

(No Model.)

J. J. BRINKERHOFF.

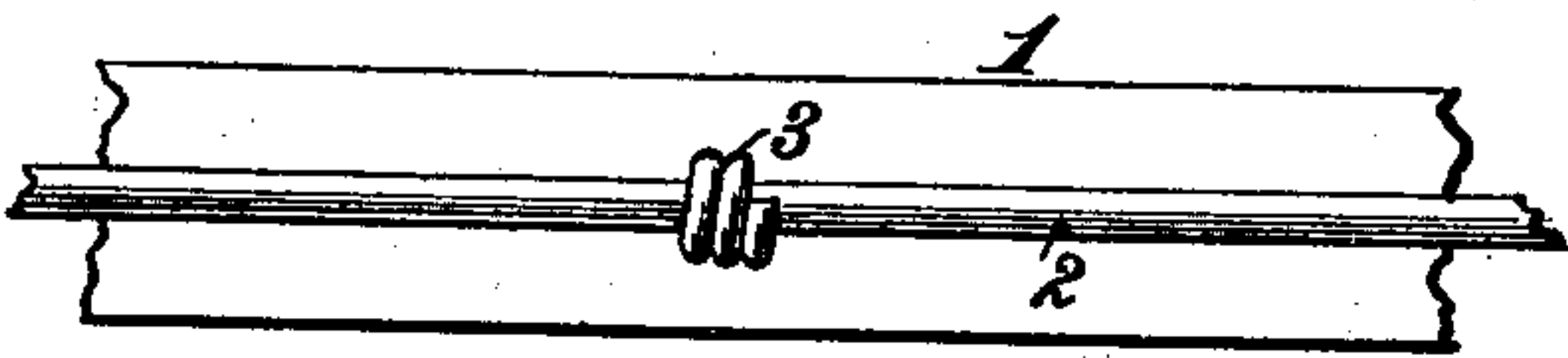
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METALLIC FENCING.

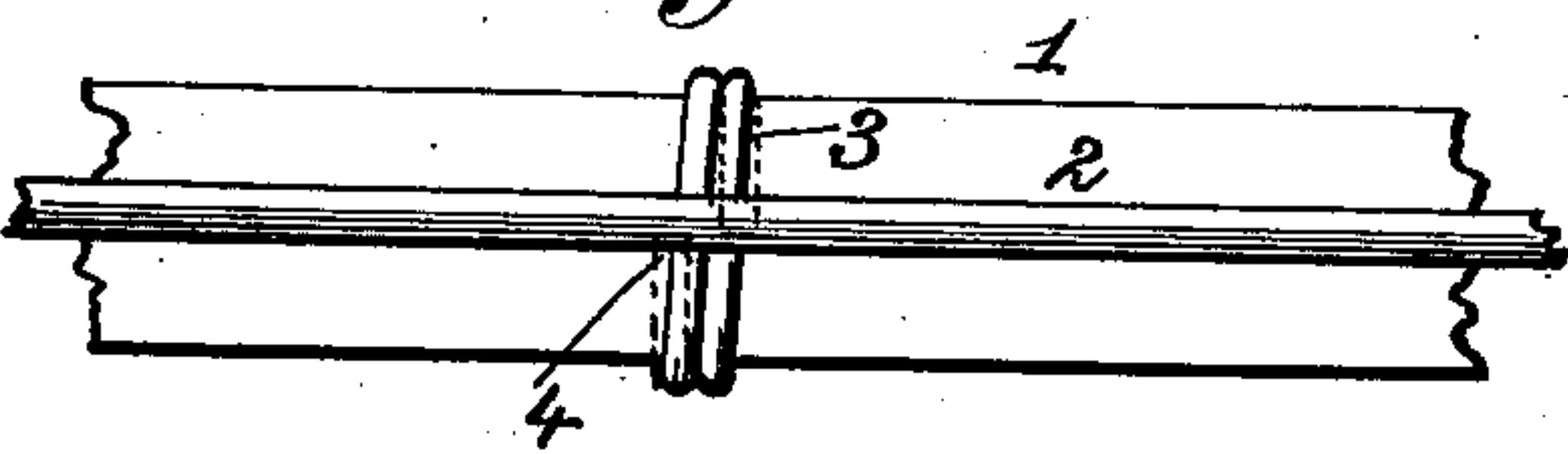
No. 324,221.

Patented Aug. 11, 1885.

