

(No Model.)

G. NICHOLSON.

2 Sheets—Sheet 1.

ADJUSTABLE BALE BAND.

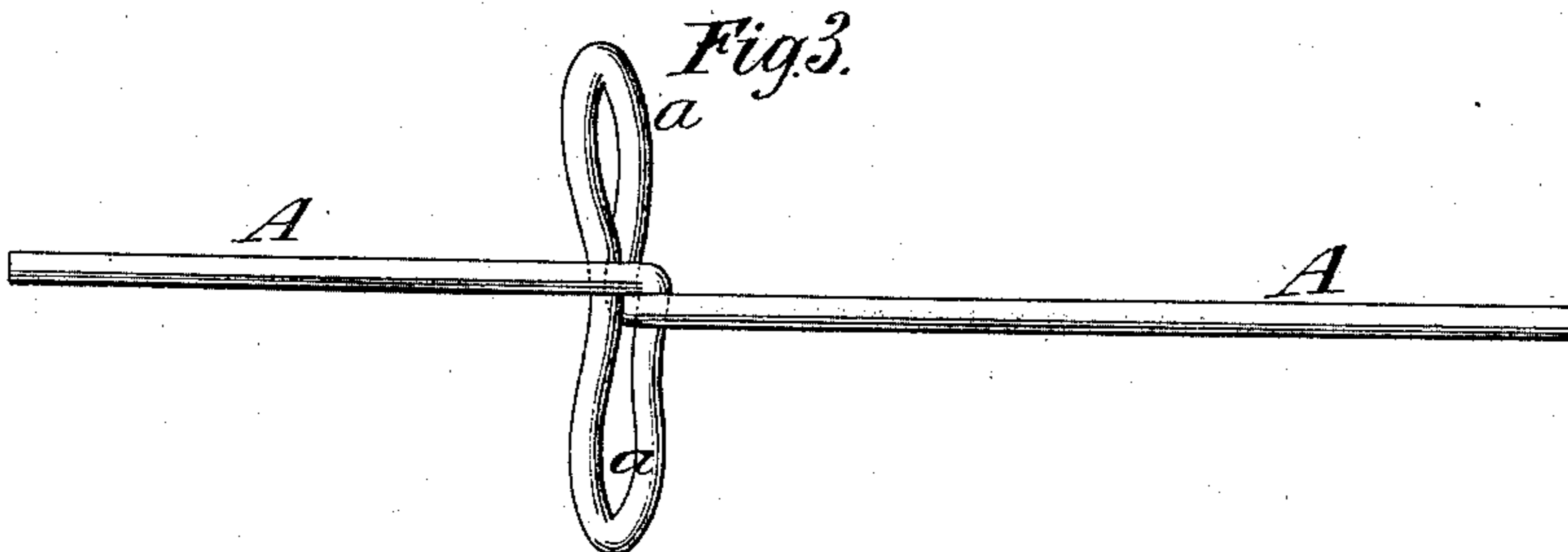
No. 313,014.

Patented Feb. 24, 1885.

