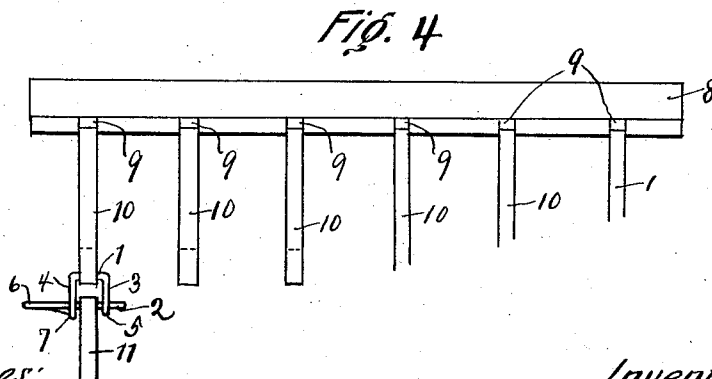
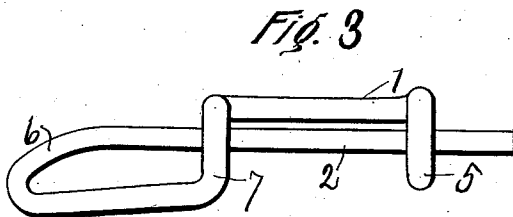
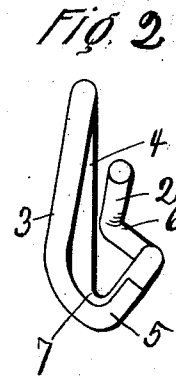
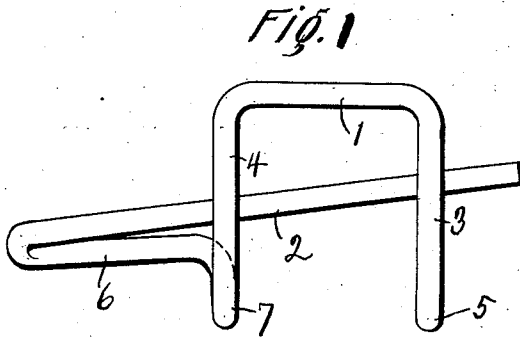
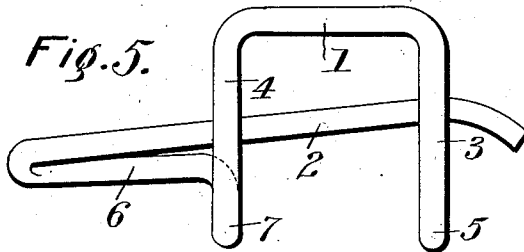


J. E. ARMSTRONG.
 BALE TIE BUCKLE.
 APPLICATION FILED NOV. 6, 1911.

1,021,397.

Patented Mar. 26, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES E. ARMSTRONG, OF WEATHERFORD, TEXAS, ASSIGNOR TO STANDARD BALE WIRE BUCKLE CO., OF FORT WORTH, TEXAS, A CORPORATION OF TEXAS.

BALE-TIE BUCKLE.

1,021,397.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed November 6, 1911. Serial No. 658,899.

To all whom it may concern:

Be it known that I, JAMES E. ARMSTRONG, a citizen of the United States, residing at Weatherford, in the county of Parker and State of Texas, have invented certain new and useful Improvements in Bale-Tie Buckles, of which the following is a specification.

My invention relates to fasteners and more particularly to a buckle for securing the ends of bale ties on cotton or other fibrous bales, and the objects are to provide a strong and durable buckle which is simple and to which the ends of bale tie can be easily and quickly attached.

It is necessary for persons putting on bale ties to wear gloves to prevent mutilating the hands. The disadvantage with buckles in use and on the market is that they are so small that there is considerable trouble in holding the buckle,—the buckle often slipping from the hand. This makes the placing of the buckles on the ties slow and tedious when it is desirable that the buckles be placed on the ties very quickly. The buckles cannot be larger or wider because the strain on the buckles would break or disarrange the buckles instantly. Another trouble with buckles on the market is that they are so small that when the buckle is attached to the tie coming over the top of the bale the buckle will frequently be drawn through the channel in the presser block through which the tie is inserted. I have provided a buckle which is no larger than other buckles and which may be made of smaller pieces of wire or other material and which is provided with guard members to prevent the buckles from going through the channels in the presser block and which will also provide means by which the buckles can be more easily held in the hands. The buckle can be made of lighter material because the members of the buckle which sustain the strain are better arranged and adapted to withstand greater strain.

Another object is to provide a buckle to which the tie can be more quickly attached,—the last member to which the tie is attached being so disposed that the tie can be attached without holding the buckle so far out of its normal position.

Another object is to provide a buckle which will be extremely accurate in automatically engaging the members which are

to be adjusted after the tie is adjusted on the buckle.

Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application and specification.