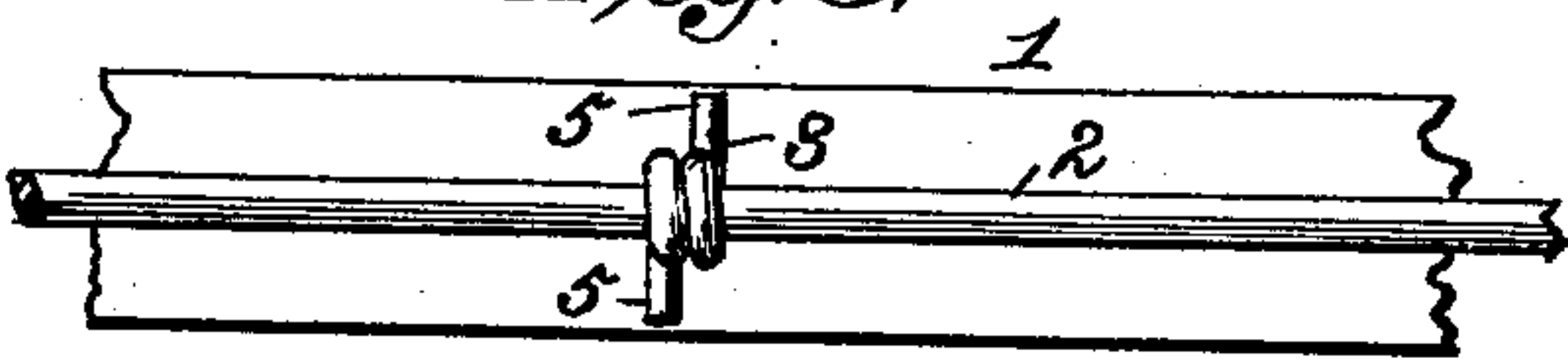
*Fig. 1*



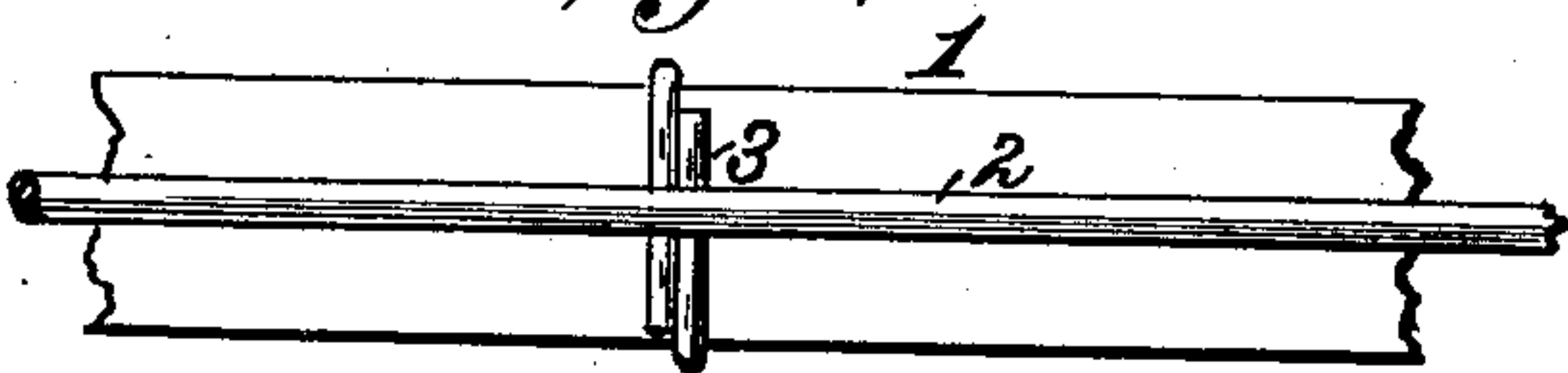
*Fig. 2.*



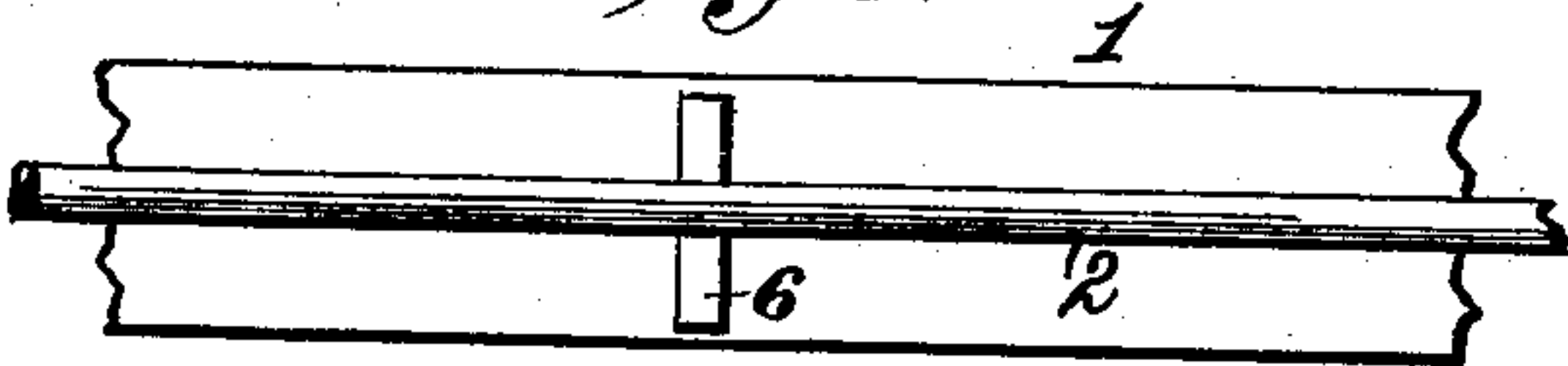
*Fig. 3.*



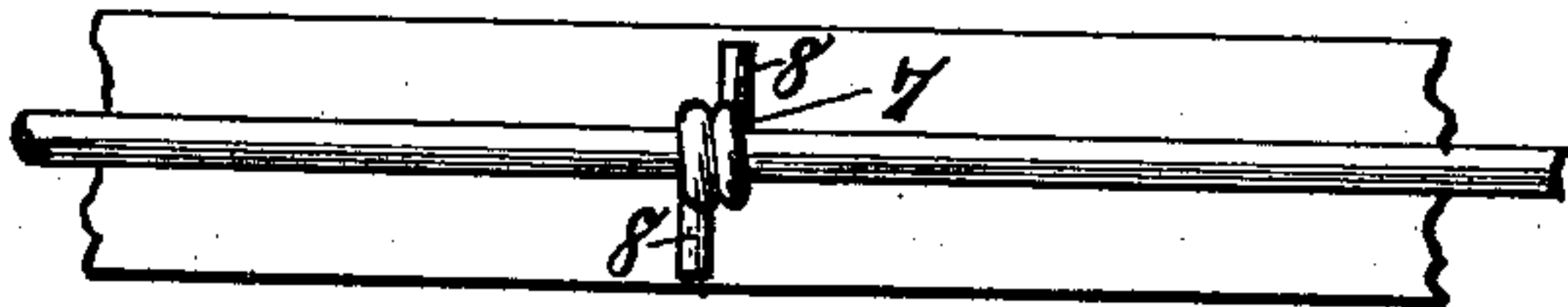
*Fig. 4.*



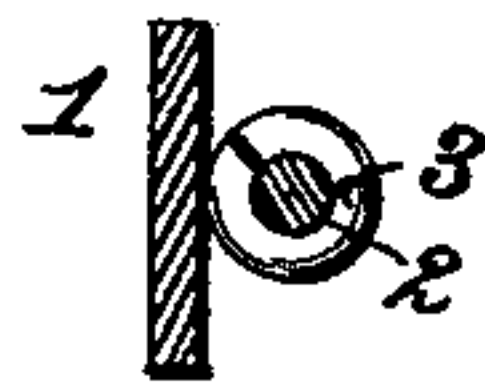
*Fig. 5.*



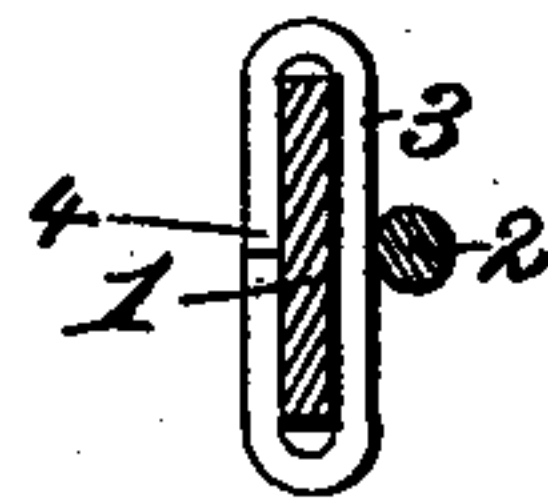