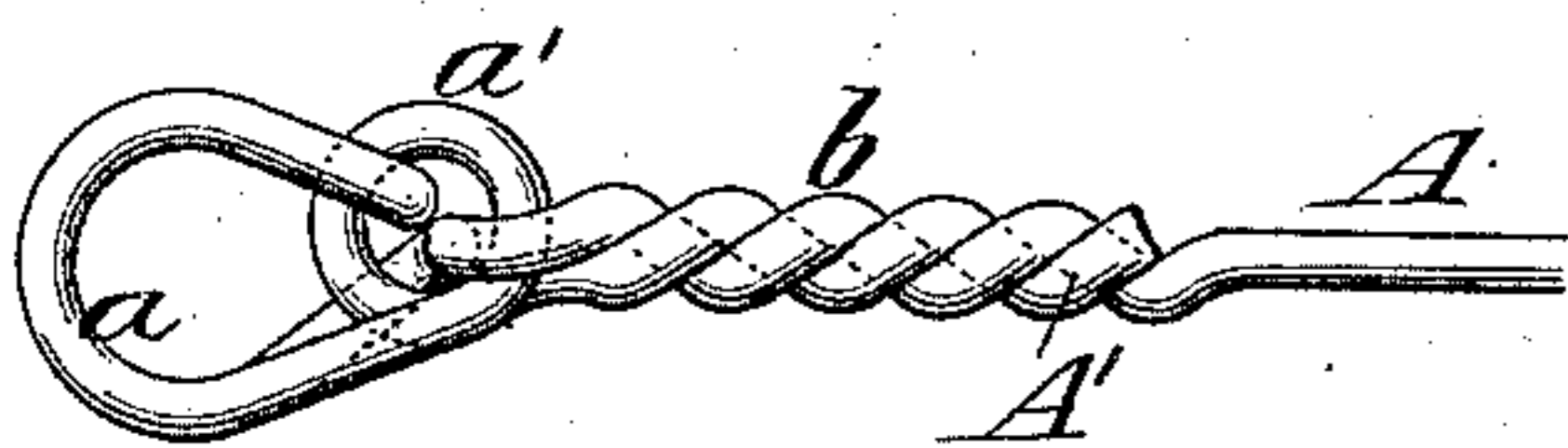
*Fig. 1.*



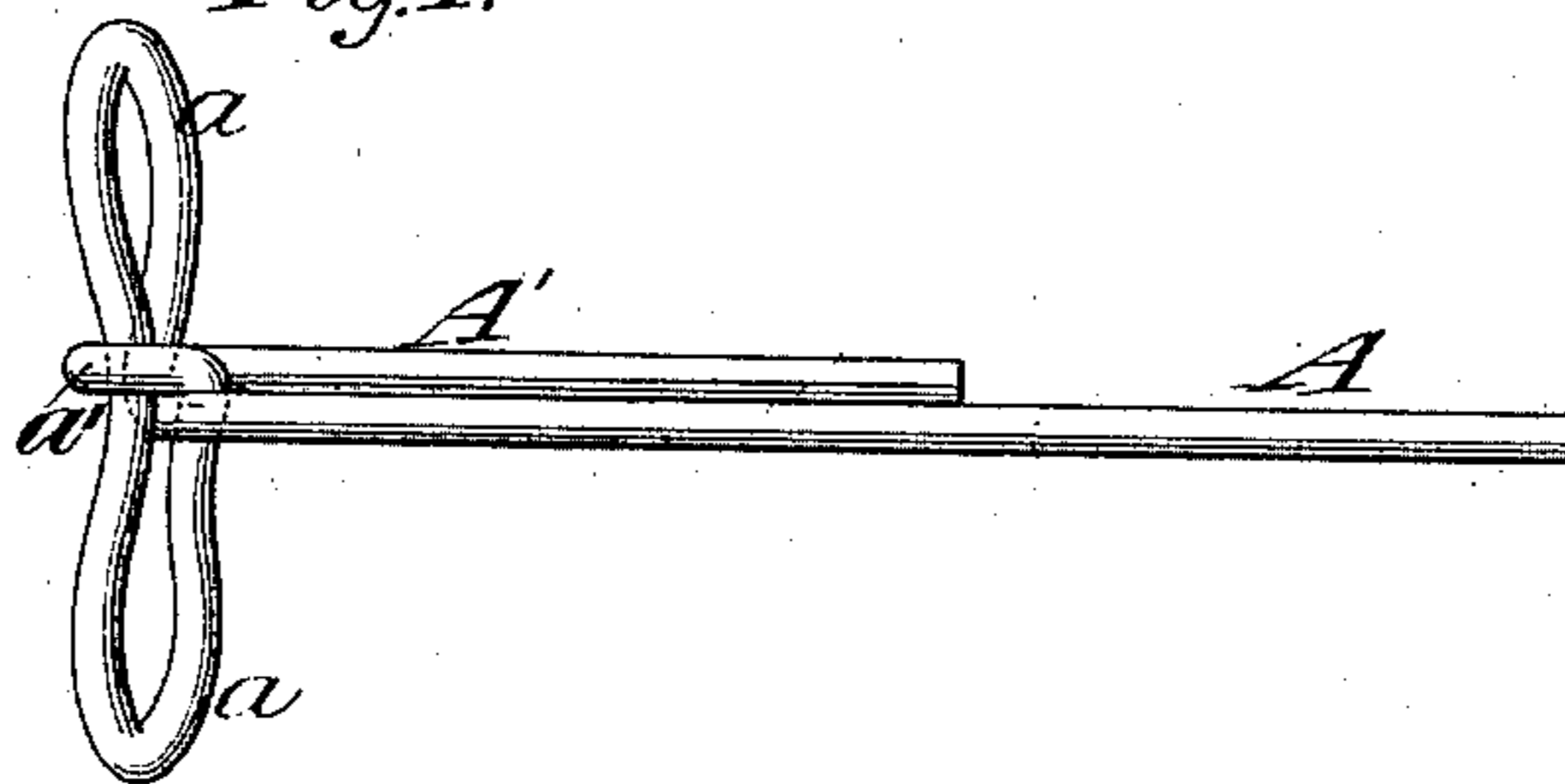
*Fig. 3.*



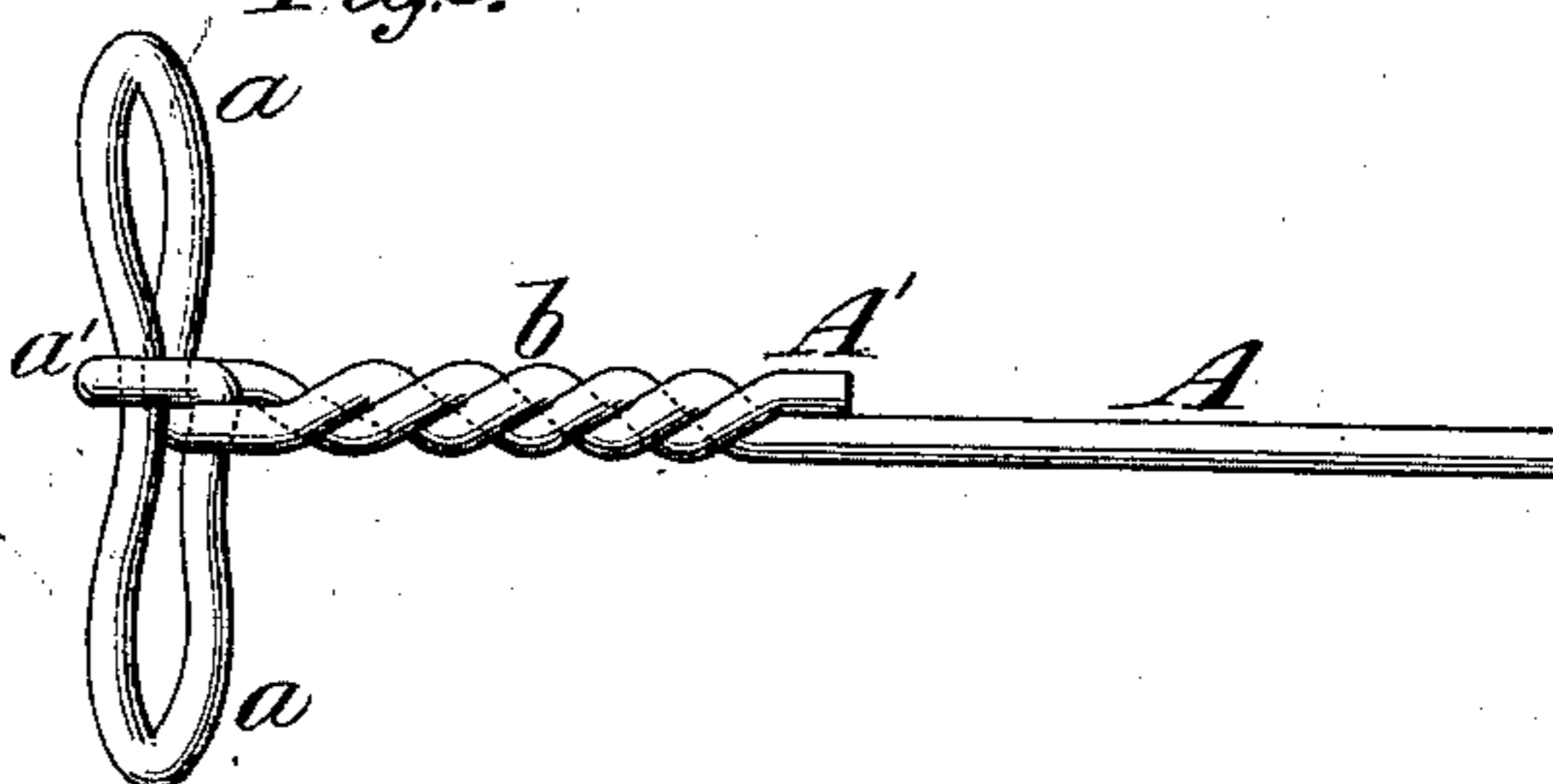
*Fig. 2.*



*Fig. 4.*



*Fig. 5.*



Witnesses;

C. C. Perkins.  
F. A. Gorman

Inventor;

Gerrard Nicholson  
by his Attys.  
Brown & Hall

(No Model.)

