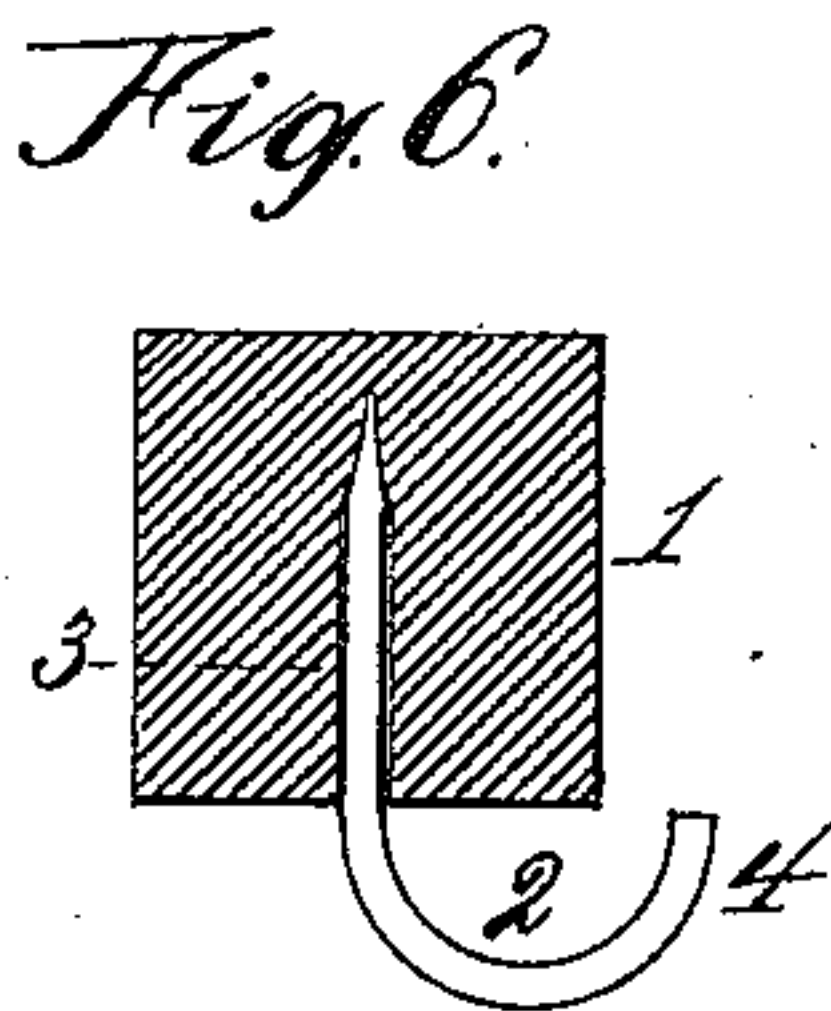
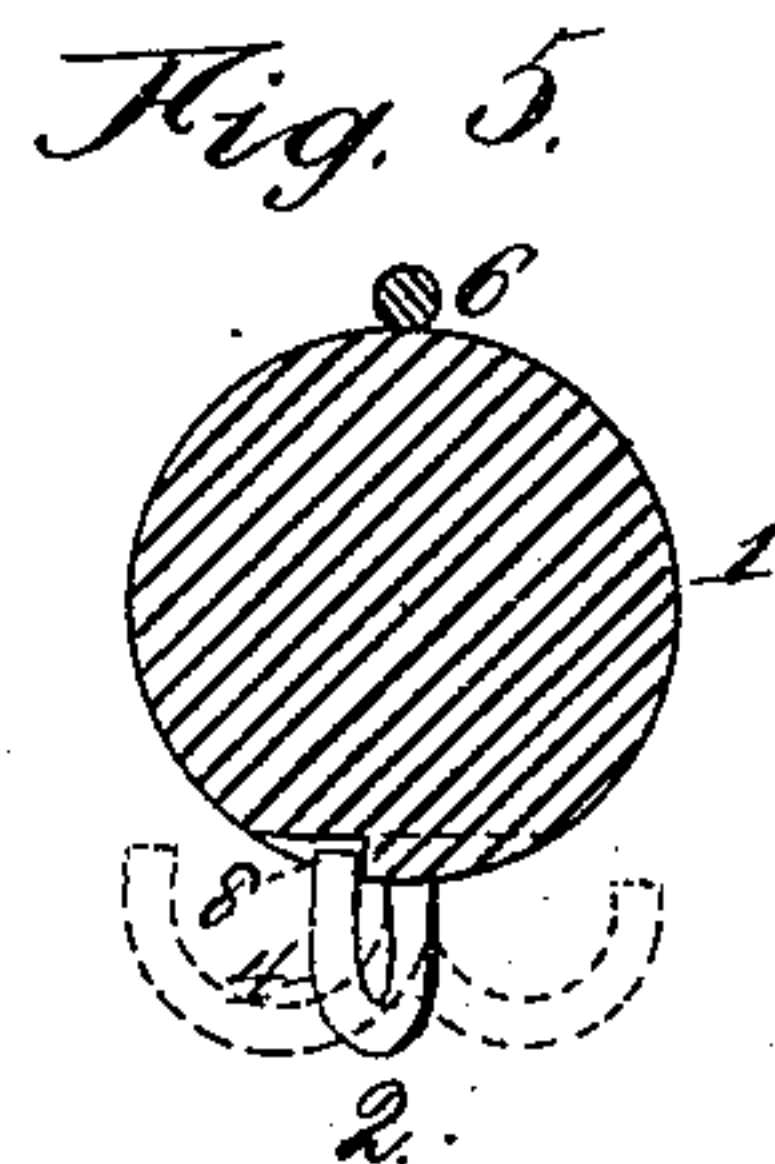