*Fig. 6.*



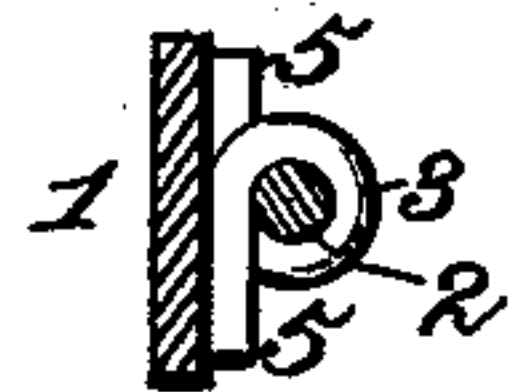
*Fig. 1<sup>a</sup>*



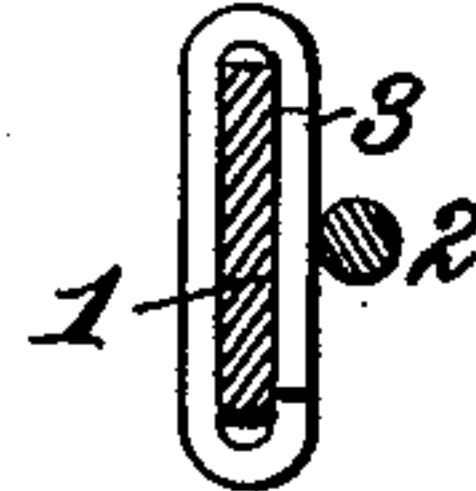
*Fig. 2<sup>a</sup>*



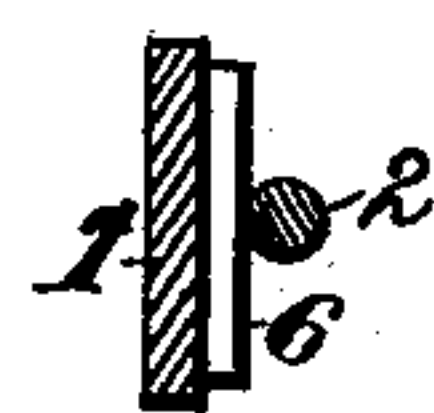
*Fig. 3<sup>a</sup>*



*Fig. 4<sup>a</sup>*



*Fig. 5<sup>a</sup>*



*Fig. 6<sup>a</sup>*



Witnesses.

