

E. L. HINES.
BUCKLE FOR COMPRESSED BALES.
APPLICATION FILED SEPT. 17, 1908.

920,328.

Patented May 4, 1909.

Fig. 1.

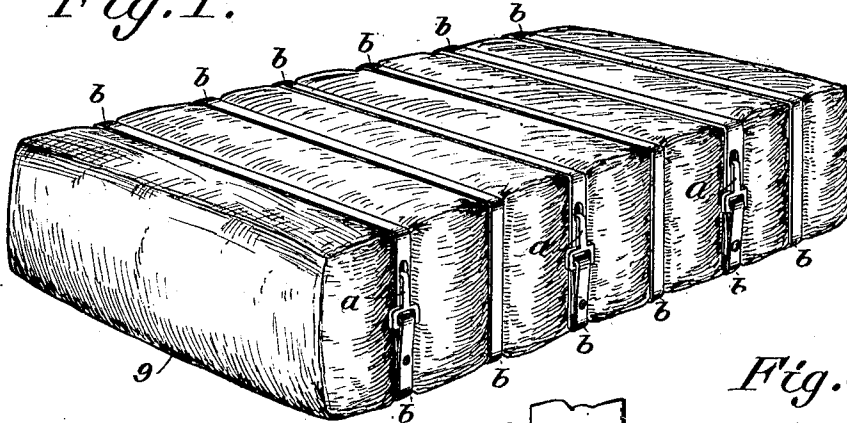


Fig. 3.

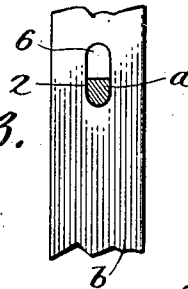


Fig. 5.

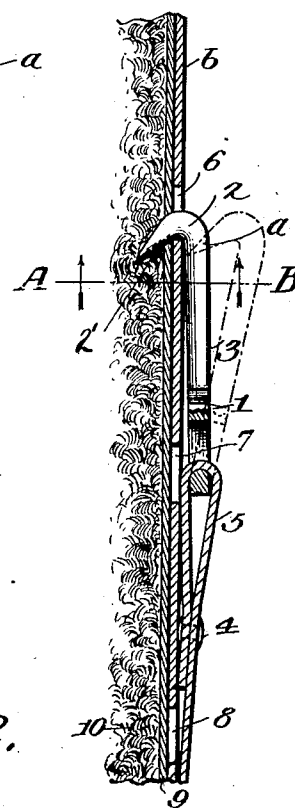


Fig. 6.



Fig. 4.

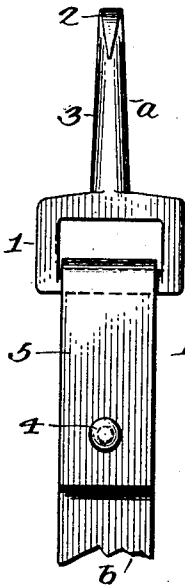
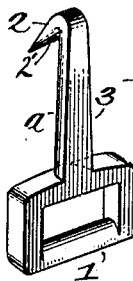


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

ERNEST L. HINES, OF WILMINGTON, NORTH CAROLINA.

BUCKLE FOR COMPRESSED BALES.

No. 920,328.

Specification of Letters Patent.

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Application filed September 17, 1908. Serial No. 453,475.

To all whom it may concern:

Be it known that I, ERNEST L. HINES, a citizen of the United States of America, and a resident of Wilmington, in the State of North Carolina, have invented a new and useful Improvement in Buckles and Bands for Compressed Bales, of which the following is a specification.

This invention relates to metallic buckles and bands especially designed and adapted for compressed bales, especially of cotton; and the invention consists in the combination of a one-part hook-shaped buckle of peculiar construction and a perforated band looped thereto, as hereinafter described and claimed.

The objects of the invention are to provide for baling cotton, both on the plantation and in the compressor, more rapidly than has heretofore been practicable; to render a fewer number of buckles and bands sufficient to prevent the swelling of bales after they are fastened; and to obviate cutting the bands in removing them from the original bales, and thus to avoid the expense of piecing up bands for the compressed bales.

