and at the opposite end thereof from said teeth integrally united with said body portion with an upwardly and rearwardly disposed loop member extending transversely of said body portion, and a bail rotatable with respect to said ear portions and supporting the same disposed beneath said body portion and having a cross bar disposed transversely with respect to said elongated teeth.

2. A buckle comprising a bail having a cross bar around which a strap is passed and a body portion operatively connected to the bail and underlying the strap after it has passed under and around said cross bar having longitudinally extending strap squeezing and strap penetrating teeth on its working edge, said working edge being normally disposed substantially in a plane parallel to the plane of said bail with said penetrating teeth projecting over the cross bar thereof.

3. A buckle comprising a body portion having a longitudinally extending edge provided with short blunt teeth and a plurality of longer penetrating teeth spaced apart from each other on opposite sides of the median line of said body portion and adjacent said short teeth, and a bail pivoted to said body portion in rear of said teeth and normally underlying the former having a cross bar normally disposed transversely beneath said teeth.

4. A buckle comprising a body portion having a longitudinally extending edge provided with short blunt teeth and a plurality of longer penetrating teeth spaced apart from each other on opposite sides of the median line of said body portion and on opposite sides of certain of said short teeth, and a bail pivoted to said body portion in rear of said teeth and normally underlying the former having a cross bar normally disposed transversely beneath said teeth.

5. A buckle comprising a body portion having a longitudinally extending edge provided with short blunt teeth and a plurality of longer penetrating teeth spaced apart from each other on opposite sides of the median line of said body portion and between certain of said short teeth, and a bail pivoted to said body portion in rear of said teeth and normally underlying the former having a cross bar normally disposed transversely beneath said teeth.

6. A buckle comprising a body portion having depending ear portions on opposite sides thereof and a longitudinally extending front edge provided with short blunt teeth and a plurality of longer penetrating teeth spaced apart from each other on opposite sides of the median line of said body portion and adjacent said short blunt teeth, and a bail pivotally connected to said ear portions and normally underlying said body portion having a cross bar normally disposed transversely beneath said longer teeth.

7. A buckle comprising a body portion having a transversely disposed serrated working edge provided with a plurality of longitudinally extending transversely spaced elongated teeth sharpened at their points and disposed on opposite sides of the median line of said body portion and at an angle to the plane of the latter, a plurality of non-sharpened shorter teeth protruding in the plane of the body portion and coöperating with said elongated teeth, and a bail pivotally connected to said body portion and disposed in a plane beneath the latter having a cross bar normally disposed beneath the ends of said elongated teeth.

8. A buckle comprising a body portion having a laterally extending ear at one side thereof and a longitudinally extending toothed working edge formed of teeth of different lengths, certain of said teeth being disposed substantially in the plane of said body portion, and a bail journaled on said body portion and normally disposed beneath the same and having a cross bar disposed transversely with respect to the teeth on said working edge.

9. A buckle comprising a body portion provided at one end with a plurality of transversely spaced elongated sharpened teeth on opposite sides of its median line and depending ear portions on opposite sides of said body portion and at the opposite end thereof from said teeth integrally united with said body portion, an upwardly projecting loop member extending transversely of said body portion in a plane above the same, a bail of substantially rectangular shape rotatable with respect to said ear portions and supporting the same disposed beneath said body portion and having a cross bar normally engageable with the ends of said elongated teeth, and a strap clip rotatably mounted on portions of said bail extending through said ear members.

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

BERT R. BENJAMIN.

Witnesses:
H. L. Rockwell,
F. W. Hoffmeister.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."