*Robert Everett.*

*George W. Red*

Inventor.

*John J. Brinkerhoff.*

*By James L. Norris.*

*Atty.*

(No Model.)

3 Sheets—Sheet 2.

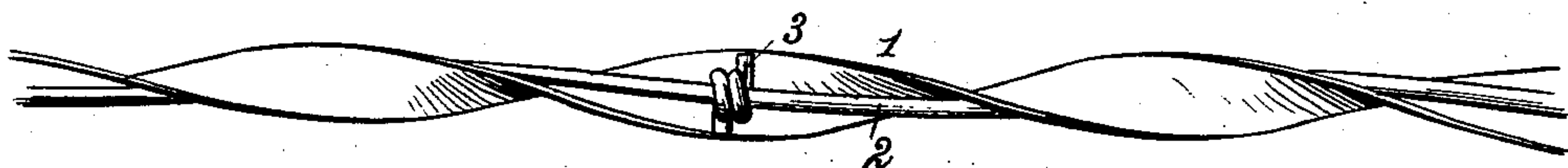
J. J. BRINKERHOFF.

METALLIC FENCING.

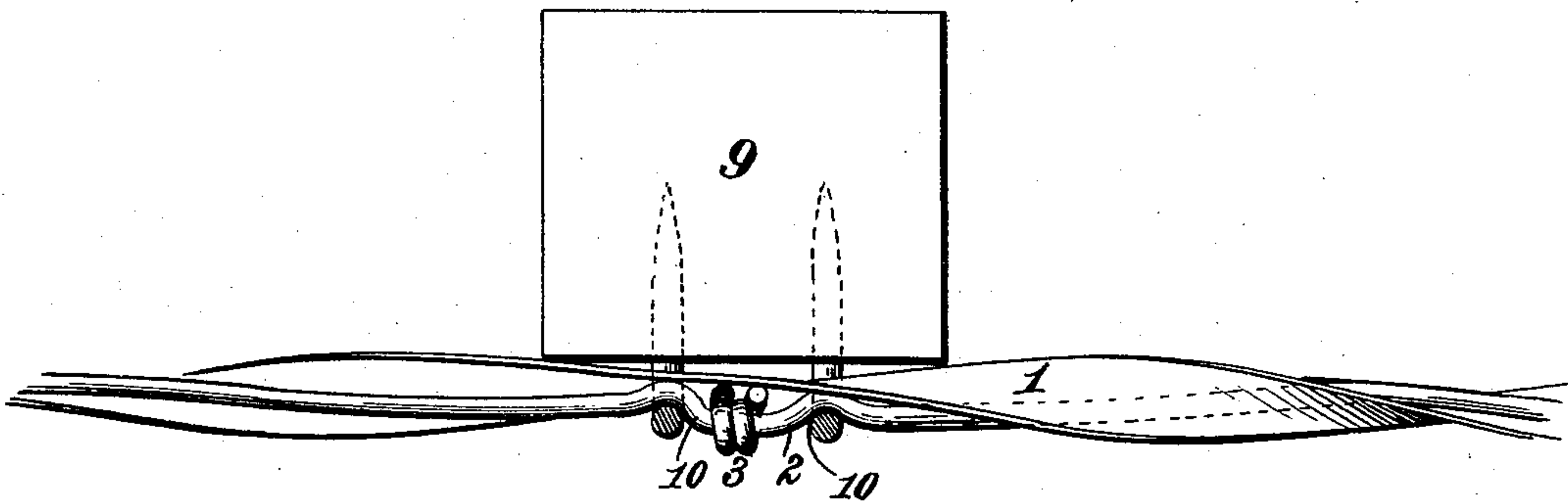
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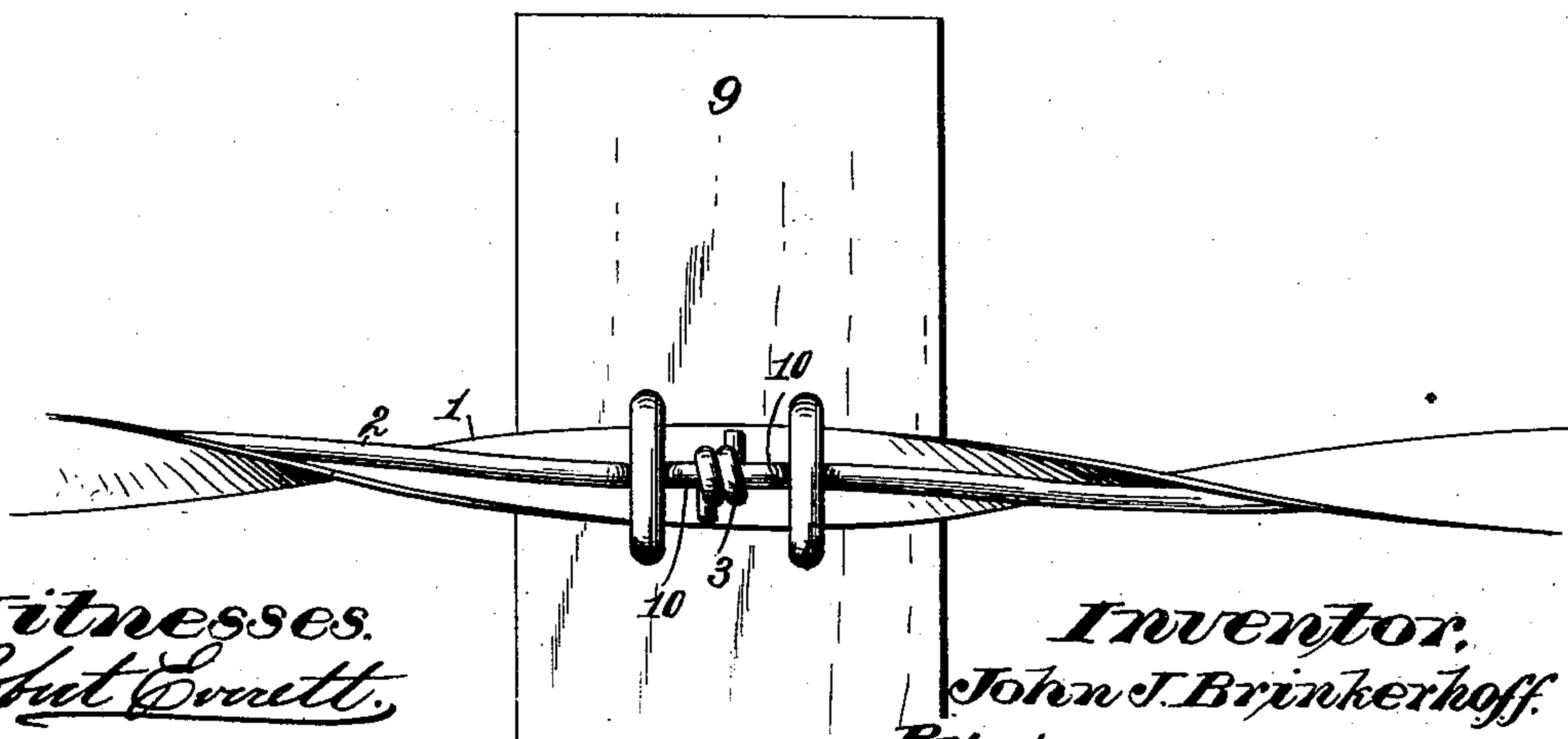
*Fig. 7.*