A sheet of drawings accompanies this specification as part thereof.

Figure 1 is a perspective view of a compressed bale, provided with the improved buckles and bands; Fig. 2 is a perspective view of an improved buckle detached; Fig. 3 represents a face view of a fragment of a band, showing one of its holes, and a section through the hook end of the interacting buckle in the plane of the band; Fig. 4 is a face view of the buckle and the looped end of the band; Fig. 5 represents a section through the band and a sectional side view of the buckle on a bale; Fig. 6 represents a cross section on the line A—B, Fig. 5.

Like reference characters refer to like parts in all the figures.

The improved buckle, *a*, is a one-part hook-shaped forging of iron or steel having a loop end, 1, and a hook end, 2, at its respective extremities, rigidly connected with each other by a shank, 3, central with reference to the loop end.

The hook end 2 is tapering and sharp pointed and its strain resisting surface or shoulder 2', as best seen in Fig. 5, is straight throughout its length and forms a suitable acute angle with reference to the adjoining face of the shank 3.

The band *b* is intended to be of suitable

hoop iron such as is commonly used and is looped at one end to the loop end 1 of the buckle *a*, with or without a rivet, 4, to render the loop, 5, permanently closed.

To interact with said shoulders 2' of the hook end 2 of the buckle *a* the band *b* is constructed with a longitudinal series of holes, 6, 7, 8, of any sufficient number, one of which is best shown in Fig. 3. As there shown, the holes in the band *b* are preferably and conveniently round-ended and the shoulder 2' of the hook end 2 of the buckle *a* is conveniently rounded to match in shape the interacting end of any hole.

The band *b* must originally be nearly or quite twice as long as is required for the compressed bale. After removing the bands from the original bale they are cut to the proper length for the compressed bale, using the perforated end of the band; and the shortened band is looped to the buckle *a* as above described.

To facilitate inserting an unhooking tool between the shank 3 and the band *b*, said shank may be constructed with a rounded face as shown in Fig. 6, or an equivalent shape in cross section.

The construction of the hook end 2 as above described adapts it to be rigidly thrust endwise through the customary bagging into the cotton of the bale, represented respectively at 9 and 10 in Figs. 5 and 6, and to be unhooked as above described by the insertion of an unhooking tool between the shank 3 and the band *b*, in which operation the inclined shoulder 2' of the hook end 2 interacts with the opposing hole end in the band with a powerful wedging action, and the band under such action stretches sufficiently to free the hook. The interaction of the hook-shaped buckle and perforated band is, moreover, such that the bands may be stretched practically free from slack in fastening the repressed bale, Fig. 1, so that there will be little, if any, swelling of the bale after it is removed from the press; and it is estimated that six bands will be amply sufficient under these circumstances in place of the eight bands heretofore commonly used.

By adapting the buckle to be unhooked as aforesaid it is rendered easily practicable to unfasten and detach the bands without cutting them from the bales; and the large expense heretofore incurred in piecing the bands for the repressed bales after cutting

them from the original bales in pieces of uncertain length is saved, without additional trouble or delay in handling the bales.

The improved buckle and band may obviously be modified in shape and construction without materially affecting their interaction as above described; and other like modifications will suggest themselves to those skilled in the art.

10 Having thus described said improvement, I claim as my invention and desire to patent under this specification:

1. A one-part buckle having a loop end and a tapering sharp-pointed hook end at the opposite extremities of a shank portion, 15 said hook end having a straight shoulder at an acute angle to the adjoining face of said shank portion, in combination with a bale band of hoop-iron one end of which is looped 20 to said loop end of the buckle and the other end is perforated to interlock with said hook

end of the buckle, substantially as hereinbefore specified.

2. The combination with a bale band of hoop iron having its respective ends provided with a loop and with a series of holes, 25 of a one-part buckle having a loop end to interact with said loop of the band, a tapering sharp-pointed hook end to interlock with said holes in the band and a shank rigidly 30 connecting said loop end and said hook end and constructed to admit an unhooking tool between the shank of the buckle and the underlying surface of the band, said hook end presenting a straight shoulder at an 35 acute angle to the adjoining face of said shank, substantially as hereinbefore specified.

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