

(No Model.)

2 Sheets—Sheet 2.

G. A. WELD.
BALE TIE.

No. 377,092.

Patented Jan. 31, 1888.

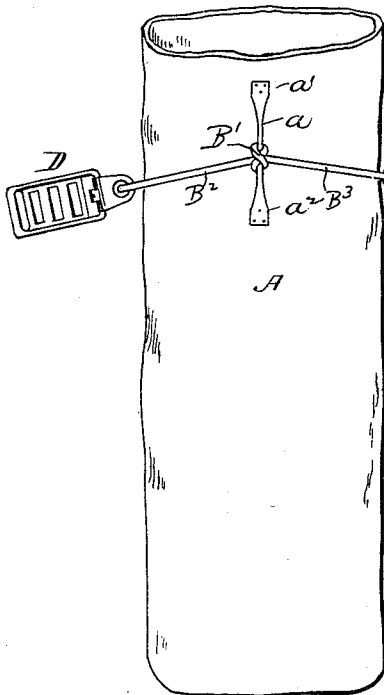


Fig. 10.

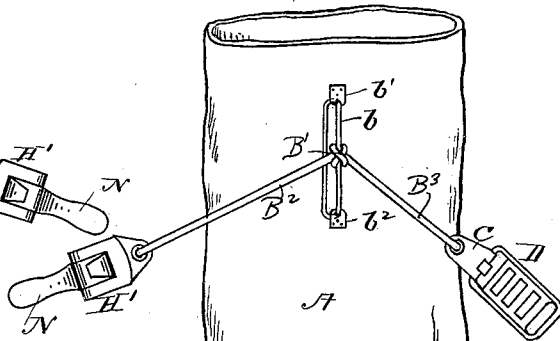


Fig. 11.

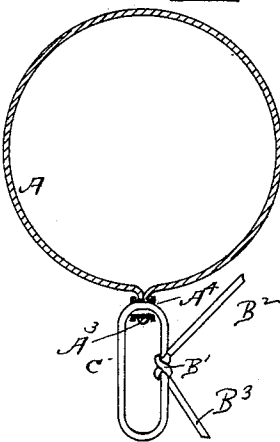


Fig. 12.

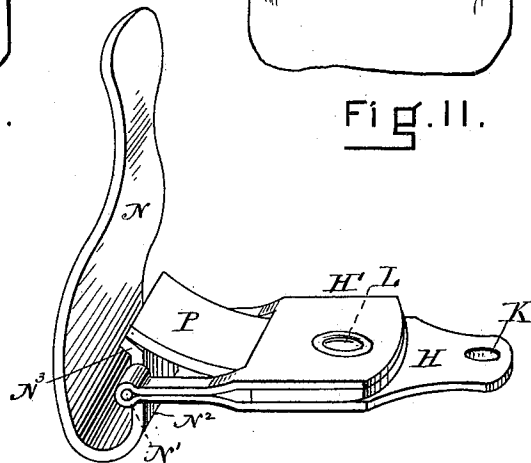


Fig. 13.

WITNESSES.

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GEORGE A. WELD, OF WINCHESTER, MASSACHUSETTS.

BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 377,092, dated January 31, 1888.

Application filed April 9, 1887. Serial No. 234,962. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. WELD, of Winchester, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Bale-Ties, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of my invention is to construct certain appendages which may be applied to bags of ordinary construction—by but slight changes in the bag—and be adapted to close up and secure the neck of the bag at the most desirable position. These appendages may also be used for securing bundles, &c. This object I attain by the mechanism shown in the accompanying drawings, in which—

Figure 1 is an elevation showing a bag open with my device attached. Fig. 2 is a drawing, partly in section and partly in elevation, showing the bag in section and the tying device in elevation. Fig. 3 is a longitudinal section, much enlarged, showing the construction of my bale-tie. Figs. 4, 5, 6, 7, 8, and 9 are drawings in detail to illustrate the construction of my bale-tie. Figs. 10 and 11 are elevations of bags, showing slight modifications of the mode of attaching the bale-tie to the bag. Fig. 12 is a horizontal section showing one eyelet inserted in a fold of the bag instead of directly through from outside to inside, as shown in Figs. 1 and 2; and Fig. 13 is an enlarged view in perspective, showing the exact construction of the hooking and clasp device of my bale-tie.

In the drawings, A, Figs. 1 and 2, represents a bag, in which two holes, A' A², are made at a short distance from each other, but both in the same vertical line, as indicated in the drawings. Through the openings A' A², I pass a cord, B, Fig. 1, which is tied at B', Figs. 1 and 2, so as to form a link, as shown in Fig. 2. The object of thus forming the cord B into a link or loop is to be enabled to raise or lower the tying-points—that is, the knot B'—and thus adjust it to that part of the neck of the bag that corresponds to the amount of the contents—that is, if the bag is full the knot B' may be raised up to the hole A', while if the bag is not full the knot B' may be lowered toward the hole A².

The mode of attaching the cord or strap B'

B² to the bag may be modified, first, as shown in Fig. 10—that is, by tying it around a bridge-piece, *a*, which is made fast to the bag, as shown at *a'* *a*²; second, as shown in Fig. 11, by attaching it to a loop-piece, *b*, which is connected by ear-pieces *b'* *b*² to the bag; and, third, as shown in Fig. 12, by attaching it to a loop-piece, *c*, which may pass through eyelets A⁴, inserted in a fold, A³, of the bag. If desirable, the cord B' B² may form the loop *b* or *c* of Figs. 11 and 12.

