J. K. FLICKINGER.

Bale-Ties.

No. 151,483. Patented June 2, 1874.

FIG. 1

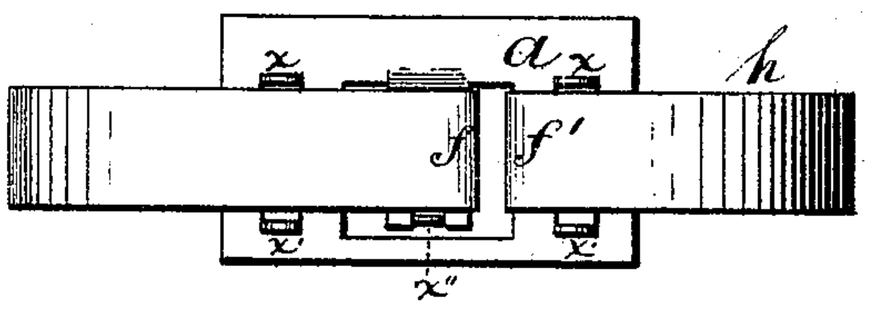
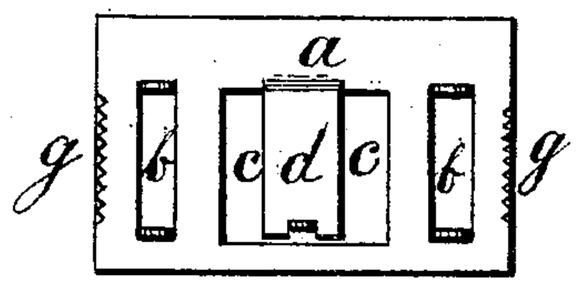


FIG. 2



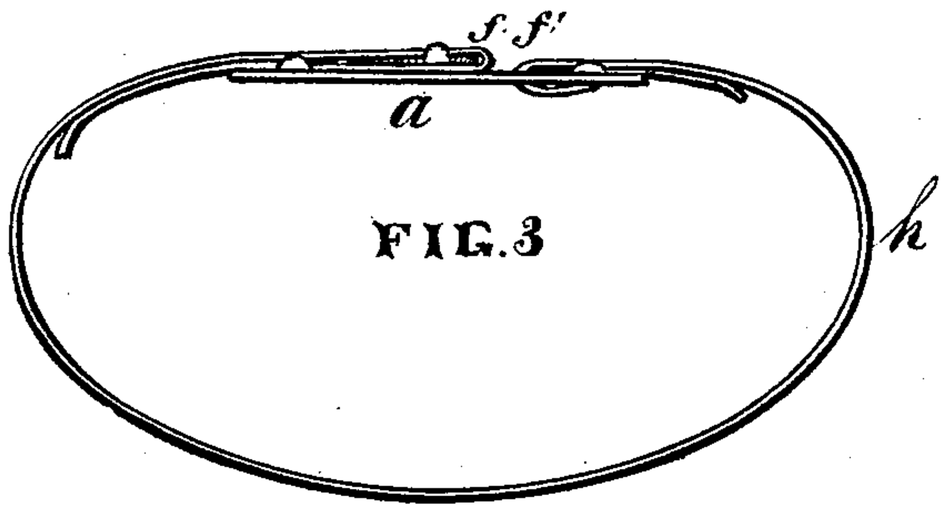


FIG. 3

FIG. 4

WITNESSES;
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INVENTOR:

UNITED STATES PATENT OFFICE.

JOHN K. FLICKINGER, OF SEVEN MILE, OHIO.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **151,483**, dated June 2, 1874; application filed March 5, 1874.

To all whom it may concern:

Be it known that I, JOHN K. FLICKINGER, of Seven Mile, in the county of Butler and State of Ohio, have invented a new and useful Improvement in Bale-Ties; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Figure 1 represents a plan or top view of my new bale-tie and band complete. Fig. 2 represents a like plan of the same, without the metal band. Fig. 3 represents an edge view of the tie and band, as attached for use. Fig. 4 represents an end view of the tie, which exhibits the raised tongue and the detents between which the band rests when applied to a bale of any kind.

My invention involves the combination of several important features, by means of which the bale-tie is made more reliable, and is better adapted for the purpose designed, as hereinafter set forth.

In the drawings, *a* denotes the closed frame of the tie, formed of a heavy plate of metal, provided with two slots, *b b*, near its ends. The tongue *d*, which is raised above the plane of the frame *a*, is rigidly connected at one end with one side of the frame, and the two slots *c c*, at the sides of the tongue, communicate with each other, as represented in Figs. 2 and 4, to freely admit the band to be looped or folded around the tongue. Upon the upper surface of the tie-frame *a* detents *x* project, and there is one detent at each end of the slots *b b*, and a detent, *x''*, projects above the detached end of the tongue *d*, upon which it is formed. The purpose of the detents is to secure and retain the tie in a true line with the band *h*, to prevent torsion and liability to fracture the edges of the metal band by the tensile strain produced by the expansive force of the bale. The detents determine the position of the band, and retain the tie in the true line with the band, and thus prevent unequal tensile strain upon either of the edges of the band where it is folded over the edges of the frame *a* and tongue *d*, as represented at *f f'* in Figs. 1 and 3. The single detent *x''* might be dispensed with when the detents *x'* upon the same longitudinal line of the frame are employed for the purpose above indicated. The bearing-edges of the slots *b b* and of the tongue *d*, upon which the strain of the band is exerted, may be formed with a slight curve outwardly for the fold of the band to bear against, which will effectively prevent the edges of the band from fracture by the strain upon it. These semi-oval or arc-formed edges of the tie and the detents will cause the tensile train to be mainly exerted upon the central body of the band. To prevent the band from slipping I have formed serrations *g* at the ends of the tie, where the reverted ends of the band are slightly bent downward and compressed between the overlapping portion of the band and the tie-plate or frame.

In using my improved bale-tie, one end of the band of metal *h* will be passed down through one of the slots *c*, and up through its adjacent slot *b*, and the other end of the band will be looped or folded around tongue *d*, as represented in Fig. 3, so that the reverted ends will each be securely held between the frame *a* and the continuous outer portion of the band. My bale-tie can be used with great facility, and its detents serve to fix the relative positions of both the tie and the band, thus avoiding delay of the workmen to adjust them, so as to prevent tearing off the reverted portions of the band.

Having fully described my invention, I claim and desire to secure by Letters Patent—

The combination of the closed frame *a*, provided with serrations *g* and slots *b b c c*, tongue *d* and detents, substantially as and for the purpose described.

Witness my hand this 18th day of February, A. D. 1874.

J. K. FLICKINGER.

Witnesses:
H. P. K. PECK,
JOHN M. DAVIDSON.