No. 830,966. PATENTED SEPT. 11, 1906.

D. M. CAMPBELL.

METHOD OF FASTENING BALE BANDS.

APPLICATION FILED NOV. 6, 1906.

Fig. 3.

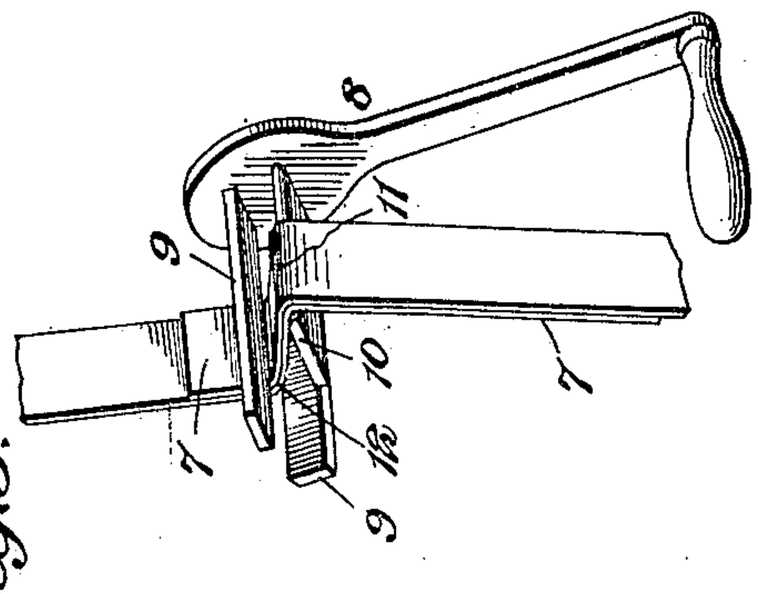


Fig. 6.

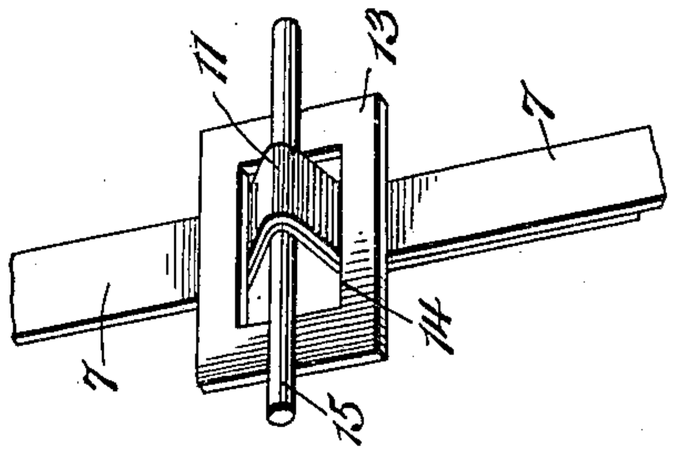


Fig. 2.

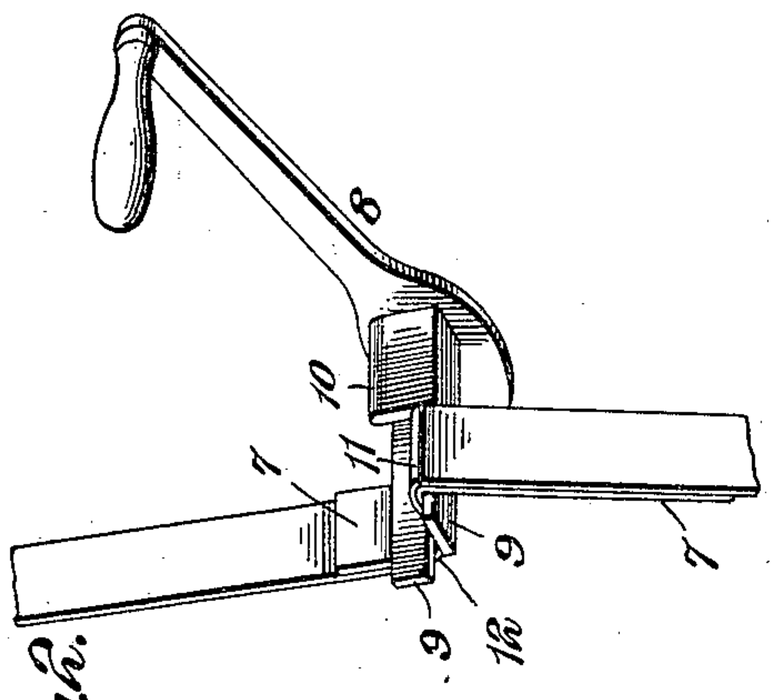


Fig. 5.

