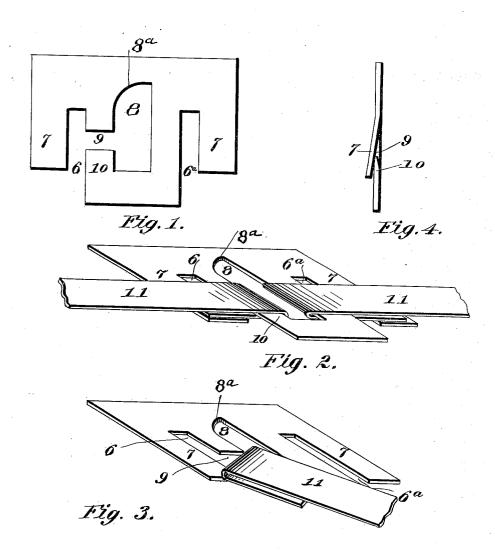
## W. T. JOHNSON. BALE TIE.

(Application filed Apr. 22, 1902.)

(No Model.)



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## UNITED STATES PATENT OFFICE.

WILLIAM T. JOHNSON, OF SYLVAN, TEXAS.

## BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 704,048, dated July 8, 1902.

Application filed April 22, 1902. Serial No. 104,160. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. JOHNSON, a citizen of the United States, residing at Sylvan, in the county of Lamar and State of Texas, have invented certain new and useful Improvements in Bale-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which 10 it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specifica-

This invention relates to bale-ties.

The object of the invention is to form a buckle to which the ends of the hoop may be readily secured and which will hold the same firmly against unintentional disengage-20 ment, the ends of the hoop being held in consequence of the shape of the buckle and the pressure of the bale.

In the accompanying drawings, Figure 1 is a plan view of the buckle. Fig. 2 is a per-25 spective view of the buckle and the ends of the hoop engaged thereby. Fig. 3 is a perspective view illustrating the manner of entering the ends of the hoop into the buckle. Fig. 4 is an end view of the buckle.

Referring specifically to the drawings, the buckle is formed of a flat plate of metal, having near the ends thereof cross-openings 6 and 6<sup>a</sup>, extending part way across the plate and forming end arms 7, which are bent 35 slightly downward from the plane of the remainder of the plate, as shown in Fig. 4. At or about the middle of the plate an opening 8 is formed, which is connected by a longitudinal passage 9 with the opening 6. The dis-40 tance from one end of the opening 8 to the passage 9 is greater than the distance from the other end, the former being somewhat greater than the width of the hoop and the latter somewhat less. The end 10 adjacent 45 the opening 9 is also bent down slightly to

facilitate the attachment of the hoop. The looped ends of the hoop are indicated at 11.

In operation the end of the hoop is first bent to form a loop, which is then entered into the opening 6, the end 10 passing through 50 the loop and the hoop extending at an angle laterally, the free end of the loop being under the plate and the standing part above it. The bend of the loop is passed through the passage 9 into the opening 8 and around into 55 the long arm of the said opening until the edge of the hoop will pass the corner of the end 10, when it may be brought straight with the plate. Meanwhile the free end of the loop passes into the opening 6" over the arm 60 7, which operation is facilitated by the downward bend of the arm. Under pressure the free end of the loop is bound against the arm To attach the other end of the tie, a somewhat similar operation is performed. The 65 loop is caused to span the plate by bringing the main portion thereof up through the opening 9 into the long arm of the opening 8 to pass the end 10, whence it slides back and closes the passage 9, which latter effect is pro- 70 duced by the inclined edge 8° of the long arm of the opening 8.

What I claim is-

A bale-tie comprising a buckle-plate having a middle portion with an opening therein, 75 arms at each end separated from the middle portion by spaces open at one side, a longitudinal entering-passage connecting the opening with one of said spaces, and a hoop the free ends of which are looped down through 80 said opening and up through the spaces, resting upon the arms under the standing part of the hoop.

In testimony whereof I affix my signature in presence of two witnesses.

WM. T. JOHNSON.

Witnesses:

O. J. GEERS, H. L. ROGERS.