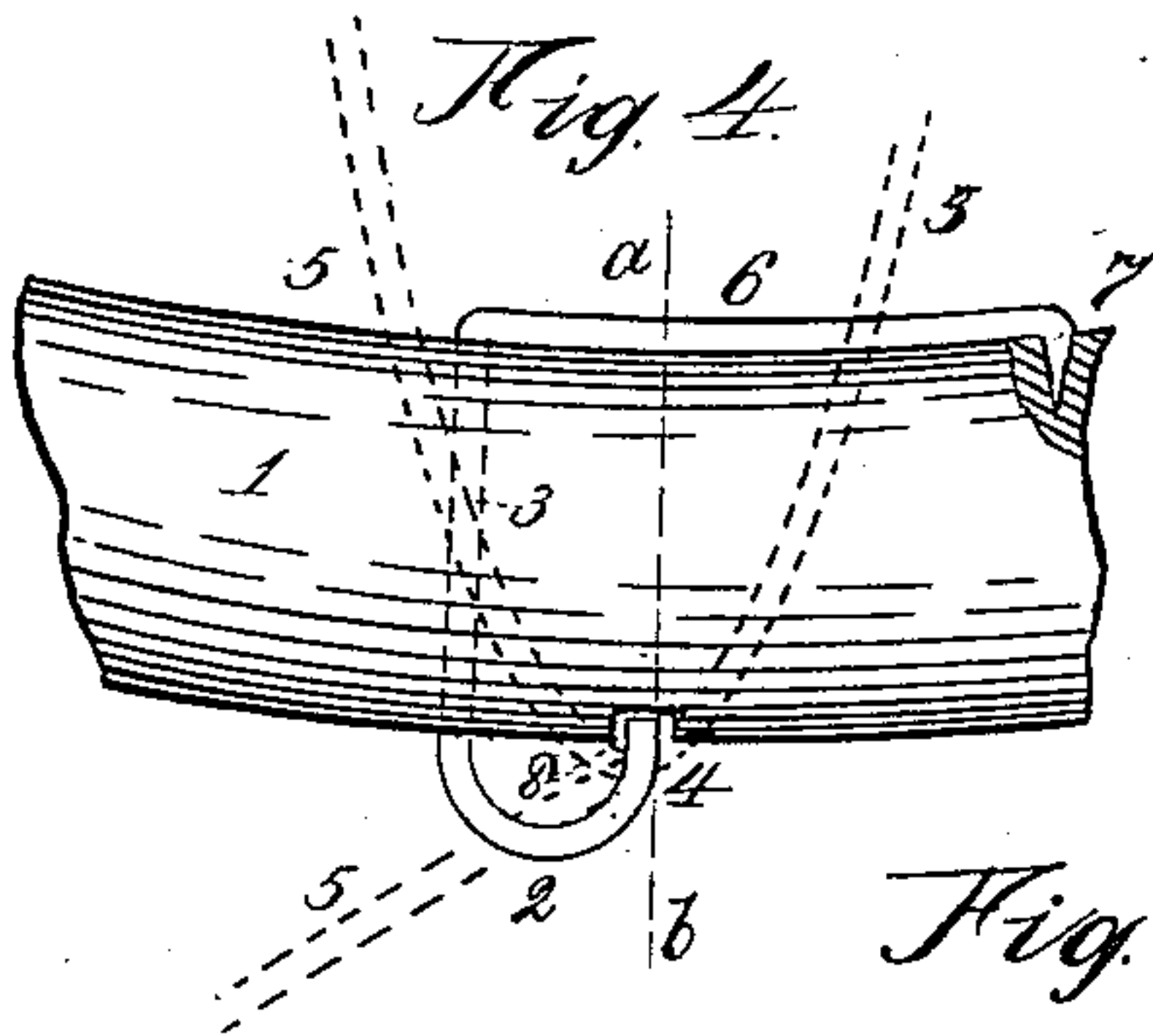
