(No Model.)

J. W. GRISWOLD.

BALE TIE.

No. 418,457. Patented Dec. 31, 1889.

Fig. 1.

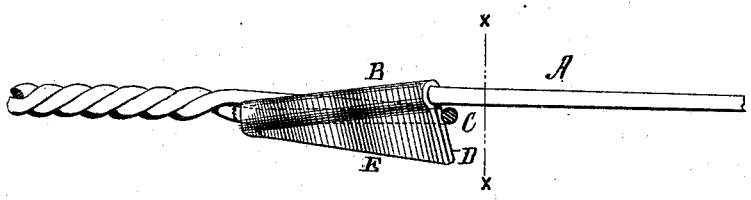


Fig. 2.

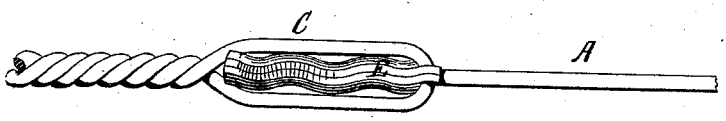
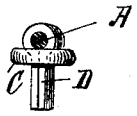


Fig. 3.



WITNESSES:
Gustave Dieterich
M Bosch

INVENTOR
John Wool Griswoed
BY Park Benjamin
His ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN WOOL GRISWOLD, OF TROY, NEW YORK.

BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 418,457, dated December 31, 1889.

Application filed April 16, 1889. Serial No. 307,457. (No model.)

To all whom it may concern:

Be it known that I, JOHN WOOL GRISWOLD, of Troy, New York, have invented a new and useful Improvement in Bale-Ties, of which the following is a specification.

My invention relates to a new form of tie, such as is used for fastening the ends of the wire bands now commonly used upon hay-bales, &c.; and it consists in the construction of the tie as hereinafter more particularly set forth.

In the accompanying drawings, Figure 1 is a side view of my improved tie, Fig. 2 is a plan view, and Fig. 3 a section on the line X X of Fig. 1.

Similar letters of reference indicate like parts.

A represents the wire which forms the band. B is a hook secured upon one end of said band, and C is an eye formed upon the other end by twisting in the usual manner. The hook B is a plate of wrought, struck, or malleable iron, which is bent, doubled, or folded over the end of the band, so that its faces come in close contact. The coinciding transverse edges D of said plate form the shoulder with which the eye C engages, as shown in Figs. 1 and 2. The coinciding longitudinal edges E of said plate are inclined or beveled toward the end of the band, so as to facilitate insertion of the hook within the eye. The end of the band, which is inclosed in the hook, is preferably slightly bent, so that the edges D stand at an acute angle with the band.

The hook B is corrugated transversely and the portion of the band inclosed in the hook is similarly corrugated, so that the corrugations of the band coincide with those of the hook. The band, therefore, cannot be pulled out of the hook.

In practice, I first apply the hook to the band by any suitable means, and then corrugate both hook and band simultaneously. When the hook is placed in the eye, the extremity of the hook rests and has a bearing upon the wire forming the eye on the side thereof opposite to that from which the hook is inserted. When strain is applied to the band, the eye is jammed into the angle of the hook, and at the same time the extremity of the hook is forced against the body of the wire forming the loop. It will be observed that the strain tending to pull the wire out of the hook is not exerted in a straight line because of the bending of the end of the wire which is inclosed in the hook, and that, therefore, the tendency of the strain is first to straighten the band. This effect, however, is prevented by the bearing of the end of the hook upon the band above described. The fastening, therefore, is one of great strength, while its simplicity of construction allows of its cheap and easy manufacture.

I claim—

1. The combination of a wire band and a plate of wrought, struck, or malleable metal doubled over and compressed upon the body of said band, the body of said plate and the portion of the band closed therein being corrugated.

2. The combination of a wire band having one end bent or inclined and having corrugations formed upon said bent portion, and a similarly-corrugated plate of wrought, struck, or malleable metal doubled over said corrugated portion, the opposing inner faces of the protruding parts of said plate being in close contact, substantially as described.

3. The combination, in a tie or fastening, of the loop or eye C upon one of the parts to be connected and the corrugated hook B upon the opposite part, the said eye engaging with the shoulder D of said hook, and the extremity of the hook resting and having a bearing upon the wire forming the loop, substantially as described.

4. The combination of the band A, having a bent or inclined and corrugated end portion, the similarly-corrugated hook B, doubled over said end portion and having the shoulder D and inclined edges E, and the loop C, substantially as described.

JNO. WOOL GRISWOLD.

Witnesses:
DAVID COWEE, Jr.,
JAMES A. HISLOP.