

# Manny & Marcellus. Harvester Cutter.

N<sup>o</sup> 12499

Fig: 6.

Patented Mar. 6, 1855.

Fig: 3.

Fig: 5.

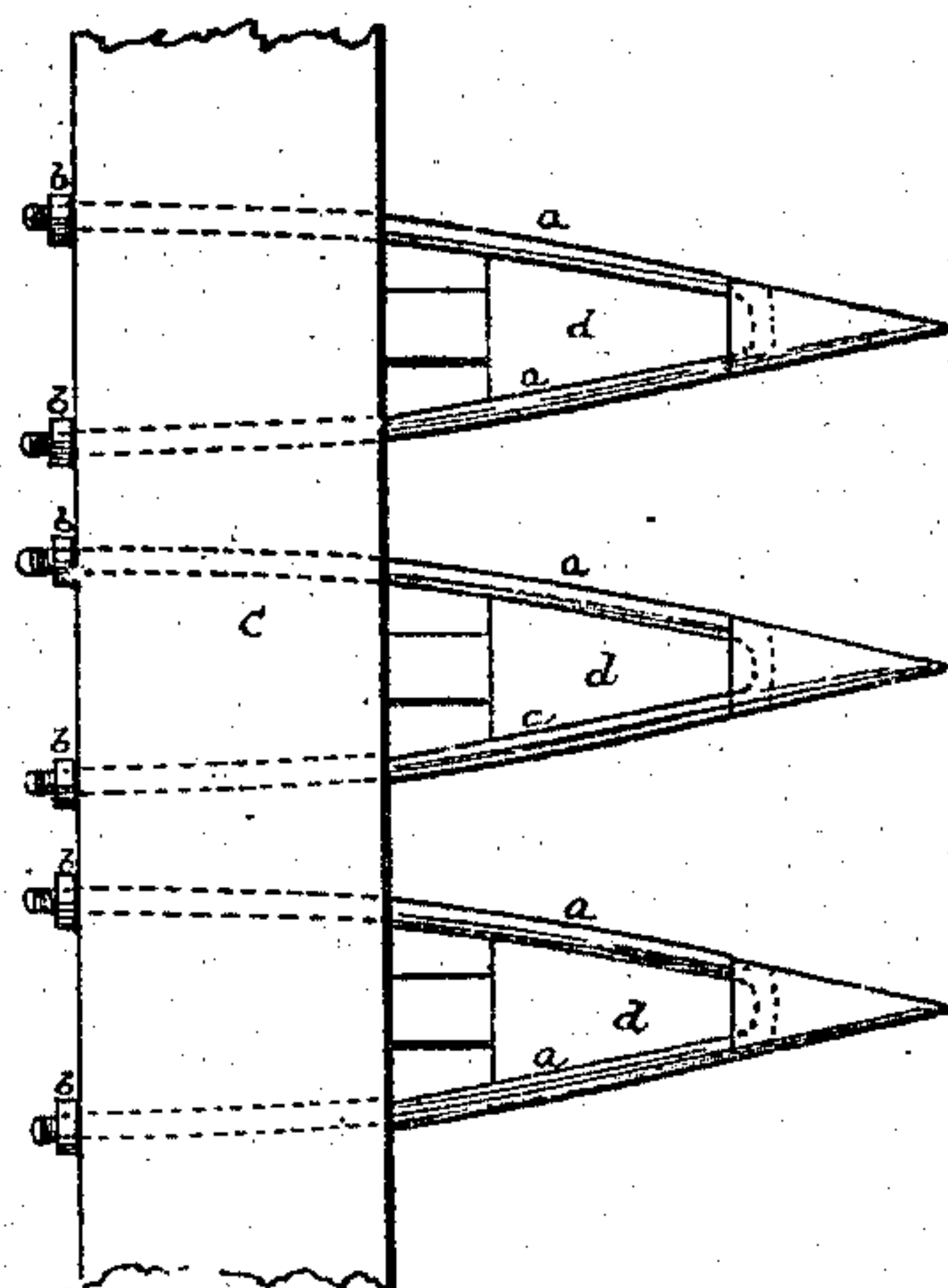