*Fig. 8.*



*Fig. 9.*



*Witnesses.*

*Robert Everett.*

*George W. Reed.*

*Inventor.*

*John J. Brinkerhoff.*

*By*

*James L. Norris.*

*Atty.*

(No Model.)

3 Sheets—Sheet 3

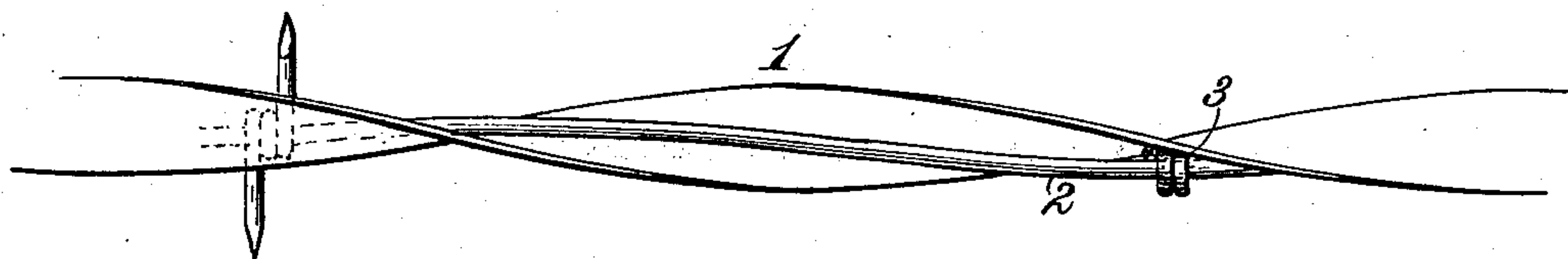
J. J. BRINKERHOFF.

METALLIC FENCING.