Figure 1 is a plan view or a front elevation of the buckle as placed on a tie while the bale is in the press. Fig. 2 is an edge view of the same, looking toward the right side of Fig. 1. Fig. 3 is a bottom plan view, that is, looking toward the bottom of Fig. 1. Fig. 4 is a diagrammatic view of a portion of a presser block and portions of the bale ties with one buckle shown. Fig. 5 is a similar view to Fig. 1, showing a variation in one bale-tie engaging member.

Similar characters of reference are used to indicate the same parts throughout the several views.

The improved buckle is preferably made of a single piece of steel wire. The buckle is provided with two bale tie engaging members,—one 1 of which is fixed and the other 2 is yielding and automatic in the final act of securing the tie on the bale. The buckle has two longitudinal bars 3 and 4 which extend from the tie engaging member 1 and are provided with hooks 5 and 7 which receive the yielding tie engaging member 2. The bar 3 terminates with a hook 5 for the purpose just mentioned. The other arm of the wire or other material, after forming the bar 4 and having the hook 7 formed therein, is extended laterally and doubled substantially upon itself to form a member 6 which performs several functions and to form the yielding member 2. The buckle has thus a quadrangular frame open at one corner to receive the last end of the bale tie to be attached. The bale tie is first fixed on the bar 1. A loop is formed in the other end of the bale tie after it has been determined at what point in the tie it is to be bent to form the loop which is to engage the bar 2. As soon as the pressure is taken off the bale, the bale will expand and the bale tie will draw the bar 2 automatically into engagement with the hooks 5 and 7. The bar 2 stands in position to be easily reached with the loop in the bale tie. By reason of the

fact that the bar 2 extends considerably beyond the bar 4, the end of the bar 2 can be placed as far as may be desirable or practical from the bar 3 and hook 5. This is
 5 important because the loop formed in the end of the bale tie is often considerably large, that is, the metal will not bend sharply. In such case the loop, although
 10 large, can be easily placed on the bar 2 without turning the buckle so much or so far out of its normal position. By reason of the fact that the bar 2 is a continuation of the
 15 upper arm of the loop 6, the bar will be certain to engage the hooks 5 and 7 when drawn by the bale tie because the bar 2 will
 tend to press toward the bars 3 and 4 instead of the opposite direction, the buckle being made of steel.

One of the more important features of the
 20 loop 6 is that it forms a member which can be seized by the hand to hold the buckle while the loop of the bale tie is being placed on the bar 2 and also to hold the buckle
 (which is fixed on end of the bale tie) in its
 25 normal position while the bale tie is being adjusted on the bale.

Another feature of the loop 6 and the projecting end of the bar 2 is that these
 30 members form a guard or stop to prevent the buckle from being drawn through the channel in the presser block.

Fig. 4 shows a portion of a presser block 8 with the channels 9 through which the ties are first shoved, the block 8 being the
 35 upper presser block. It is apparent that the end of bar 2 and the loop 6 will prevent the buckle from being drawn through the channel. The tie is shoved in the channel 9 at
 the top and the end 10 of the tie is fixed on
 40 the bar 1 and a loop is formed in the end 11 to engage the bar 2. There is a further advantage in having the yielding tie engaging
 45 member 2 projected from the outer end of the loop 6, and that is, the bar 2 will engage the bar 4 as well as the bar 3 at substantially

right angles thereto so that the pull on the bar 2 will be direct on both the hooks 5 and 7 and the hook 7 will be braced by the loop 6.

The variation shown in Fig. 5 consists in a hook formed on the end of the yieldable
 50 bale-tie engaging member to prevent lateral spreading of the side-bar on that side of the buckle, the other side bar being braced by the lateral extension of the wire.

Having fully described my invention, 55
 what I claim as new and desire to secure by Letters Patent, is:—

1. A bale-tie buckle constructed of a length of wire bent to form a bale-tie engaging member, and two side bars projecting therefrom and terminating with hooks
 60 and then extended from one of said hooks to form a combined handle and guard member, and then bent upon itself and projected across and beyond said side bars within the
 65 plane of said hooks to form a yieldable bale-tie engaging member and a guard member, said yieldable bale-tie engaging member being normally spaced from said hooks and
 70 from said side bars, but adapted to be automatically drawn into engagement with said hooks by the strain of the bale-tie.

2. A bale-tie buckle constructed of a length of wire bent to form a frame having
 75 a fixed bale-tie engaging member, two side bars projecting therefrom and terminating with hooks, and said wire after forming one of said hooks being extended laterally in a
 80 plane with the beaks of said hooks and bent back upon itself into a loop forming a handle and to form a yieldable bale-tie engaging member within the plane of said hooks.

In testimony whereof, I set my hand in the presence of two witnesses, this 16th day of October, 1911.

JAMES E. ARMSTRONG.

Witnesses:

W. L. TULKER,
 D. E. EDDLEMAN.