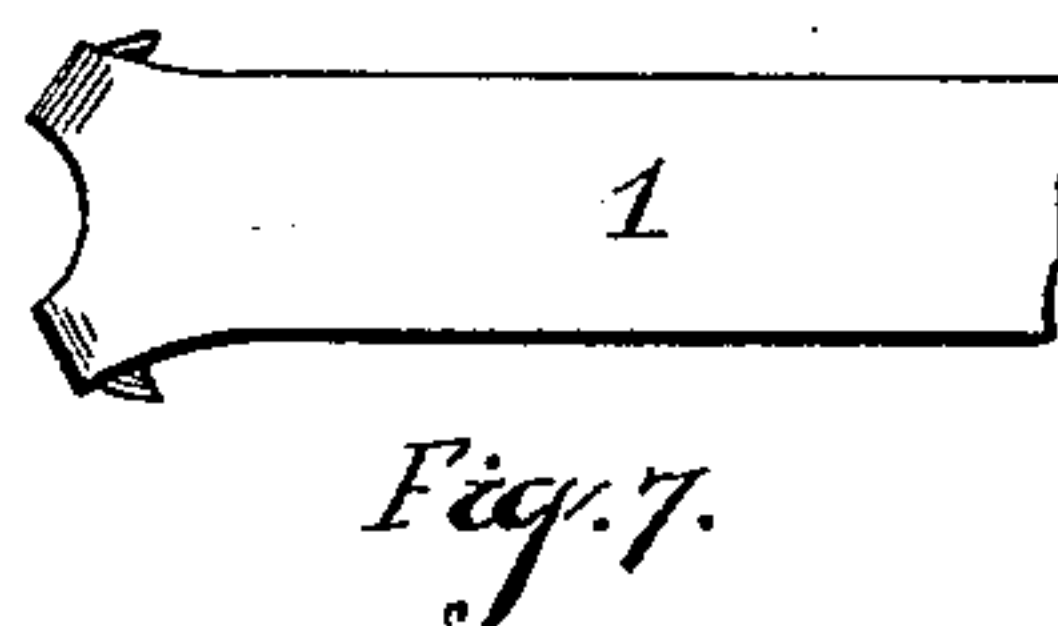