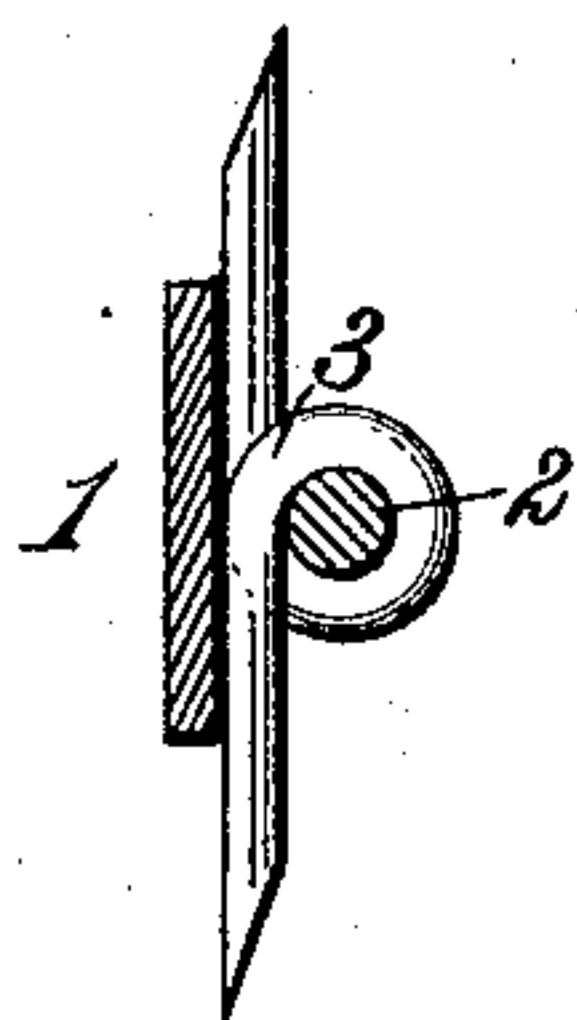
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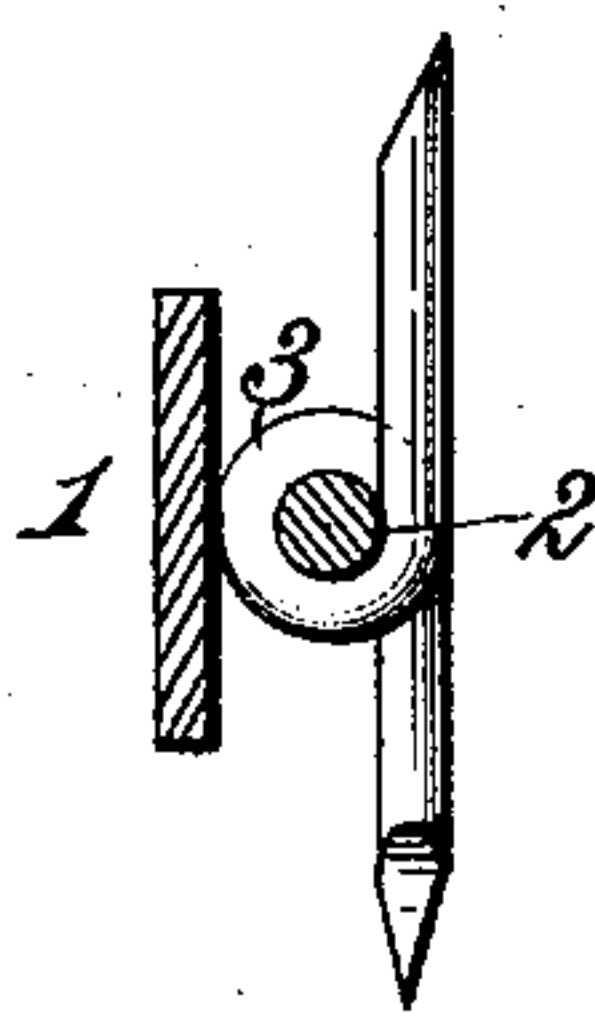
*Fig. 10.*