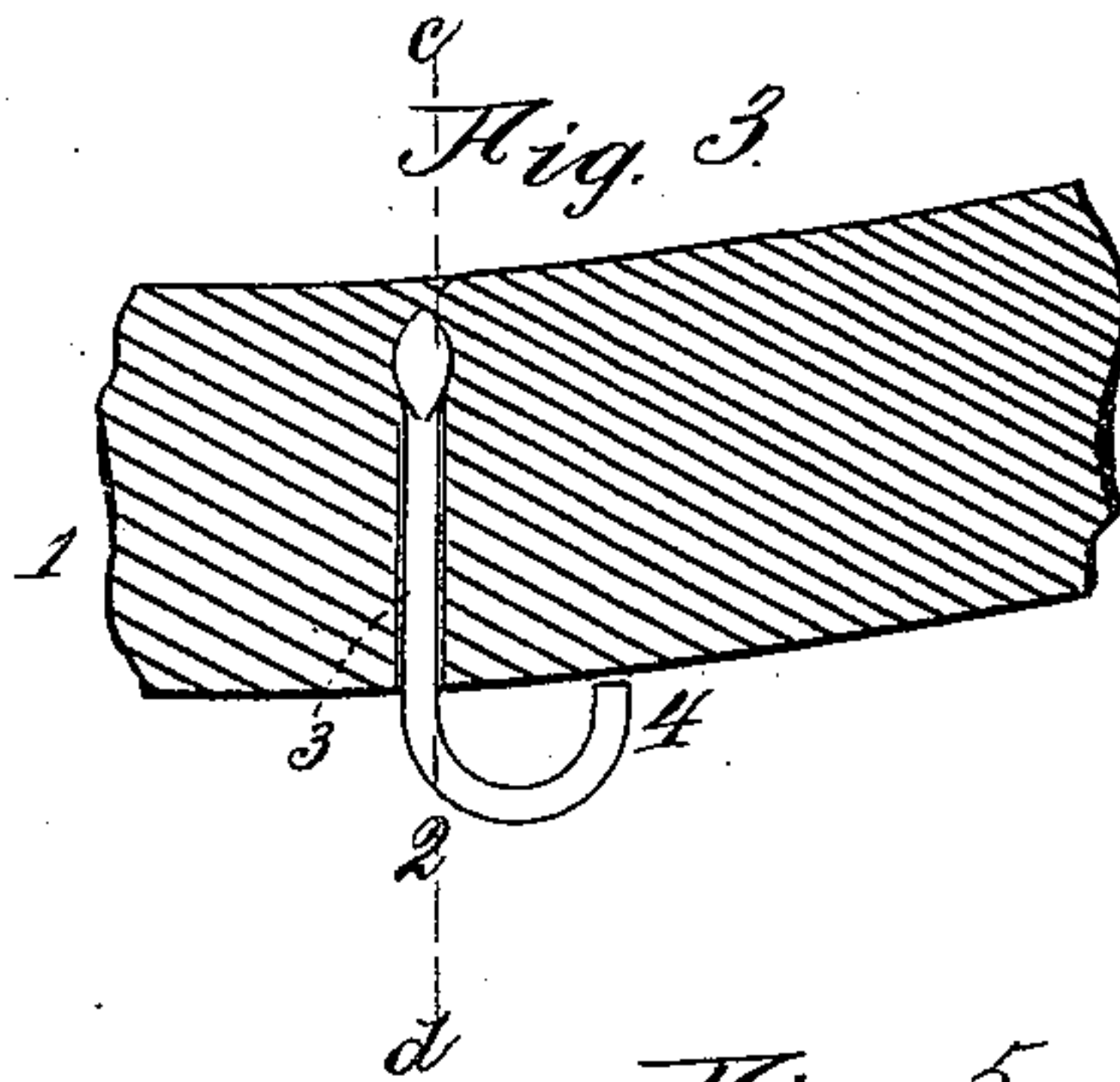
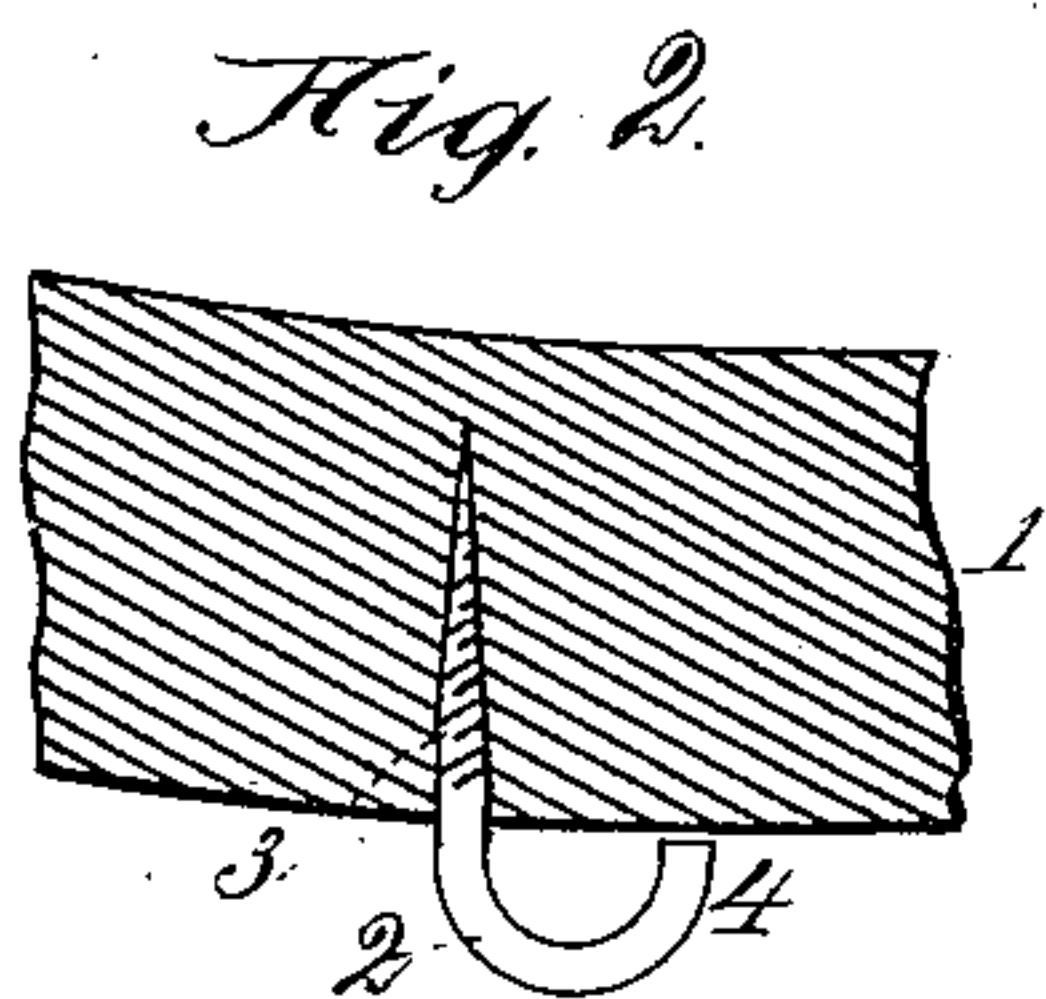
