J. Y. BLOOMINGDALE & J. WYNKOOP.

Bale-Tie.

No. 204,409. Patented May 28, 1878.

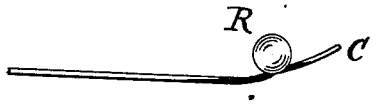


Fig. 1.



Fig. 2.

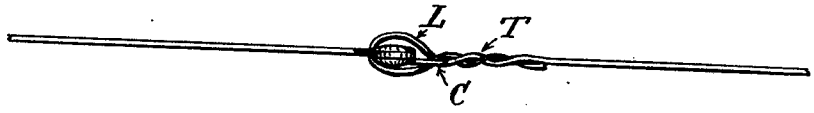


Fig. 3.



Fig. 4.

Witnesses:
Alex. Scott
Wm. M. Duncan

Inventors:
Joel Y. Bloomingdale,
Jacob Wynkoop.
By their Attorney
Thos. Houghton.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JACOB WYNKOOP AND JOEL Y. BLOOMINGDALE, OF NEW SALEM, N. Y.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **204,409**, dated May 28, 1878; application filed April 30, 1878.

To all whom it may concern:

Be it known that we, JACOB WYNKOOP and JOEL Y. BLOOMINGDALE, of New Salem, in the county of Albany and State of New York, have invented a new and useful Improvement in Bale-Ties, which improvement is fully set forth in the accompanying drawing and the following specification.

In the accompanying drawing similar letters of reference indicate corresponding parts in the several figures.

Figure 1 is a side elevation of one end of a bale-tie illustrating my invention. Fig. 2 is a top view of the same. Fig. 3 is a top view of the two ends of the bale-tie interlocked before the expansive pressure of the hay has flattened the loop end. Fig. 4 is a side elevation of the locked ends of the tie.

Heretofore the hooking end of bale-ties have been made by doubling the end of the wire and then twisting it into various forms to make one or more projections, catches, or hooks; or a single wire has had an eye formed near the end, and a pin or bolt thrust through the eye when passed up into the loop of the opposite end of the tie, the end of the wire being extended beyond the loop and twisted or hooked around the same. Either of these modes of construction are objectionable in some respects.

In our invention we form a loop, L, on one end of the wire composing the bale-tie by bending the wire back upon itself and twisting the same, as shown at T, in the usual well-known manner. The locking end of the tie is made by forming a small round eye near the other end of the wire, and inserting and riveting therein a rivet. The rivet R holds the eye securely, thus forming a solid, reliable catch or head, to be inserted within the loop L to lock the tie.

To assist the riveted eye E to retain its position when interlocked within loop L, we extend the end of the wire beyond the rivet R a sufficient length to rest upon the loop, as shown at C in Figs. 1 to 4.

The eye E may be formed of one or more coils of wire; but we find one coil sufficient when riveted. The rivet cannot drop out, but holds the coil forming the eye E securely together.

This tie requires no expensive or special tools for its construction, and it can be made easily by farmers or their unskilled mechanical help.

It will be seen from the above description that its mode of application is simple. While the bale of hay or other article of commerce is in the press the wire tie encircles it, and is locked by passing the end C of the wire and the riveted eye E through the loop L, either from the top or underneath the loop, and then by releasing the bale from the press the wire will be drawn tightly around the goods.

The expansion of the bale when released from pressure will more or less elongate and flatten the loop L, thus diminishing any tendency of the riveted eye E to slip out of its place.

The free end C of the tie may, if desired, be bent a half-turn backward, as indicated by dotted line *y*, Fig. 4, thus forming a combined riveted eye and hook, the hook or guard *y* preventing the loop L from unshipping from the riveted eye E.

Having described our invention and its mode of application in such clear and exact terms that those skilled in the art to which it appertains may make and use the same, what we claim as new, and desire to secure by Letters Patent, is—

1. A bale-tie constructed with a riveted eye, E, and free end C, in combination with loop L, as herein shown.

2. In a bale-tie, the riveted eye E and guard *y*, combined with loop L, as herein specified.

JACOB WYNKOOP.
JOEL Y. BLOOMINGDALE.

Witnesses:
J. M. ERWIN,
JOHN H. HALLENBEK.