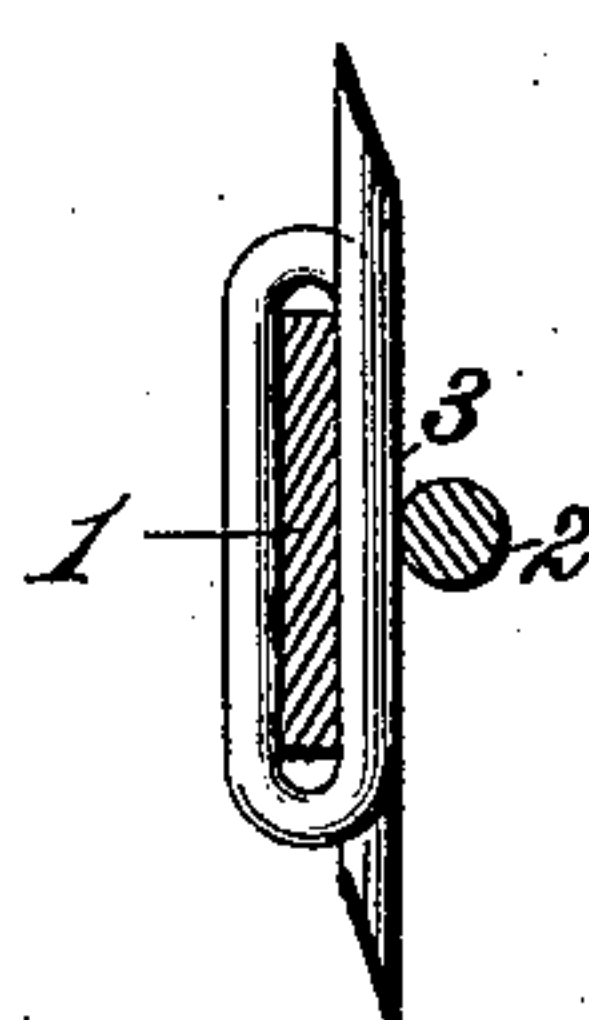
*Fig. 10<sup>a</sup>.*



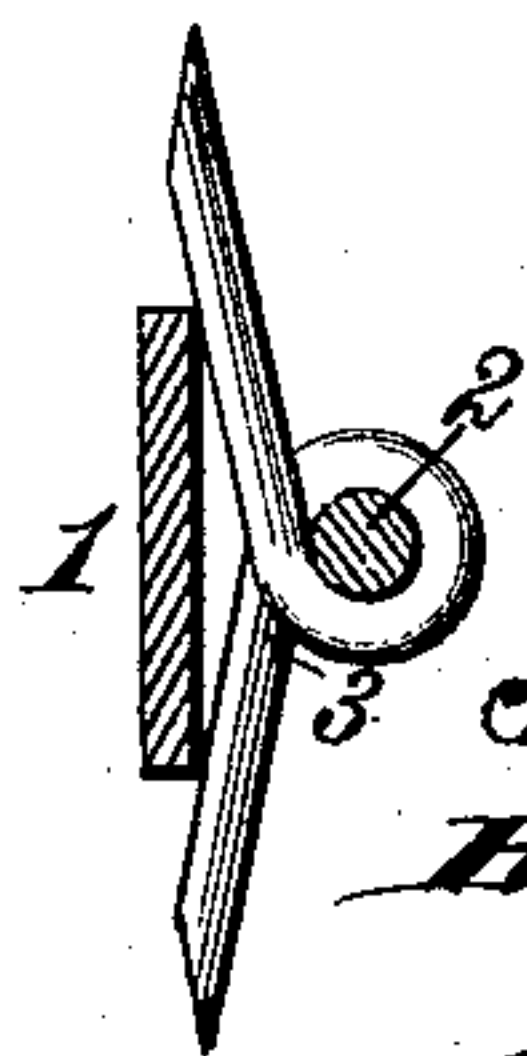
*Fig. 10<sup>b</sup>.*



*Fig. 10<sup>c</sup>.*



*Fig. 10<sup>d</sup>.*



Witnesses.

*Robert Everett*

*George W. Rea*

Inventor.

*John J. Brinkerhoff*

By

*James L. Norris*

*Atty*



# UNITED STATES PATENT OFFICE.

JOHN J. BRINKERHOFF, OF AUBURN, NEW YORK.

## METALLIC FENCING.

SPECIFICATION forming part of Letters Patent No. 324,221, dated August 11, 1885.

Application filed August 12, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. BRINKERHOFF, a citizen of the United States, residing at Auburn, New York, have invented new and useful Improvements in Metallic Fencing, of which the following is a specification.

My invention relates to improvements in metallic fencing. The purpose of my invention is, first, to provide a construction whereby the fencing may be stapled to the supporting-posts without injury to the flat metal strip, and in such a manner as to effectually secure the fencing against all longitudinal displacement, while at the same time it may be quickly and easily removed or detached from the posts without marring or injuring either it or the fastening-staples; second, to impart additional elasticity and strength to the fencing, to enable it to withstand the contraction and expansion caused by changes in temperature, to resist undue strain, and retain its taut and rigid position; third, to provide means for more nearly equalizing the length of the flat metal strip and the wire or strand combined therewith.

To these ends my invention consists in the combination, with a flat metal strip, of a wire lying thereon, and raised at suitable intervals out of contact therewith by means of an interposed body or device of any suitable character, whereby (the strip and wire being twisted simultaneously, causing the wire to follow and substantially lie in the convolutions of the strip) the length of the wire and the strip is more nearly equalized, and means provided so that the fencing may be firmly stapled to the posts without injury to the strip, and the same removed or detached from the posts with a common tool without marring or injuring the strip or the fastening-staples, and an increased degree of elasticity is imparted to the fencing. This fencing may be provided with barbs in any desired manner. This may be accomplished by extending the ends of the interposed body or device to a suitable distance and forming their extremities into barbs. The flat metal strip may be ribbed or corrugated.

Referring to the drawings, Figure 1 is a view of a section of fencing, illustrating my

invention and showing the wire raised off the strip by a coil upon the former. Fig. 1<sup>a</sup> is a cross-section of Fig. 1. Fig. 2 is a similar view showing the interposed body or device mounted upon the strip. Fig. 2<sup>a</sup> is a transverse section of Fig. 2. Fig. 3 is a similar view showing the interposed body or device mounted upon the wire, with its extended ends lying against the strip. Fig. 3<sup>a</sup> is a transverse section of Fig. 3. Fig. 4 is a similar view showing the interposed body or device coiled upon the strip, with its ends between the strip and the wire. Fig. 4<sup>a</sup> is a cross-section of Fig. 4. Fig. 5 is a view of a section of fencing, showing a different construction and attachment of the interposed body or device. Fig. 5<sup>a</sup> is a cross-section of Fig. 5. Fig. 6 is a view of a section of fencing, showing the interposed body or device coiled upon the wire, with its ends meeting the face of the strip at an angle thereto. Fig. 6<sup>a</sup> is a cross-section of Fig. 6. Fig. 7 is a view of a section of fencing after the strip and the wire have been twisted together. Fig. 8 is a view of a section of fencing attached to the post, showing the manner of utilizing the interposed body or device to prevent injury to the strip, and secure the fencing from longitudinal displacement. Fig. 9 is a front elevation of the parts shown in Fig. 8. Fig. 10 is a view of a section of fencing, showing the manner of utilizing the ends of the interposed body or device to provide the fencing with barbs. Figs. 10<sup>a</sup>, 10<sup>b</sup>, 10<sup>c</sup>, and 10<sup>d</sup> are cross-sections of Fig. 10.