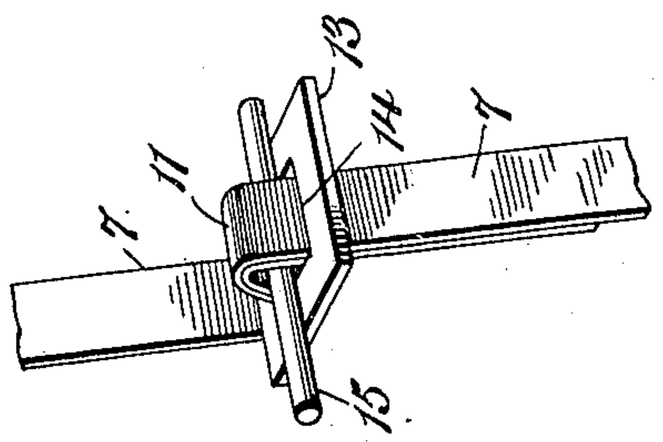


Fig. 1.

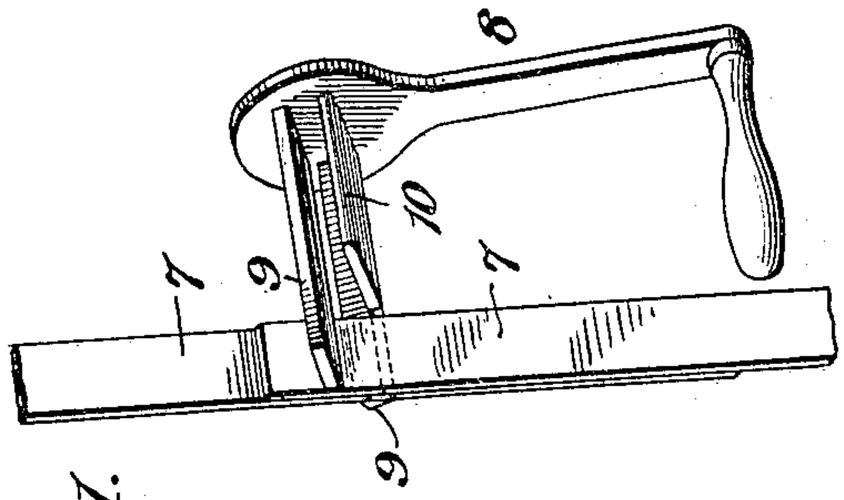
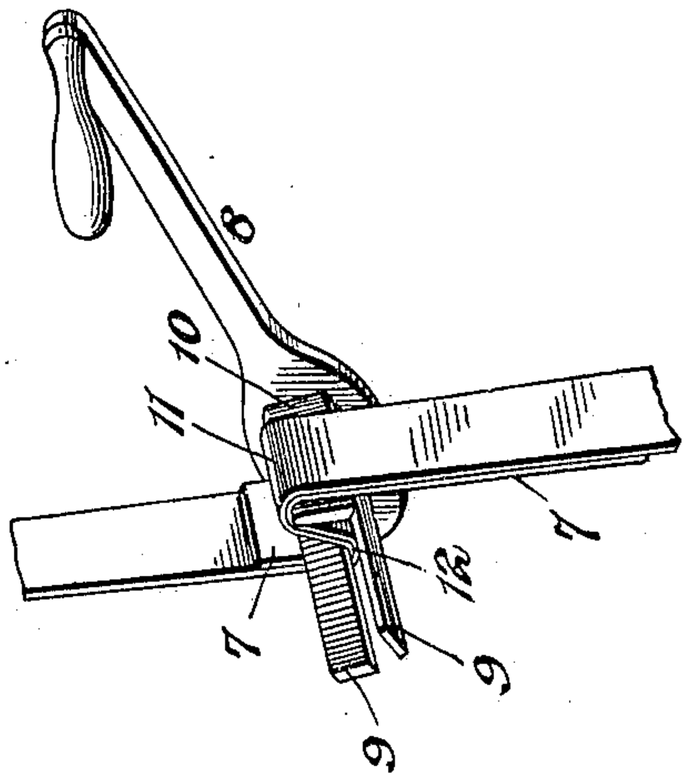


Fig. 4.



Witnesses
Howard D. Orr.
B. G. Foster.

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By E. G. Siggers.
Attorney

UNITED STATES PATENT OFFICE.

DOUGLAS M. CAMPBELL, OF HOUSTON, TEXAS.

METHOD OF FASTENING BALE-BANDS.

No. 830,966. Specification of Letters Patent. Patented Sept. 11, 1906.

Application filed November 6, 1905. Serial No. 286,110.