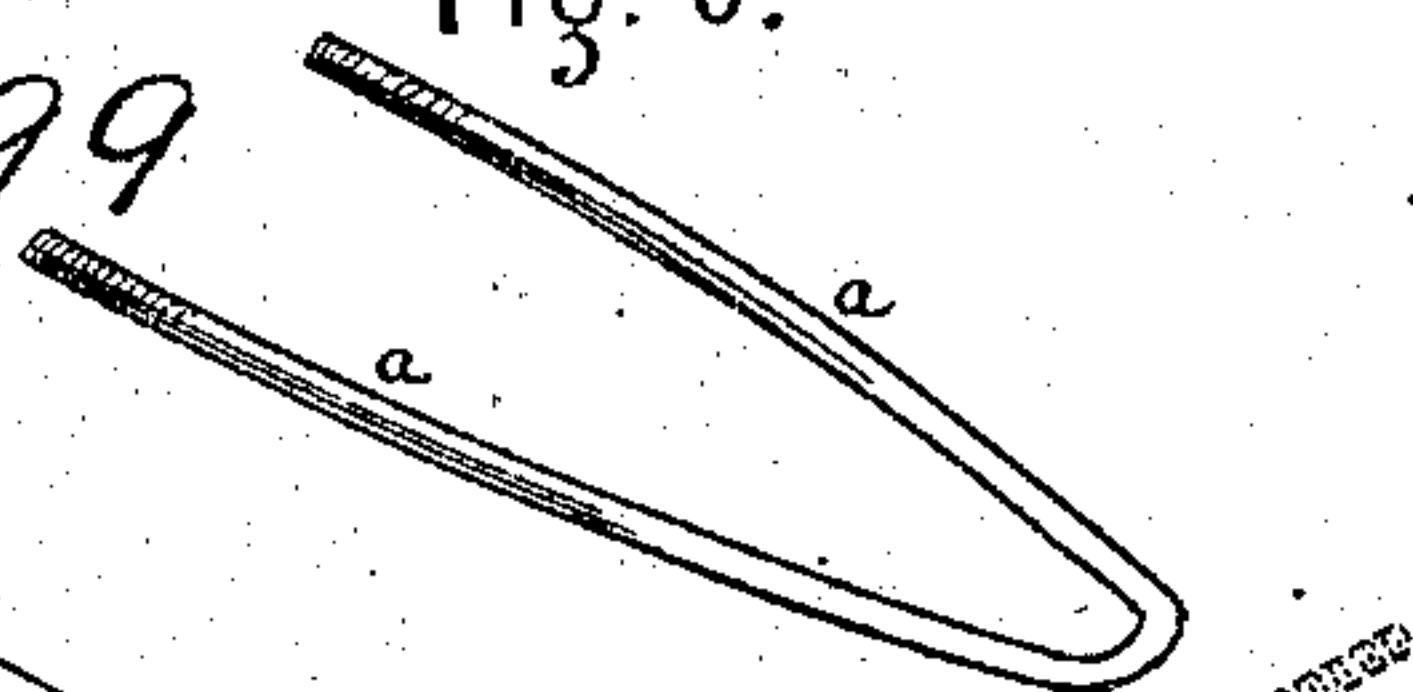
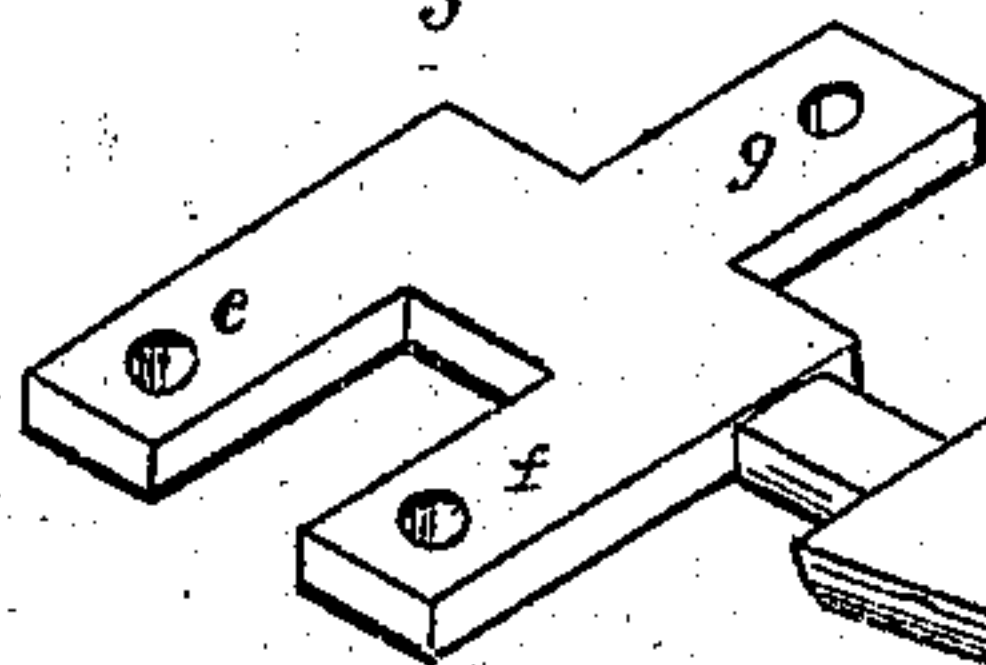