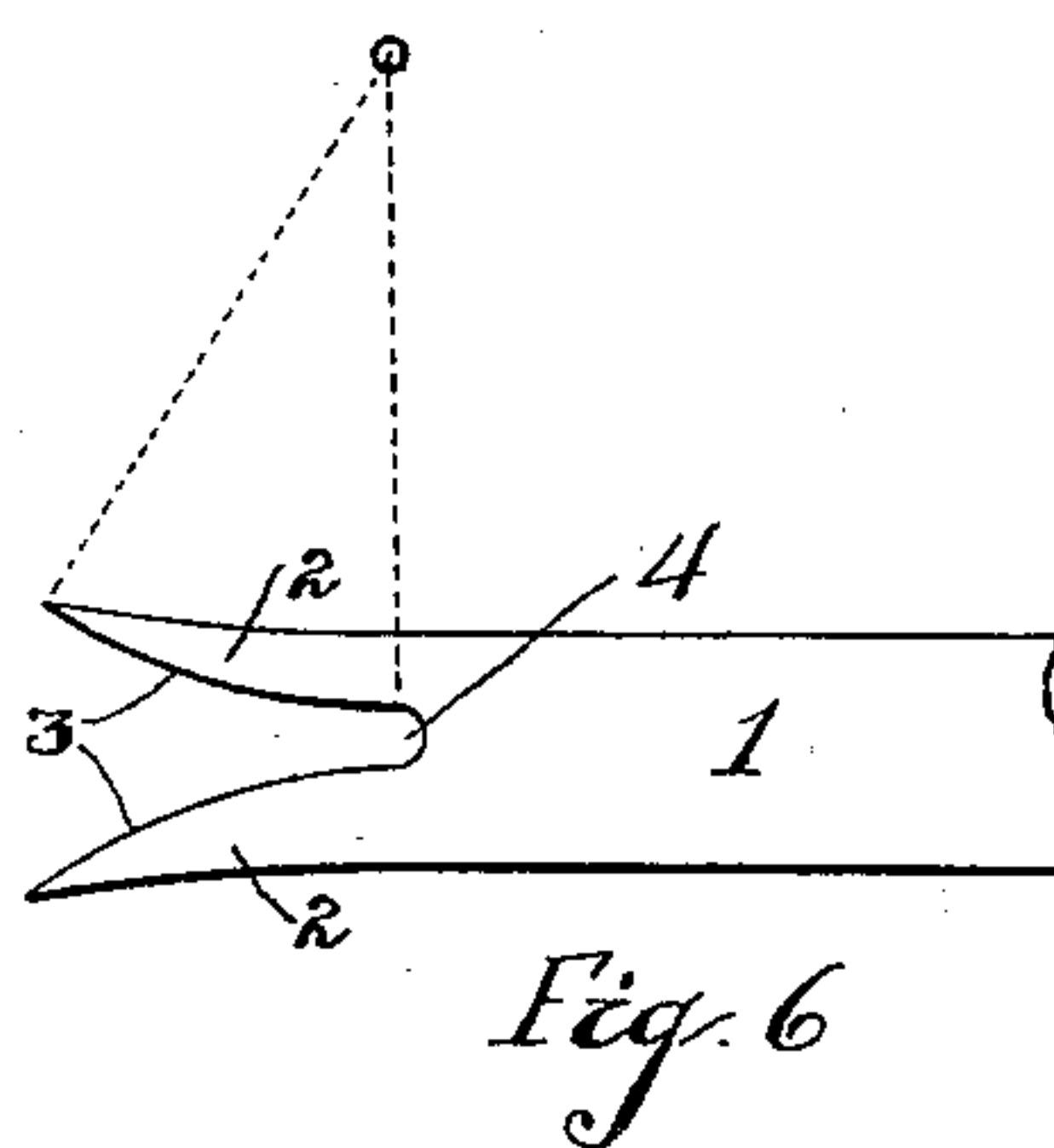
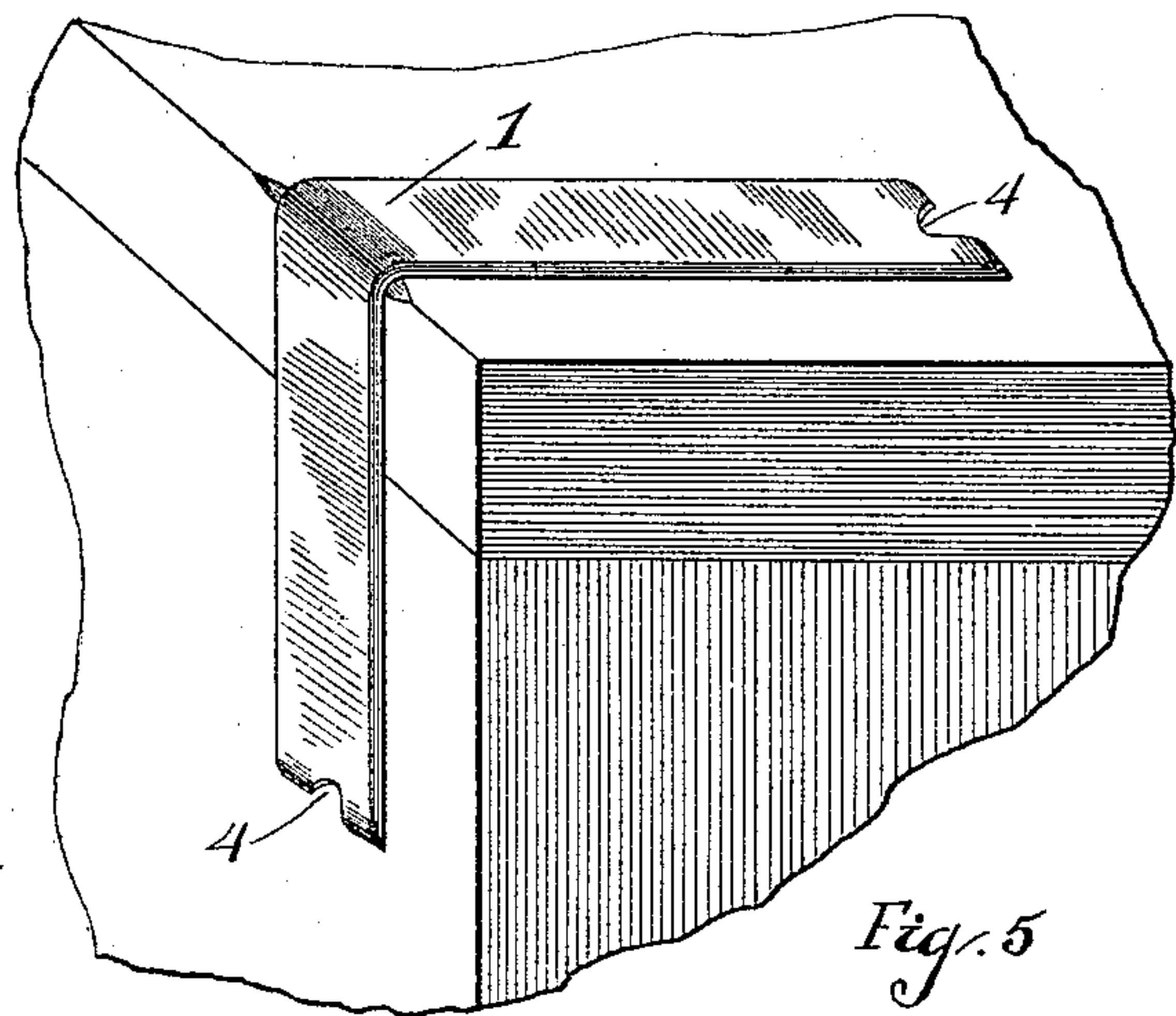