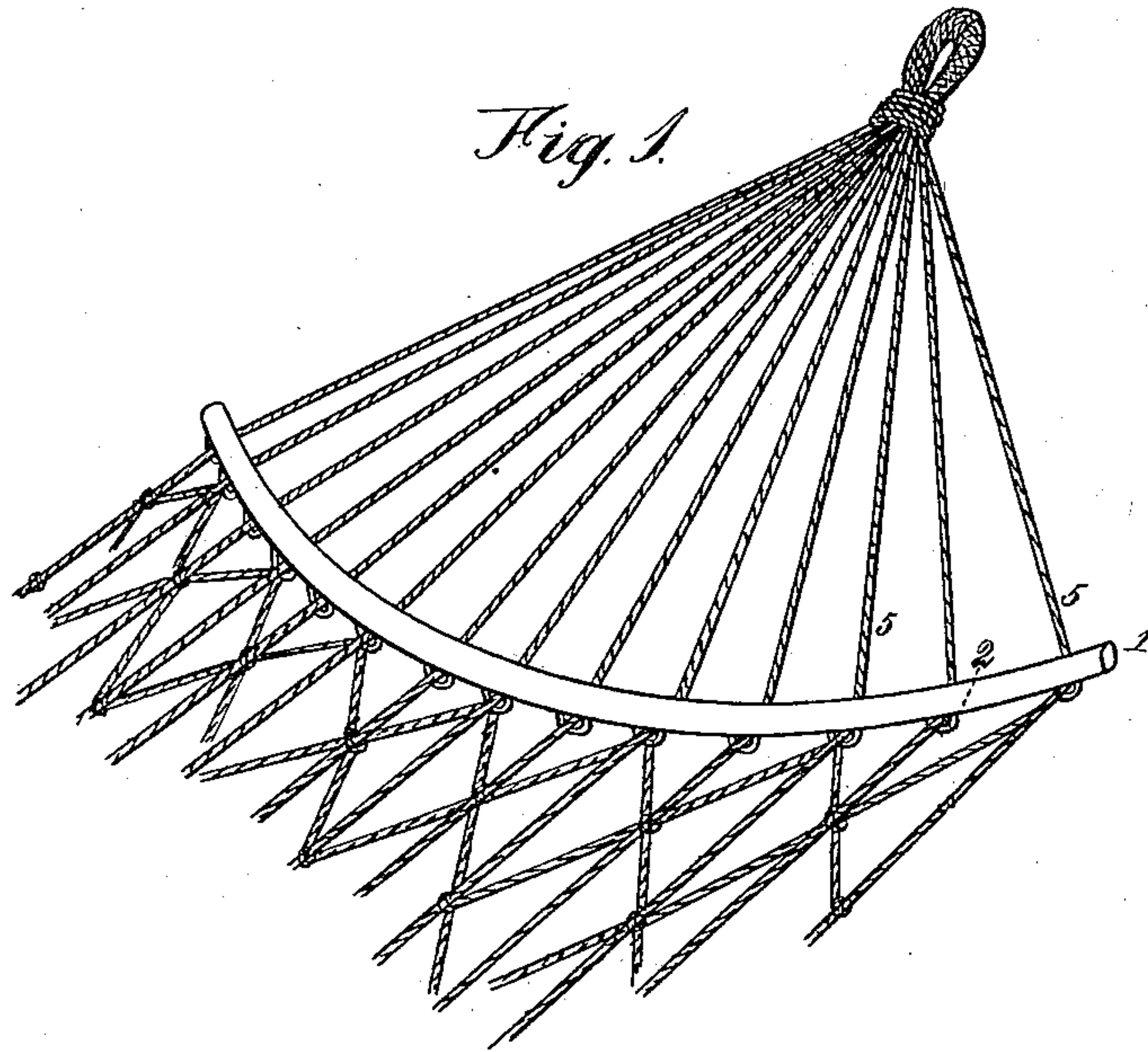