Figure 1.

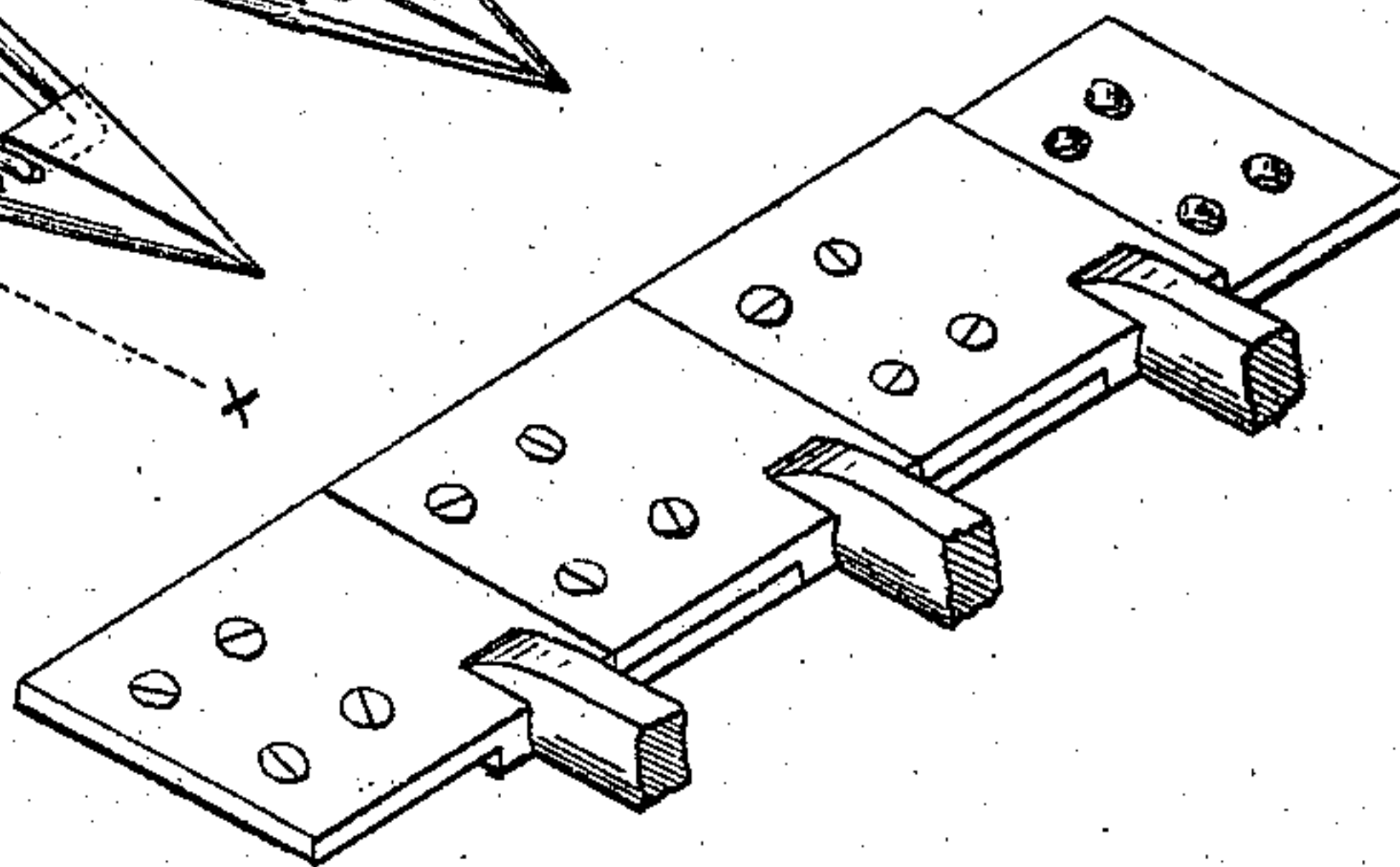