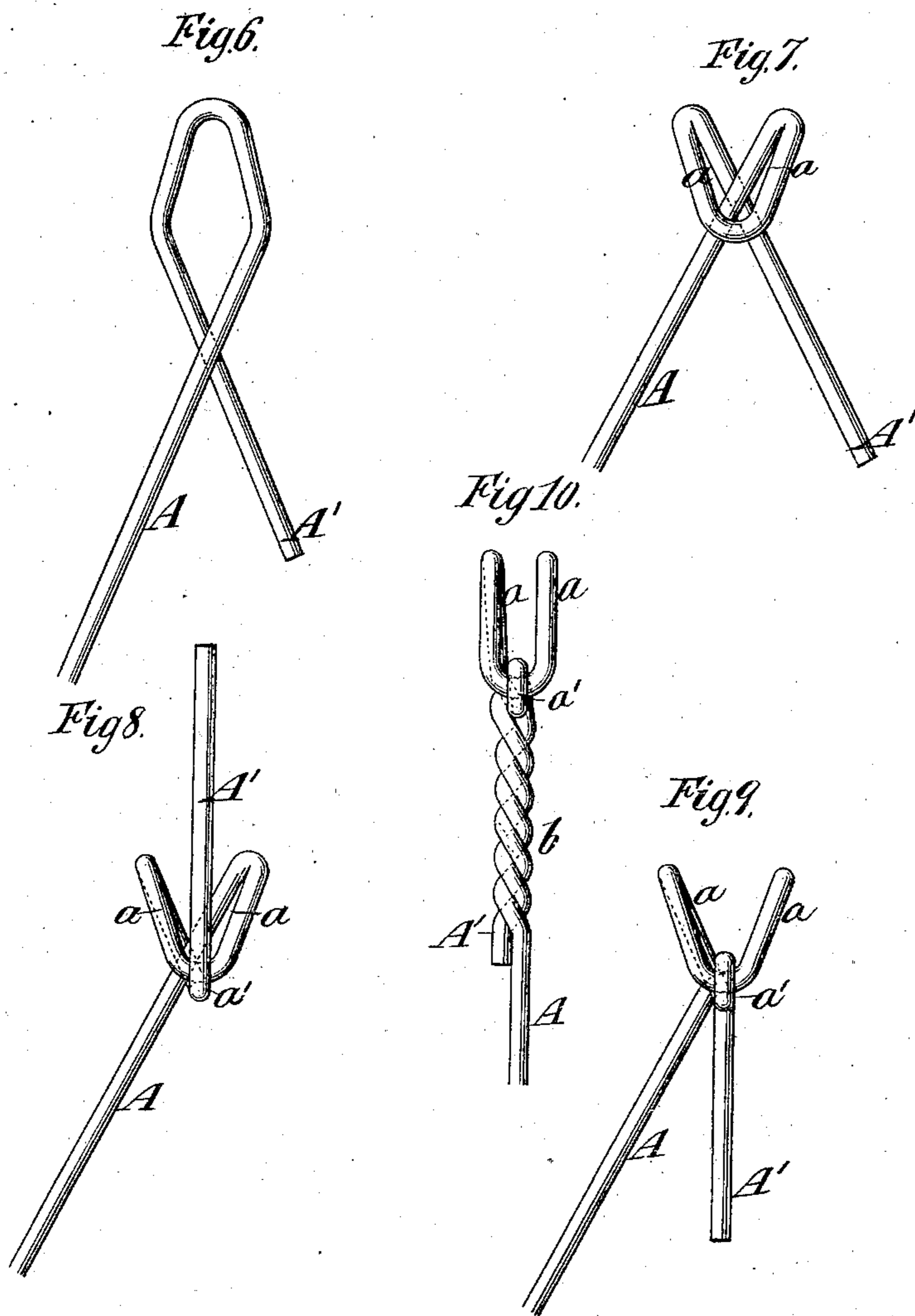
G. NICHOLSON.

2 Sheets—Sheet 2.

ADJUSTABLE BALE BAND.

No. 313,014.

Patented Feb. 24, 1885.



Witnesses;

C. C. Perkins.  
F. A. Keenan

Inventor;

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by his Attys.  
Brown & Hall

# UNITED STATES PATENT OFFICE.

GRANVILLE NICHOLSON, OF NEW YORK, N. Y., ASSIGNOR TO JOHN L. CLARK, OF SAME PLACE.