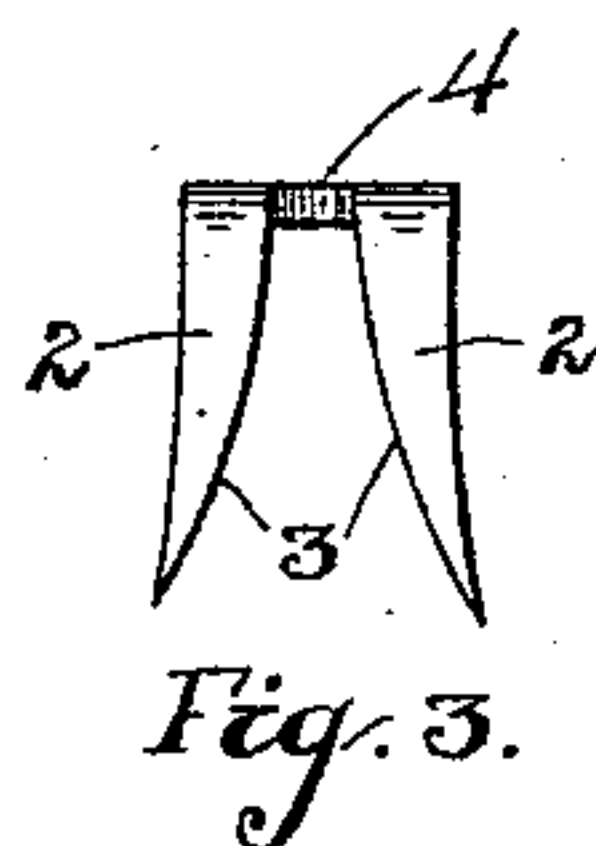