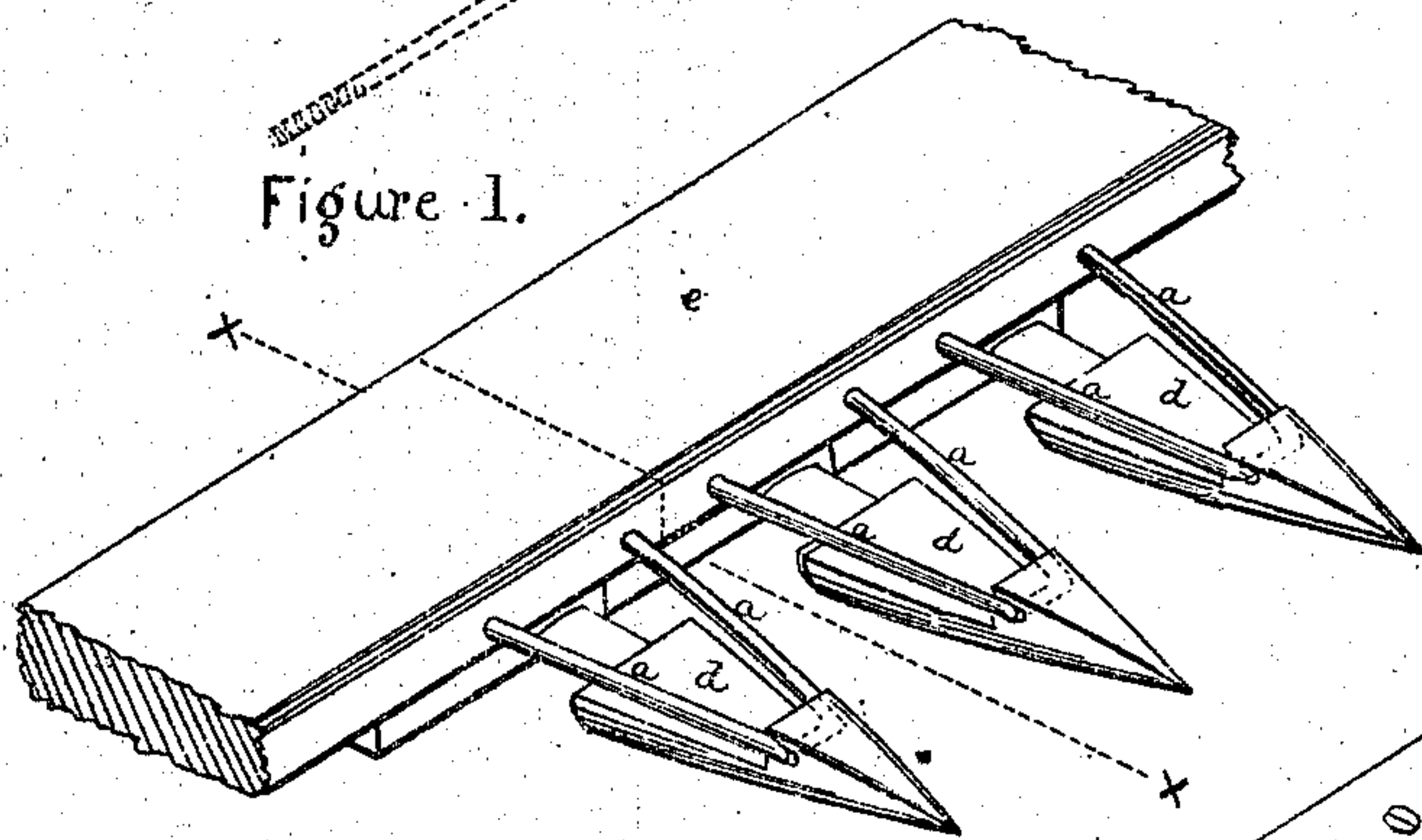