(No Model.)

A. L. ADAMS.  
HAMMOCK STRETCHER.

No. 451,009.

Patented Apr. 28, 1891.



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Att'y.



# UNITED STATES PATENT OFFICE.

ALBERT L. ADAMS, OF CEDAR RAPIDS, IOWA.

## HAMMOCK-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 451,009, dated April 28, 1891.

Application filed December 8, 1888. Serial No. 293,023. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT L. ADAMS, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Hammock-Stretchers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of hammock-stretchers in which the cords of the hammock are distended by means of catches on a curved stick; and the object of my invention is to so construct these catches as to securely hold the cords from slipping out in either lateral direction and to prevent the loose cords from becoming caught and entangled in them.

The invention consists, essentially, in the arrangement of a catch or fastener having a U-shaped or semicircular loop, one limb of which connects with the stick and the other and shorter limb swings into and out of engagement with the stick as the fastener is turned sidewise.

In the accompanying drawings, forming a part of this specification, Figure 1 is a view in perspective of a stretcher embodying my invention as applied to one end of a hammock; Fig. 2, a longitudinal section of a portion of a stick with a simple form of fastener therein; Fig. 3, a similar view showing a modified form of fastener; Fig. 4, an elevation, partly in section, of another modification; Fig. 5, a transverse section of the same in the line *a b*; and Fig. 6, a transverse section in the line *c d*, showing the fastener as applied to a stick square in cross-section.

Similar figures of reference indicate corresponding parts.