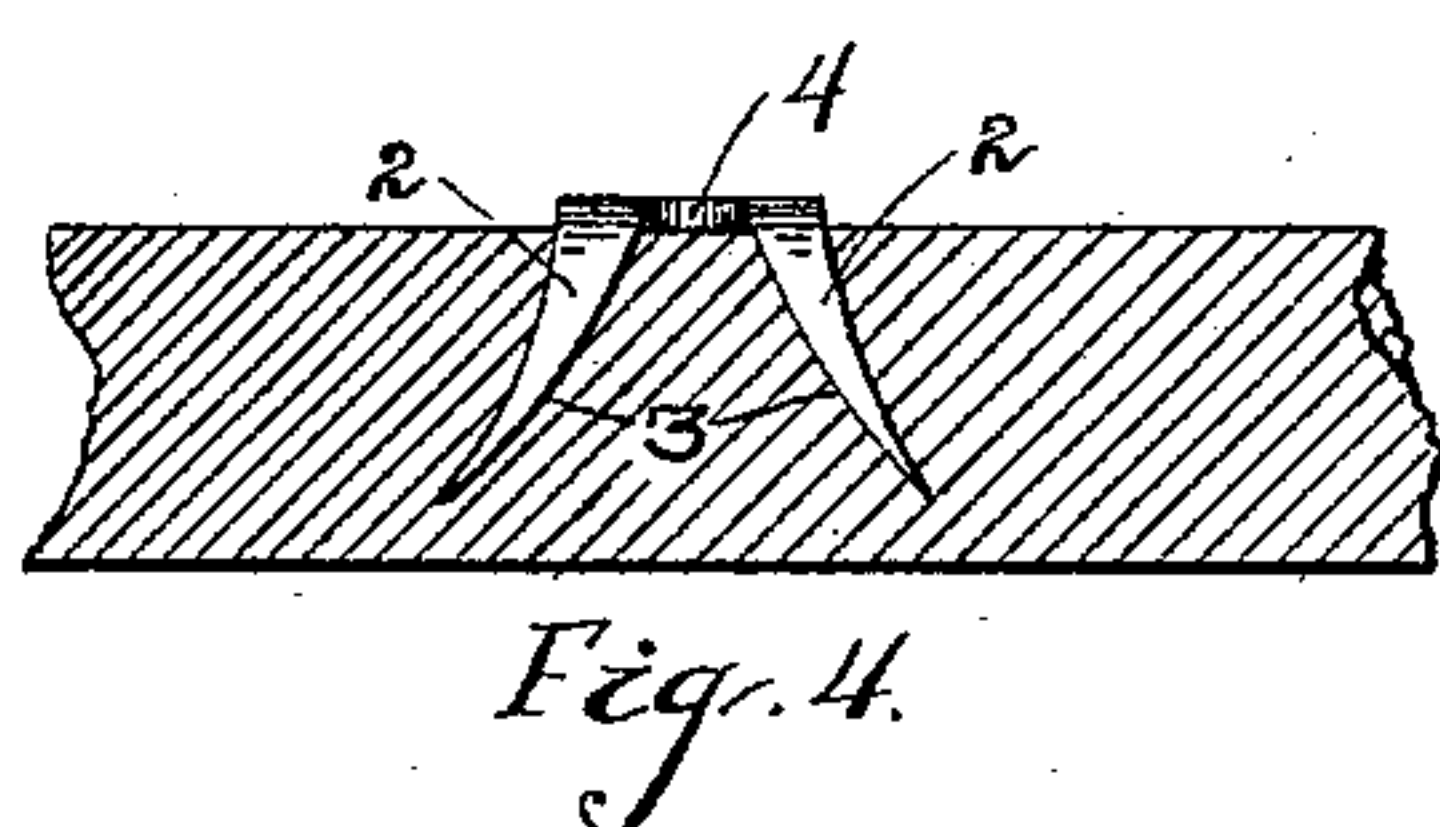
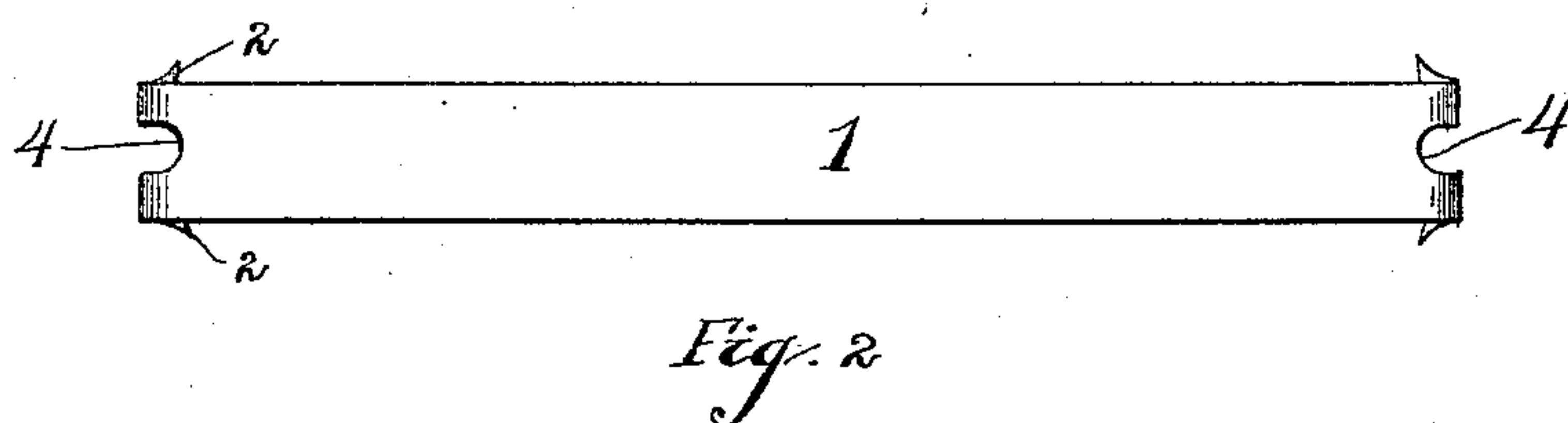