Fig: 2

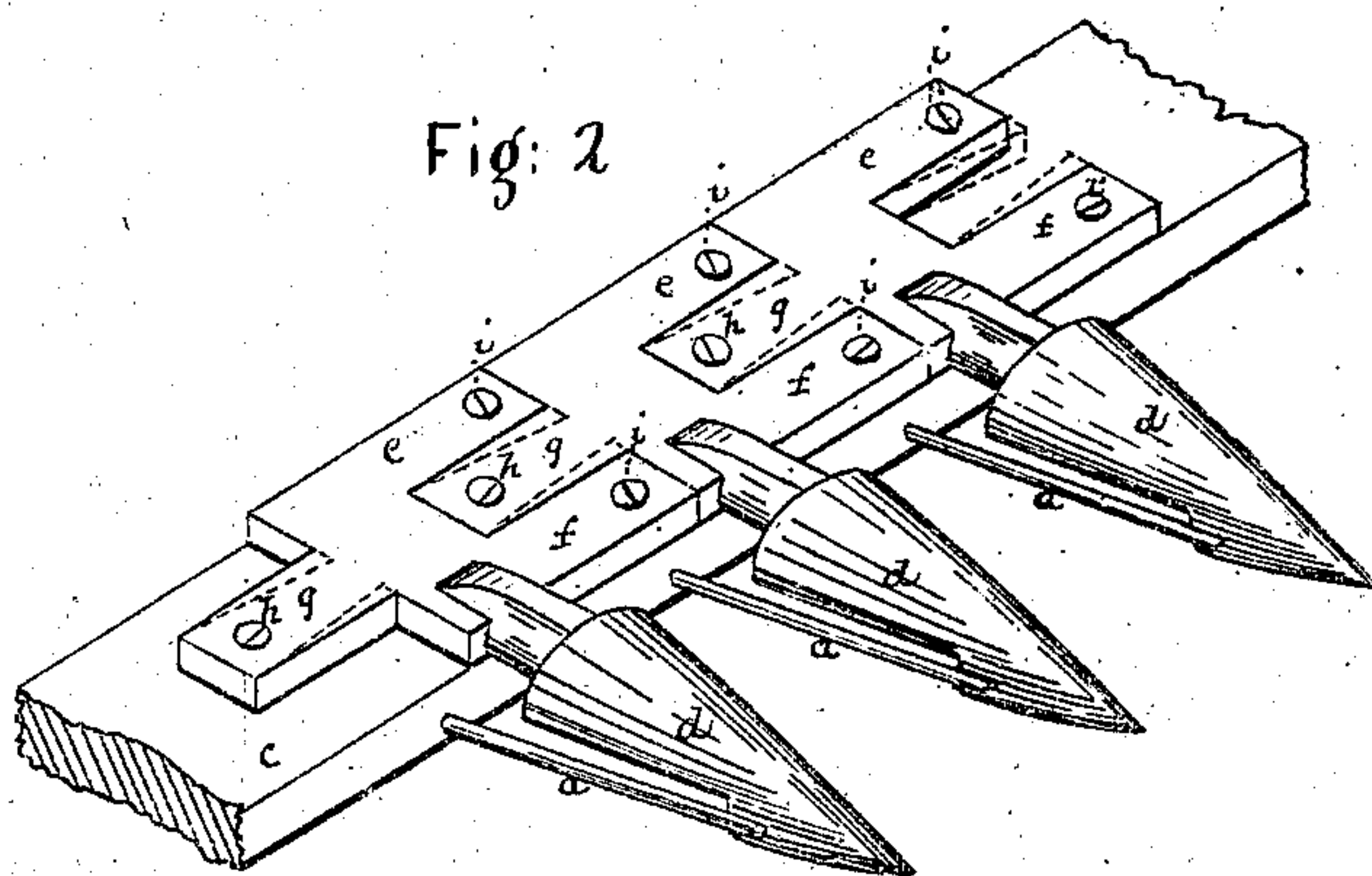