In its simplest form the fastener is in the form of a hook, the loop of which opens out from the stick when turned transversely thereto and closes when turned lengthwise thereof. This opening and closing of the fastener by turning its free end sidewise constitutes the gist of the invention, and the principle as applied to hammock-stretchers possesses several important advantages, which will herein-

after be more fully pointed out. In practice this principle is applied in two ways, the one being to connect the longer limb of the fastener loosely with the stick, so that it turns laterally therein, and the other to attach this longer member rigidly to the stick, in which case the fastener turns sidewise in the same manner, but upon this longer member by the torsion thereof. Both forms are illustrated in the drawings, the pivotal connection of the longer member being indicated by the screw.

Referring to the drawings, 1 is the stick, which does not differ essentially from those in common use. It may be of any desired form in cross-section, a round stick being preferred. The fastener 2 is in the shape of a hook, the longer limb of which 3 is screwed or driven into the stick, and the shorter limb 4 turns up to or within a short distance of the stick when the loop of the fastener lies in the same general direction as the length of the stick. In this normal position of the fastener the cord 5 is held from displacement in either lateral direction, and the common difficulty due to the disengagement of the cords is thus avoided. To disconnect the cords the fastener is turned transverse to the stick, when the shorter member extends out from the side thereof, as indicated in Figs. 5 and 6, and through this space the cord is passed in or out. The form of the loop is such as to prevent, also, the catching in it of loose cords of the hammock and the tangling and annoyance common thereto, inasmuch as there is no projecting end to cause this difficulty.

The fastener is made automatic by making the longer member a spring adapted to throw the fastener into normal position by the torsion thereof. Two forms of this device are shown in the drawings, that illustrated in Figs. 3 and 6 being preferred by reason of its greater cheapness and simplicity as compared with that illustrated in Figs. 4 and 5. In the former case the end of the longer member of the fastener is flattened somewhat, so as to prevent its turning in the stick into which it is driven. Now as the loop is turned in either direction this longer member is twisted, and on being released springs back to normal position.



The device illustrated in Figs. 4 and 5 is adapted for wire which is not sufficiently elastic to give the requisite spring if made with the shorter stick-connecting leg shown in the other figures. In this case the long member passes through the stick and has an extension 6, terminating in a tang 7, which is driven into the stick. By this construction the combined torsion of that portion of the fastener which passes through the stick and the lateral spring of that which lies longitudinally therewith give the requisite elasticity in comparatively soft wire.

By forming a notch or recess 8 in the bottom of the stick, as shown in Figs. 4 and 5, the end of the shorter limb of the loop is made to pass below the surface of the stick, (above considered with respect to the drawings,) and the possibility of the end catching on any loose strands of the cord is entirely prevented, and a bearing is at the same time afforded for this part of the loop against pressure by the cords on either side.

The manner of inserting and disengaging the cord is shown in Fig. 4, where the cord is indicated by the dotted lines. To insert the cord it is drawn diagonally across the stick and into the angle between the fastener and the stick, while to disengage it the lower portion is brought up on the same side as the other, forming a loop, as represented, and thus drawn through, both operations being performed without the fastener being touched by the hand at all.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hammock-stretcher, the combination, with a stick, substantially as described, of a U-shaped fastener, substantially as described, one member being connected with

the stick and serving as the axis of the fastener and the other being adapted to swing into and out of juxtaposition with said stick as turned sidewise.

2. In a hammock-stretcher, the combination, with a suitable stick, of a fastener having a semicircular or U-shaped loop to receive the cord of the hammock, one member of said loop being disconnected from the stick, but adapted to swing into or out of juxtaposition therewith, as turned in line with or transverse to said stick, respectively, and the other member being extended to form an axial spring connection with the stick, whereby the fastener automatically closes through the action of said spring, substantially as described.

3. In a hammock-stretcher, the combination, with a stick having a notch therein to receive the free end of the fastener, of a fastener having a loop to receive the hammock-cord, one member of the loop being connected with said stick and serving as the axis for said fastener and the other adapted to swing into said notch, substantially as and for the purpose set forth.

4. In a hammock-stretcher, the combination of the stick 1, the fastener 2, having the free member 4, adapted to engage with a notch in the under side of said stick, the member 3, connecting with said stick and serving as the axis for said fastener, and the extension 6, terminating in the tang 7, and the notch 8, substantially as described.

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

ALBERT L. ADAMS.

Witnesses:

S. W. BRAINERD,  
FRANK G. CLARK.