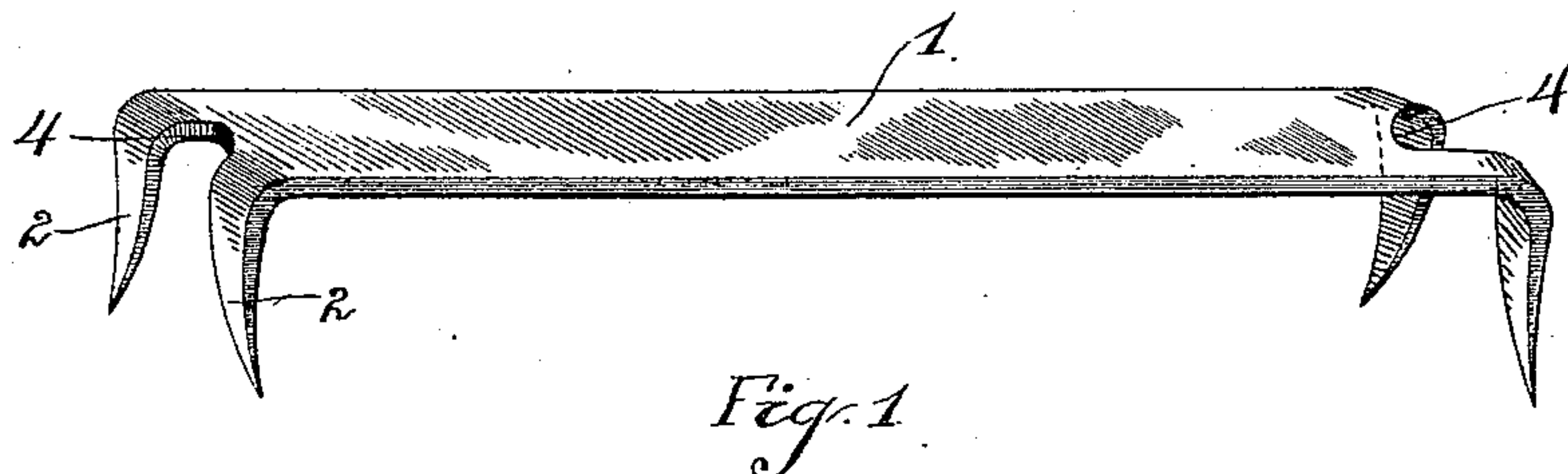