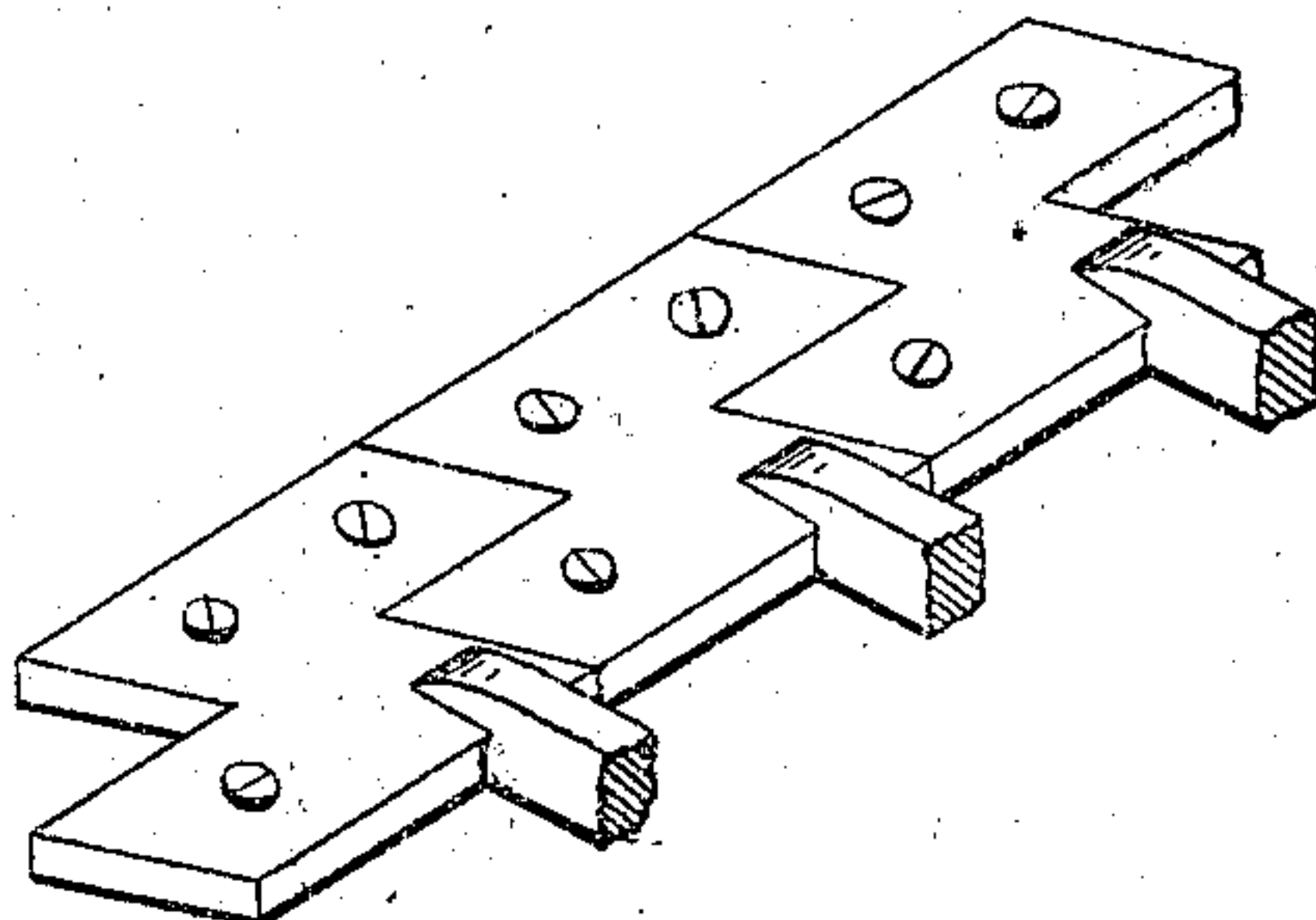
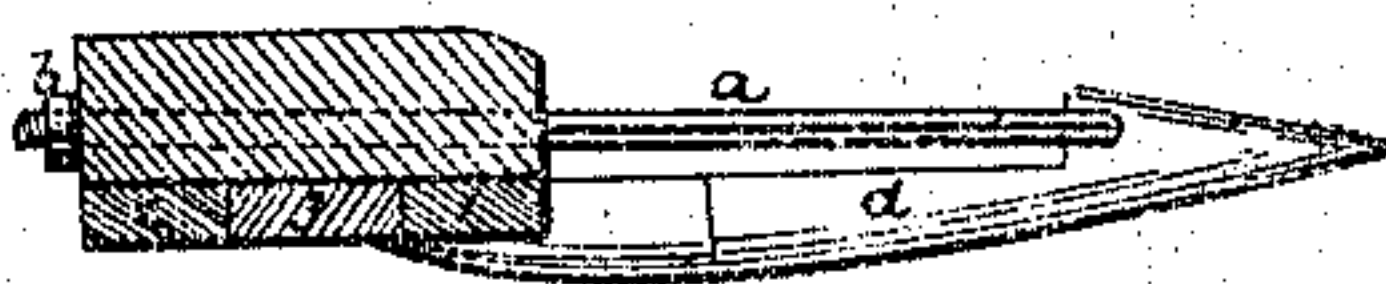