To all whom it may concern:

Be it known that I, DOUGLAS M. CAMPBELL, a citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have invented a new and useful Method of Fastening Bale-Bands, of which the following is a specification.

This invention relates to a method of tying or fastening bale-bands to cotton or other bales.

The principal object is to provide a simple and novel method whereby bands can be effectively and properly secured with great rapidity to bales of varying sizes and characters.

In the drawings, Figure 1 is a perspective view illustrating the position of the parts in the first step of the method. This pronounced exaggeration of the crimp produces a surplus of slack in the band and causes the band ends to be temporarily tied or interlocked in such a manner that the tool can be withdrawn and the hands left free to handle the retainer without danger of the crimp being drawn out or the band ends drawn apart by the surface expansion of the bale before the retainer can be applied. Fig. 2 is a corresponding view showing the preliminary crimping of the overlapped ends of the band. Fig. 3 is a view illustrating the position of the crimping-tool when in position for its final operation on the ends. Fig. 4 shows the final crimp. Fig. 5 illustrates the position of the parts after the application of the buckle. Fig. 6 is a perspective view showing the position of the buckle after the bale has expanded and strain is brought upon the band.

Similar reference-numerals designate corresponding parts in all the figures of the drawings.

In practicing my novel method of tying bales a metal band is fitted to the bale in the usual manner, but with its ends 7 disposed in overlapping relation. After the band has been fitted to the bale, as stated, the overlapped ends thereof are simultaneously crimped, which obviously serves to interlock the overlapped ends of the band and to draw the latter more tightly about the bale. This crimping of the overlapped ends of the band is accomplished by means of a tool 8, having spaced fingers 9, one of which has an offset portion 10. The tool 8 is applied to the band with the fingers 9 disposed above and below the overlapped band ends, as shown in Fig. 1, and is turned to the position shown in Fig. 2 to simultaneously crimp the overlapping portions of the band or tie.

For the purpose of exaggerating the crimp which will obviously interlock the band ends, the offset 10 of one of the fingers 9 is passed into the crimped portion of the band and the tool 8 is again swung to the position indicated in Fig. 4. This manipulation of the tool will draw the band even more tightly and will so exaggerate the crimping of the band that the overlapped portion of the latter will be formed with reversely-arranged open-mouthed loops 11 and 12. By the term "reversely-arranged loops" is meant the bending, folding, or doubling of the band ends in a manner to produce open eyes, loops, or curved portions which open in reverse directions, whether or not such loops or eyes assume the exact form shown in the drawings. It is sufficient if the reversed loops or bends cause such effectual interlocking of the band ends as will prevent the latter from being drawn apart when the tool by means of which the bending is accomplished is removed. The overlapped ends of the band will now be so securely interlocked that the tool may be removed without danger of the pulling apart of the interlocked band ends by the surface expansion of the bale, it being understood, of course, that during the tying operation the bale is held in the press. A retaining device is now applied to the crimped portion of the band to prevent the pulling out of the crimp or the slipping of the band ends when the bale expands upon its removal from the press. The illustrated retaining device includes a buckle-frame 13, having a central opening 14, through which the crimped portion of the bale-tie projects when the frame is applied. (See Fig. 5.) After the buckle-frame has been applied to the crimp a holding-key 15 is inserted in the crimp and is disposed between the holding-frame and the overlapped portion of the tie. Therefore when the bale is released from the press the expansion thereof will merely eliminate the excess or exaggeration of the crimp by drawing the buckle down flat upon the bale, as shown in Fig. 6, but the overlapped ends of the band will remain crimped and interlocked, and the expansion of the bale permitted by the band will be very slight.

By reason of the fact that the band is first fitted to the bale and then secured by the simultaneous crimping of its already overlapped ends, the tying of the bale may be

accomplished with expedition and a close-fitting band insured, it being noted that the act of crimping the band ends serves also to interlock said ends and to draw the band closely around the bale.

What I claim is—

That improvement in the art of tying bale-bands which consists in fitting a band to the bale with the ends of the band overlapped, crimping the overlapped band ends simultaneously to form reversely-arranged loops therein which will temporarily tie or interlock the band ends so that the crimping-tool can be withdrawn, and the hands of the operator left free to handle a retainer, without danger of the crimp being drawn out or the band ends disconnected by the surface expansion of the bale, before the retainer can be applied, and finally applying a retainer to one of the loops of the crimp to prevent the slipping of the band ends, or the pulling out of the crimp, when the bale expands upon removal from the press.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in the presence of two witnesses.

DOUGLAS M. CAMPBELL.

Witnesses:

JOHN C. MATTHEWS,

J. PHILIP GIBBS.