(No Model.)

S. M. ELLINGSON.  
CLAMP FASTENER.

No. 538,730.

Patented May 7, 1895.



Witnesses:  
C. F. Blake  
A. W. Yeater

Inventor.  
Sigward M. Ellingson  
By Wm. Johnson  
Atty



# UNITED STATES PATENT OFFICE.

SIGWARD M. ELLINGSON, OF CHICAGO, ILLINOIS.

## CLAMP-FASTENER.

SPECIFICATION forming part of Letters Patent No. 538,730, dated May 7, 1895.

Application filed August 27, 1894. Serial No. 521,391. (No model.)

*To all whom it may concern:*

Be it known that I, SIGWARD M. ELLINGSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Clamp-Fasteners; 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.

My invention relates to improvements in clamp-fasteners for securing the covers of wooden boxes or packages; of that class, in which the fastener is formed of wire or a flexible strip of metal, having downward turned ends, adapted to be driven into the box or casing of the package.

The object of the invention is to provide a fastener that will hold the parts together in a firm and substantial manner, and is not liable to be loosened by the rough usage and handling to which packages of merchandise are commonly exposed, and which is also adapted to be manufactured at small cost.

The invention consists in the novel features of construction hereinafter fully described and set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved clamp-fastener; Fig. 2, a plan view, and Fig. 3 an end view, of the same. Fig. 4 represents the prongs of the fastener as they appear when driven into the wood. Fig. 5 shows the practical application of my improved clamp-fastener. Fig. 6 represents one end of the blank from which the fastener is formed, and Fig. 7 is a modification of my improved fastener adapted for the largest sizes.

The several views are enlarged from the normal size of the fastener in ordinary use for the sake of clearness; it being adapted to be made of any size that may be required.

Referring to the drawings, 1. designates the body of the fastener, and 2 the pointed prong projections, adapted to be driven into the wood. Said parts are formed integral from a thin flexible strip of metal that may be readily bent around the corner of a package, and of such dimensions as is required by the size and thickness of material composing the cas-

ing or package for which the fastener is designed.

The metal to form the fastener is blanked out as shown in Fig. 6. The two prongs at each end have their inner edges 3, cut to the arc of a circle, and are wider apart at their points than the normal width of the fastener or strip upon which they are formed, the increased width being uniform upon the outer edges of the prongs in a straight line from the base for about three quarters of their length, from which point to the points of the prongs the increase is sharpened, by which the outer edges of the prongs are slightly dished or concaved. This form of construction has been found to cause the prongs to diverge, or spread apart when driven into the wood, with regularity and uniformity, compressing the fibers in their passage without cutting or injury thereto; the fastener being anchored and secured to the package thereby in a rigid and substantial manner, making it difficult to withdraw the prongs or to loosen the fastener without tools adapted for the purpose. The described uniformity and regularity of divergence of the prongs when driven into the wood has been fully verified by sawing away the wood up to the prongs, Fig. 4 being an exact representation thereof when driven into pine. To facilitate and render certain this action, the space between the prongs is extended into the body of the fastener to a point beyond where the prongs are bent, leaving a gap 4, in the ends of the body at the base of the prongs. This allows the portions of the prongs remaining in a plane with the body of the fastener, after the prongs are bent, to twist, or turn and yield to the diverging course of the prongs, and by means of which the prongs are not required to bend edgewise in the act of spreading, but will readily follow the line of divergence, each prong retaining nearly its normal shape when driven into the wood. The ends of the fastener are also better adapted to be hammered down smoothly, by reason of cutting the gap a short distance into the body, there being less metal at the ends. They will more readily bend down into the wood, as is represented in Fig. 5, and will be less liable to be loosened by contact with other bodies than they would be otherwise. The fastener is completed by



bending the prongs downward and obliquely inward, past a right angle to the plane of the body.

The modification shown in Fig. 7 will be readily understood, it being practically the same as that before described, the difference consisting in spreading the prongs at their base, so that the prongs stand normally farther apart, and are turned at an angle, increasing their lateral stiffness to better adapt them for securing the largest size of box or package.

I am aware that it is not new to provide a clamp-fastener of this class with a plural number of prongs, and therefore do not claim such as my invention; but heretofore the prongs have been formed by cutting a V notch out of the ends of the blank, the shape of the prongs when turned being that of a scalene triangle, the form and rigidity being such that the divergence of the points when driven cannot be relied upon to form a clinch, and have but little if any better holding qualities than a single prong. I am also aware that spikes and staples have been split and curved to diverge and form a clinch when driven into wood, but such are not applicable to the purpose or use of my invention, and are not in conflict therewith.

In my invention the circular are formed prongs, in conjunction with the slotted body ends, by which the root, or base of the prongs are formed to lie in a plane with the body part; said base parts being comparatively free to twist slightly, are the means by which my improved fastener is adapted to form the desired clinch with certainty of action.

Having thus described my invention, I claim—

In a clamp-fastener of the kind described the combination of a body 1, provided with two pointed prongs 2 at each end formed integral with, and bent approximately at a right angle to said body; said prongs being formed with curved inner edges, and wider apart at their points than the normal width of the fastener; and said body provided with gaps or openings 4 between said prongs at their junction therewith and extending into the body beyond the line of bend of said prongs thereby weakening the same, substantially as and for the purpose specified.

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

SIGWARD M. ELLINGSON.

Witnesses:

ALBERT H. PARKER,  
ALBERT W. YEATER.