Fig: 4





# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN GRAIN AND GRASS HARVESTERS.

Specification forming part of Letters Patent No. 12,499, dated March 6, 1855.

*To all whom it may concern:*

Be it known that we, JOHN H. MANNY, of Rockford, in the county of Winnebago and State of Illinois, and HENRY MARCELLUS, of Amsterdam, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Reaping and Mowing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 is an isometrical representation of a portion of the bar for supporting the cutting apparatus, commonly called the "finger-bar," with three fingers attached thereto. Fig. 2 is a like representation of the same parts in an inverted position. Fig. 3 represents a top view of the same parts. Fig. 4 represents a section taken through the line *xx* of Fig. 1, and Fig. 5 is an isometrical representation of one of the fingers detached from the bar.

Our invention and improvements relate to the fingers, with reference to their old function as instruments to aid in cutting, and also with reference to a new function, which our improvements have given to them, of supporting the finger-bar and themselves, instead of depending upon the bar alone for support.

The improvement in that part of the finger which relates to cutting consists in substituting a pair of metal rods, *a*, for the cap which commonly extends over the upper side of the sickle. These rods or wires occupy the same position relative to the lower part of the finger as the outer edges of the caps would if used. In constructing this part of the finger a rod, round or prismatic in form, is taken, of the proper length, and a screw-thread is cut on each end, as seen in Fig. 6. To these screws nuts are fitted. A hole is made through the end of the finger transversely, as seen in Fig. 5, through which the rod is passed until its ends project equally on both sides of the finger, when they are bent back, as seen in Fig. 6, the red lines in Fig. 5 showing the position of the ends before bending. Holes are next bored through the finger-bar in the direction in which the rods extend back from the front of the fingers, through which the rods are passed when the fingers are put in place, and drawn tight by the nuts *b*, screwed on behind, as seen in Figs. 3 and 4. The wires or rods thus arranged, in addition

to supporting the grain while being cut by the sickle, brace and support the tooth both vertically and laterally. It is obvious that two or more separate rods may be used instead of one bent rod, and their ends may be fastened to the finger and bar, respectively, in various ways.

That branch of the improvement which relates to the reciprocal strengthening and support of the fingers and finger-bar consists in giving to that part of the shanks of the fingers which serve to attach them to the finger-bar such shape that they will interlock together and tend to support the finger-bar in the same manner as if the shanks of the fingers were all made in one piece which extended the whole length of the bar and was connected to it. There are numerous ways in which the shanks may be formed so as to interlock or overlap and attain the object we have in view after the principle of construction has been pointed out. Two or three modes only are shown in the drawings, as these are sufficient to illustrate the invention and indicate how both longitudinal and transverse support to the bar is supplied by the shanks of the fingers, and how they may be interlocked together to support each other in position with considerable firmness without the aid of a bar.

The bar *c* is usually made of wood, but it may be made of any other suitable material.

The fingers *d*, I prefer to make of cast metal, and of such form that while they will strengthen the bar *c* when attached to it each can, in case it becomes damaged or worn, be easily removed and replaced by a new one. In the form represented in Figs. 1, 2, and 3 of the drawings, the rear part of the shank of each finger has three branches, two, *ef*, extending from one side, and one, *g*, from the other. The space between the two branches of one side is of a form and width corresponding to the branch of the other side of the shank. This form makes the adjacent sides of the fingers the counterparts of each other. The branches of the adjoining fingers overlap or pass each other a considerable distance, so that the screws *h*, which secure the branches of the shank of one finger are placed nearer to the adjoining finger than the screws *i*, which secure the adjacent branches of the shank of the adjoining finger to the bar. The space which the branches and screws pass causes the shanks of the finger to splice into each other,



so to speak, and one branch to break joint with the others, so that fully one-half of the branches of the shanks are rendered available to stiffen and support the finger-bar.

As the finger-bar, especially in machines adapted for mowing, is subjected to greater strain, and is more difficult to support than any other part of the frame-work of the machine, because all of the ordinary modes of supporting this part of the frame would either obstruct the cutting apparatus or delivery of the cut grass, or would render it too bulky or heavy, it will be seen that this improvement, which adds little to the weight and nothing to the bulk of the bar, and does not in any way obstruct the cutting or delivery of the grass, is highly important and valuable.

It is obvious that the rods may be placed on the under side of the finger, leaving the cap on the top, without in any way changing the principle of construction; or the whole finger may be inverted, and the shanks attached to the top instead of the bottom of the bar *c*.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. Supporting the stalks of grass or grain to be cut by means of rods or wires on one side of the sickle while they are supported on the opposite side by means of the edges of the finger in the usual way, substantially as herein set forth.

2. The construction of the shanks or rear part of the fingers in such form that the shanks will pass or overlap each other and mutually support each other and stiffen the finger-bar, substantially as herein set forth.

3. The manner described of connecting the rods to the fingers and to the cutter-bar and of adjusting them so as to support and brace the point of the finger with such degree of force as may be required, substantially as herein set forth.

In testimony whereof we have hereunto subscribed our names.

JOHN H. MANNY.  
HENRY MARCELLUS.

Witnesses:

JAMES MANNY,  
W. WILBER SPORE.