In said drawings, the reference No. 1 indicates a flat metal strip composed of any suitable metallic material. With this strip I combine a wire, 2, of any suitable form, running longitudinally therewith, and at suitable intervals, a body or device, 3, of any proper form and material, is interposed between the wire and the strip, separating the two at such points. When the two, provided with an interposed body or device, 3, are twisted together, as shown in Fig. 7, the wire is closely drawn upon the face of the strip, save at and near those points where the interposed body or device 3 occurs, where it will be raised off the strip and an interval or space left between the wire and the strip. Thus the wire, while



it follows substantially the convolutions of the strip, is thrown out of a regular spiral course at intervals, imparting great rigidity to the fencing, and giving it an increased degree of elasticity, enabling it to withstand the contraction and expansion resulting from changes in temperature, as well as strain applied in any direction, without impairing its taut and rigid condition.

In twisting a flat metal strip and a wire together the former will shrink in length from torsional contraction more rapidly than the wire, and this inequality is practically remedied by the combination and construction mentioned, because, by interposing a body or device, 3, between the strip and the wire at intervals and twisting the two together, projecting portions are formed in the wire, giving it in effect a new direction at and near where the interposed body or device 3 occurs. This, while adding materially to the elasticity of the fencing, tends to equalize the length of the flat metal strip and wire in the fencing.

The interposed body or device 3 may be composed of any suitable material, and have any suitable form, attachment, or application. For example, a simple wire coil may be used, as shown in Fig. 1, and this may be mounted upon or coiled around the wire strand 2, or a wire may be coiled upon the strip 1, as shown in Fig. 2, with its ends 4 upon the outside of the strip; and this form of construction may be varied by arranging the said ends so that they shall lie under the wire 2, as seen in Fig. 4, whereby they will be held firmly down, preventing the coil from opening or loosening. Again, the interposed body or device 3 may be coiled upon the wire 2 with its ends 5 5 projecting in opposite directions and lying against the face of the strip, as shown in Fig. 3, whereby a similar purpose is accomplished, the coil being tightened upon the wire 2 by the pressure of its ends upon the strip.

Instead of a wire coil, such as is described, a simple body, 6, may be used composed of metal or other suitable material, and having any suitable form, construction, or application, so as to raise the wire 2 off the strip 1 at suitable intervals. Again, a wire loop or coil, 7, may be used, having its ends 8 8 projecting in opposite directions crosswise of the strip, lying intermediate of the strip and the wire 2, and forming an angle with each other, whereby they have contact with the strip near its edges only. This gives increased space between the strip and the wire 2 in excess of the diameter of the coil 7, and also gives an elastic bearing or seat, since any strain tending to force the wire 2 toward the flat metal strip will be resisted by the elasticity of the ends 8 8. Such force will also more firmly bind the coil upon the wire 2 by tightening its loop.

The fencing may be applied to the posts in the manner shown in Figs. 8 and 9, in which the reference-number 9 indicates the post.

The instances at which the wire 2 is raised off the strip are of such frequency throughout the line of fencing as to bring such points into engagement with the posts often enough to afford a frequent fastening of the kind shown. It consists in stapling upon either side of the interposed body or device 3, the staple being driven down upon the wire 2 in close proximity to the interposed body or device 3, and entering far enough to form a shoulder or abrupt bend, 10, in the wire 2. The fencing cannot turn upon the post while the staple is being driven by reason of the flat metal strip 1, which lies against the post.

This form of fastening provides a most secure attachment of the fencing to the posts without injury to the strip 1. It also wholly avoids any longitudinal displacement of the fencing without the necessity of embedding it in the posts, which often impairs its strength, and it affords means for removing the staple without cutting it or injuring the fencing.

It is well known that a wire will withstand far more bruising and marring without substantial injury to its strength than a flat strip can sustain, for if the edges of the latter are once torn or broken its strength is destroyed.

The fastening may be applied, as shown, at points where the raised wire 2 is presented at the posts, whereby the staple or staples may be driven down thereon far enough to form a shoulder or abrupt bend, 10, in the wire 2 on either or both sides of the interposed body or device 3. This fully protects the strip and gives as strong and secure a fastening as can be desired.

Where the fencing crosses posts at points where the wire 2 is lying upon the strip, a staple may be driven in lightly over the fencing, which will afford sufficient fastening at those points.

Having thus described my invention, what I claim is—

1. The combination, with a flat metal strip and a wire twisted together, of a suitable body or device coiled around or mounted upon the wire or the strip, whereby the wire and strip are separated at such point or points.

2. The combination, with a flat metal strip and a wire twisted together, of a suitable body or device coiled around or mounted upon the latter, whereby the wire and strip are separated at such point or points.

3. The combination, with a flat metal strip and a wire twisted together, of a wire looped or coiled around the latter and having its ends extending outward crosswise of the strip and bearing upon it near its edges only.

4. The combination, with a flat metal strip and a wire twisted together, of a suitable body

or device interposed between the two and a staple driven down upon the raised wire and into the post.

5 5. The combination, with a flat metal strip and a wire twisted together, of bodies or devices interposed between the two at intervals, raising the wire off the strip at intervals, forming projecting portions in the wire

and causing it to deviate from a regular spiral course.

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

JOHN J. BRINKERHOFF.

Witnesses:

JOS. C. ANDERSON,  
JAS. T. CARSON.

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