The ends B² B³ of the cord may be passed directly around the neck of the bag and tied; but for convenience I have devised a mechanism for connecting the ends of the cord in a manner that admits of almost instantaneous connection or disconnection, which I will now proceed to describe.

Referring to Fig. 3, C is a loop, of plate metal, attached to the end B² of the cord, and also embracing the last bar C' of the barred link D, which is provided with a series of openings, E E, for receiving the spring-hook N of the clasp H'. (See Figs. 1, 2, and 3.) The clasp H' is attached to the end B³ of the cord at K, Figs. 1, 2, and 3. The metallic loop C is formed by bending up a plate of metal, first shaped as shown in Fig. 4. This plate has holes C³ C³, which coincide when the loop is formed, and together serve as a fastening-place for the end B² of the cord, which at this point is made into a knot, C⁴, Fig. 3. The opening S', Fig. 4, serves (when the loop is formed and connected to the first bar C' of the barred link D) to receive the small stop S on the bar C', which admits of the barred link D being turned back a limited distance, as indicated by dotted lines in Fig. 3.

The clasp, Figs. 1, 2, 3, and 13, consist of a plate made in the form indicated in Fig. 7. This plate H has two holes, L L, which receive a rivet when it is folded. (See Fig. 13.) This plate H, when folded, embraces the spring-piece P, Fig. 9, which has a rivet-hole, *h*, through which the rivet that passes through the holes L L also passes, and thus the spring-piece is held in place by the same rivet (at L, Figs. 3 and 13) that holds the folds of the plate H together.

The hook N, Figs. 1, 2, 3, and 13, is first formed of a flat plate, as shown at Fig. 6, and

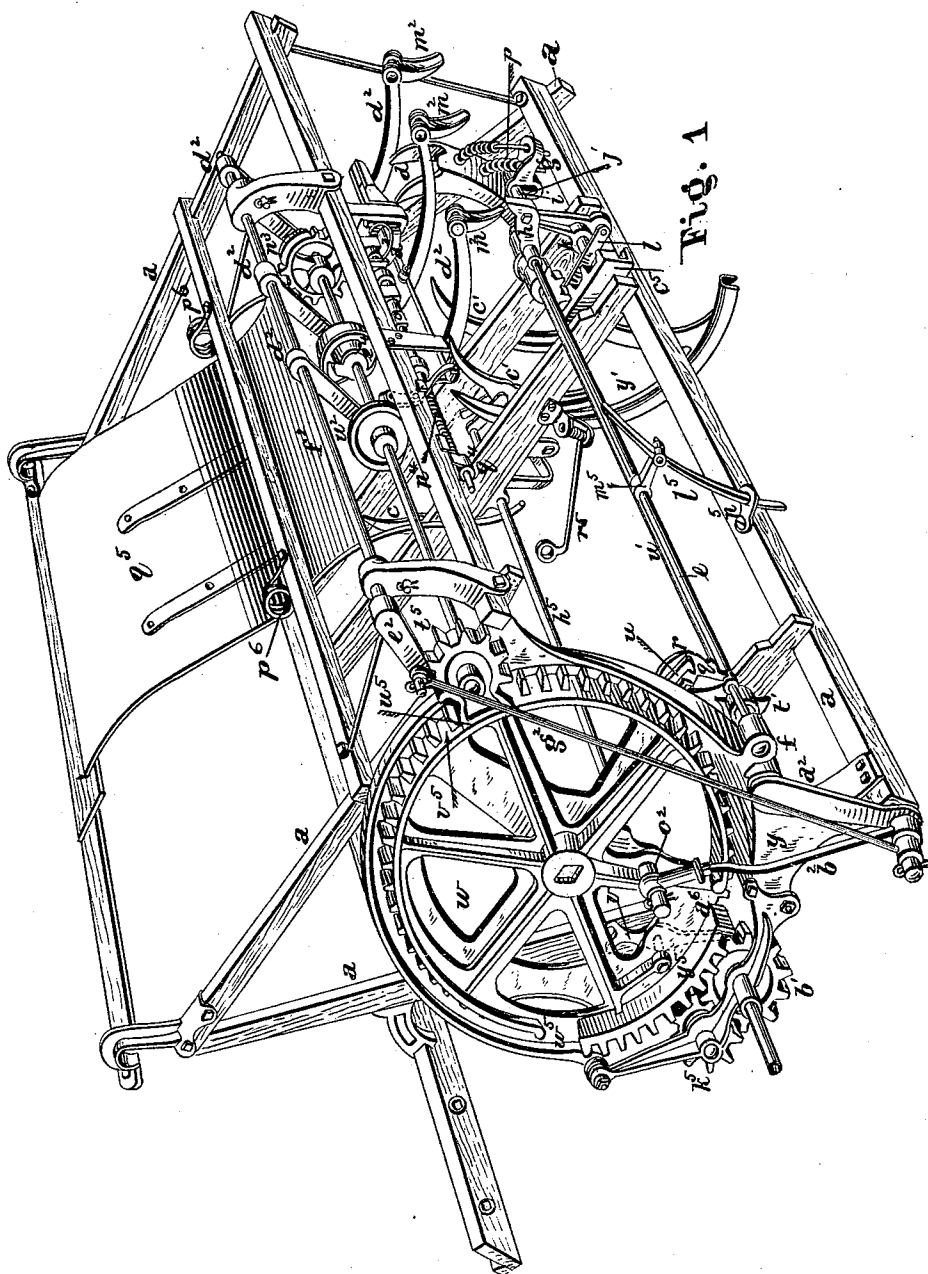
(Model.)

8 Sheets—Sheet 1.

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GRAIN BINDER.

No. 377,093.

Patented Jan. 31, 1888.



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