

P. F. KING.  
WIRE COTTON BALE-TIE.

No. 181,183.

Patented Aug. 15, 1876.

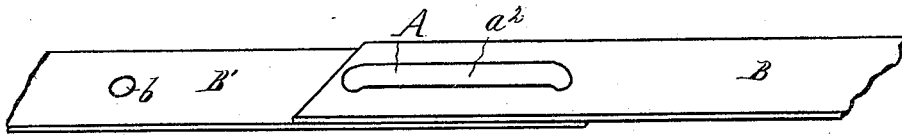


Fig. 1.

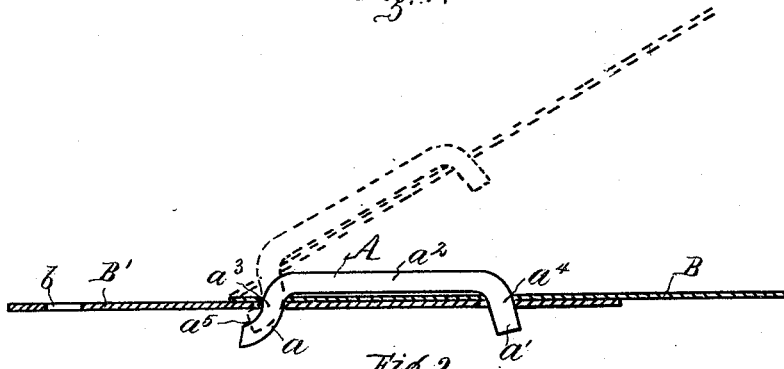


Fig. 2.

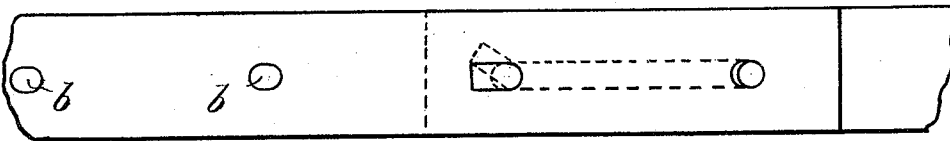


Fig. 3.

Witnesses:  
Chas. P. Meisner.  
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Inventor:  
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Attys.

# UNITED STATES PATENT OFFICE.

PHINEAS F. KING, OF ST. LOUIS, MISSOURI, ASSIGNOR TO GEORGE C. CLARKE.

## IMPROVEMENT IN WIRE COTTON-BALE TIES.

Specification forming part of Letters Patent No. **181,183**, dated August 15, 1876; application filed January 6, 1876.

*To all whom it may concern:*

Be it known that I, PHINEAS F. KING, of St. Louis, Missouri, have invented an Improved Wire Tie for Baling Cotton, &c., of which the following is a specification:

This invention is an improved fastening device, more specially designed for securing the ends of iron bands used in baling cotton, hemp, and other flexible material.

This invention pertains to that class of fastenings for the purposes mentioned, and known as "wire ties." It consists of a section or piece of wire, the opposite ends of which are passed through a band end to become a permanent feature thereof, and so that it can be inserted into the opposite band to effect the uniting of both band ends.

The nature of my invention can, however, be more specifically stated to consist in the constructive relationship of the opposite downward-projecting ends of my tie, so as to achieve, first, that the body part of the tie shall strengthen the top end of the band; secondly, that its projecting ends shall resist the strain of the bands inversely; thirdly, that said projecting ends shall form a locking device to prevent self-disengagement of the bands, and otherwise, by their construction, enable the operator to readily insert or apply the band-fastening as use requires, and all of which will now more fully appear.

Of the drawing, Figure 1 is a perspective view of the top of the band ends with my improved tie applied. Fig. 2 is a section through the band ends, and showing more clearly the construction of my tie and its application for use. Fig. 3 is a bottom plan of band ends and my tie.

A represents my wire tie. As stated, its opposite ends  $a$   $a^1$  are made capable of being passed through one end of the band, to form part thereof, and in this condition to be adapted further to unite with the opposite band end. B B' represent the opposite ends of the same band, and these I provide each with a series of slots,  $b$ , of such relative distance apart to suit the passage through them of the opposite projecting ends of the tie. My tie A has its ends  $a$   $a^1$  passed through the band end B from the top, and so that the body part  $a^2$  of the tie shall be top of said band. This feature, as

is obvious, strengthens these parts. The forward end  $a$  of the tie I bend so that, when passed through the band end B, it presents a bearing at  $a^3$  to resist the strain of said band. Likewise, the rear end  $a^1$  is bent downward to form a like bearing at  $a^4$ , and to resist the same strain of the band just stated, and as indicated in Figs. 2 and 3. Further, the same bearings at  $a^3$   $a^4$  serve to resist the strain of the opposite band end B' when the tie is fastened. It will, therefore, be noticed that the strain of the bands being in opposite directions, it is brought to bear upon the opposite sides of the bearings  $a^3$   $a^4$ , and thus both the projecting ends  $a$   $a^1$  of my tie effectually coact to resist the expansive tendency of the bale to pull the band apart.

It is essential to prevent the bands from self-disengagement; hence a further constructive feature of the ends  $a$   $a^1$  of my tie consists in forming the needed locking device. For this purpose the forward end  $a$  of the tie has its extremity bent or curved, say, to project from the vertical line of its bearing at  $a^3$  in a forward direction under the band end B'. This enables the further bearing part at  $a^5$  to come in contact with the under face of the end of band B', and hence any tendency of the top band B, seeking to disengage itself at that point, is thus certainly resisted; also, the under band end cannot possibly be loosened, owing to this effectual fastening of the top band. The forward end  $a$ , thus constructed, also enables the operator to readily cause it to engage the slot of the band part B'. Thus, as shown in Fig. 2, since the part  $a$  projects to the left, the top end of the band should be made to assume an inclination, and as indicated in Fig. 2, which permits the point  $a$  to be slipped through the slot in the lower band end, and, in so doing, the rear end  $a^1$  will be brought in line with its proper slot and readily be made to seat itself and complete the fastening. As shown in dotted lines, Fig. 3, the extremity of the end  $a$  can be bent diagonally, and when so used it must be inserted laterally, and that of  $a^1$  brought in proper line to complete the engagement. The rear projection  $a^1$  of my fastening has a slight incline. (See Figs. 2, 3.) This secures that end of the fastening more permanently to the upper band end, and

also prevents, in a great measure, any action on the part of the band to spread apart its ends.

My fastening is cheap, durable, and for use possesses advantages apparent.

What I claim is—

1. A wire fastening, consisting of the body part  $a^2$ , having projecting ends  $a^1$ , their bearing-points at  $a^3$   $a^4$   $a^5$ , all constructed to operate in the manner and for the purpose set forth.

2. The combination of a wire fastening, consisting of the body part  $a^2$ , its ends  $a^1$ , bearings  $a^3$   $a^4$ , locking-point  $a^5$ , with slotted band ends, as and for the purposes set forth.

In testimony of said invention I have hereunto set my hand.

PHINEAS F. KING.

Witnesses:

WILLIAM W. HERTHEL,  
GEORGE C. CLARKE.