## ADJUSTABLE BALE-BAND.

SPECIFICATION forming part of Letters Patent No. 313,014, dated February 24, 1885.

Application filed January 10, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, GRANVILLE NICHOLSON, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Adjustable Bale-Bands, of which the following is a specification.

My invention relates to those wire bale ties or bands which have a head comprising an eye, through which the plain tail end of the tie or band is inserted in applying the tie or band to a bale, the tail end being then bent or doubled back and twisted around the wire in order to securely connect the two ends of the band and properly confine the bale of goods. Such bands are termed "adjustable" in that the tail or plain end of the band may be passed through the eye to any extent desired to confine a large or small bale, and then bent and twisted to secure the bale. Where the eye in the head of the tie or band has but a single portion of wire throughout its circumference, the bend formed in the tail end of the band when passed through the eye and bent back and twisted is very sharp, and the wire is liable to break at the bend.

Various means have been devised to secure more stock in the eye at the head of the band, in order to produce a broader bend in the tail end, which latter will then not be likely to break; and my invention consists in a bale-band having at its head an eye of a novel construction, hereinafter described, whereby the desired results are attained in a simple and practicable manner.

In the accompanying drawings, Figures 1 and 2 are respectively an edge and side view of the head of a bale tie or band having an eye which embodies my invention. Figs. 3, 4, and 5 represent the head portion of the bale-band in the several stages in the operation of forming the eye by one method, and Figs. 6, 7, 8, 9, and 10 represent the head portion of the band in the operation of forming the eye by another method.

Similar letters of reference designate corresponding parts in all the figures.

In order that the construction of the head of the tie or band may be clearly understood, I will first refer to Figs. 3, 4, and 5, which represent the head in the several stages of the operation whereby it is formed by one method.

A designates the piece of wire forming the band. It may be of iron wire; but steel is now most commonly used for the purpose. I first bend the wire near one end to the form shown in Fig. 3, thereby producing two loops, *a*, which project in opposite directions from the line of the wire, and are opposite each other, and joined at their root or inner ends. I then bend the portion *A'* of wire which projects beyond the loops *a* around them at their root, so that it by its bend *a'* will encircle the root of the loops and lie parallel with the main wire *A*, as shown in Fig. 4. I then twist together the main wire *A* and the end portion *A'*, as shown at *b*, Fig. 5, and thereby cause the bend *a'* to tightly bind the root of the loops *a a*. All that now remains to complete the head is to bend the loops *a a* into positions parallel with each other, as shown in Figs. 1 and 2, thereby forming an eye composed of the two loops. I may produce the same kind of an eye by a different method, which will be understood from Figs. 6, 7, 8, 9, and 10. I first take the wire *A* and bend or double it into the form shown in Fig. 6, and I then again fold or bend this doubled portion into the position shown in Fig. 7, thereby forming two rudimentary loops, *a a*. The end portion, *A'*, of the wire is then bent around and between the loops *a a* at their connection or root, as shown in Figs. 8 and 9, and the bend *a'*, thus formed, there confines the loops. The main portion *A* of the wire is then brought into a position parallel with the end portion, *A'*, and the two are twisted together as shown at *b*, Fig. 10, after which the two loops *a* are brought into positions parallel, or nearly so, with each other, as shown in Fig. 10.

The eye, whether made in either of the two ways herein described, is composed of two approximately-parallel loops, connected at their inner ends, and there confined by the end portion of the wire, which is bent around and between them and intertwisted with the main portion of the wire.

In applying the band the tail end of the wire, which is plain, is inserted through the two loops *a* as through a single eye, and is then bent back and twisted around the main portion of the band. The eye thus formed is composed of two portions of wire, and when the

tail end of the wire is secured therein it will have a long or broad bend, which will obviate the danger of its breaking.

Instead of being truly parallel, as shown in Fig. 1, the loops *aa* may be bent more inward, as shown by dotted lines, and the strain on the band will cause them to assume this position when in use. The loops, however, always extend in the same direction, or are approximately parallel in the completed band.

What I claim as my invention, and desire to secure by Letters Patent, is—

A wire bale-band having at the head an eye composed of two approximately-parallel loops,

connected at their inner ends or root, and there confined by the end portion of the wire, which is bent around and between them and inter-twisted with the main portion of the wire band, substantially as and for the purpose herein described.

In testimony that I claim the foregoing I hereto sign my name in the presence of two subscribing witnesses.

GRANVILLE NICHOLSON.

Witnesses:

FREDK. HAYNES,  
MATTHEW POLLOCK.