

No. 746,086.

PATENTED DEC. 8, 1903.

R. S., H. P. & E. C. HOYT.  
HANDLE FASTENER.  
APPLICATION FILED APR. 18, 1903.

NO MODEL.

FIG. 1.

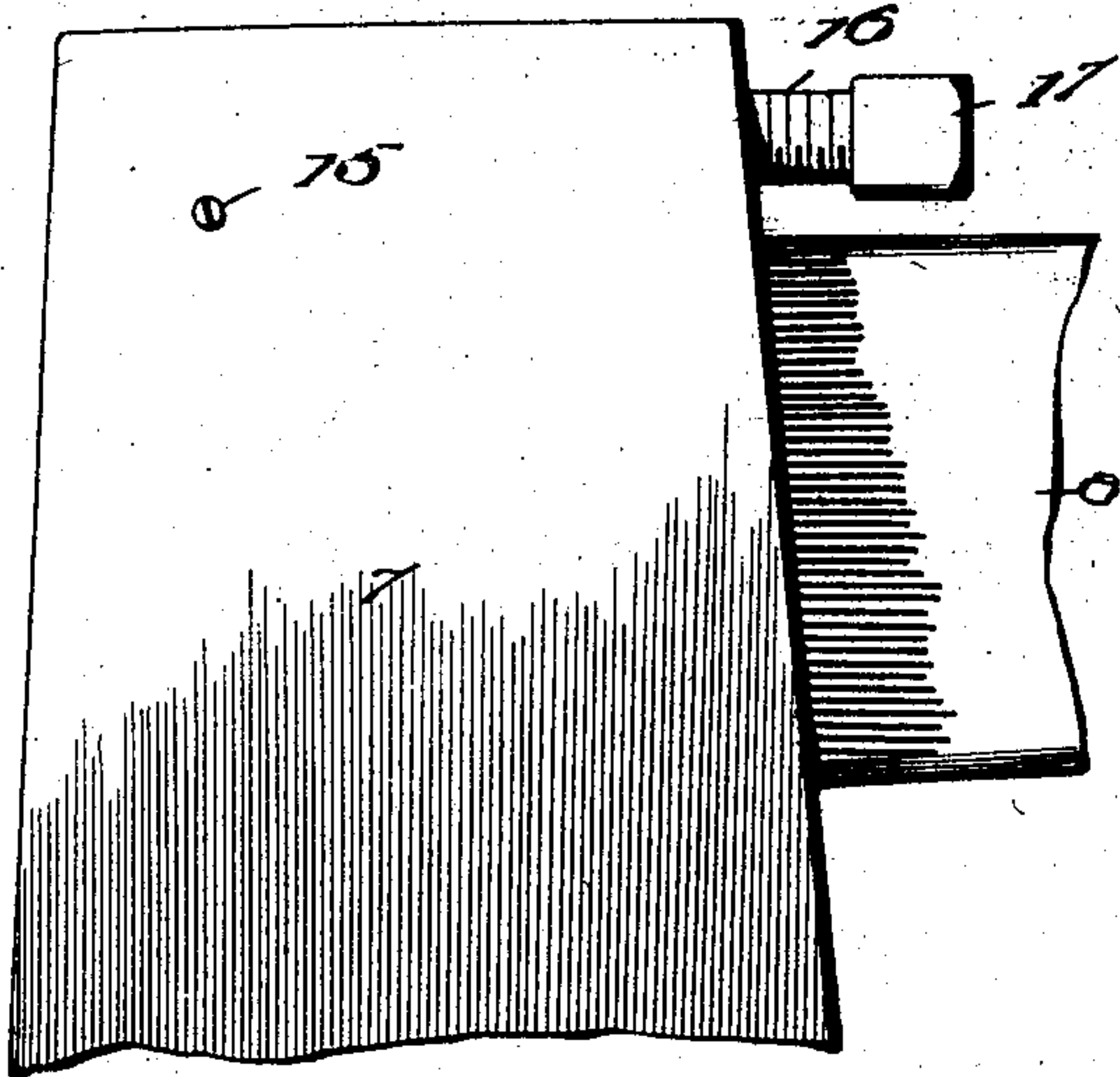


FIG. 2.

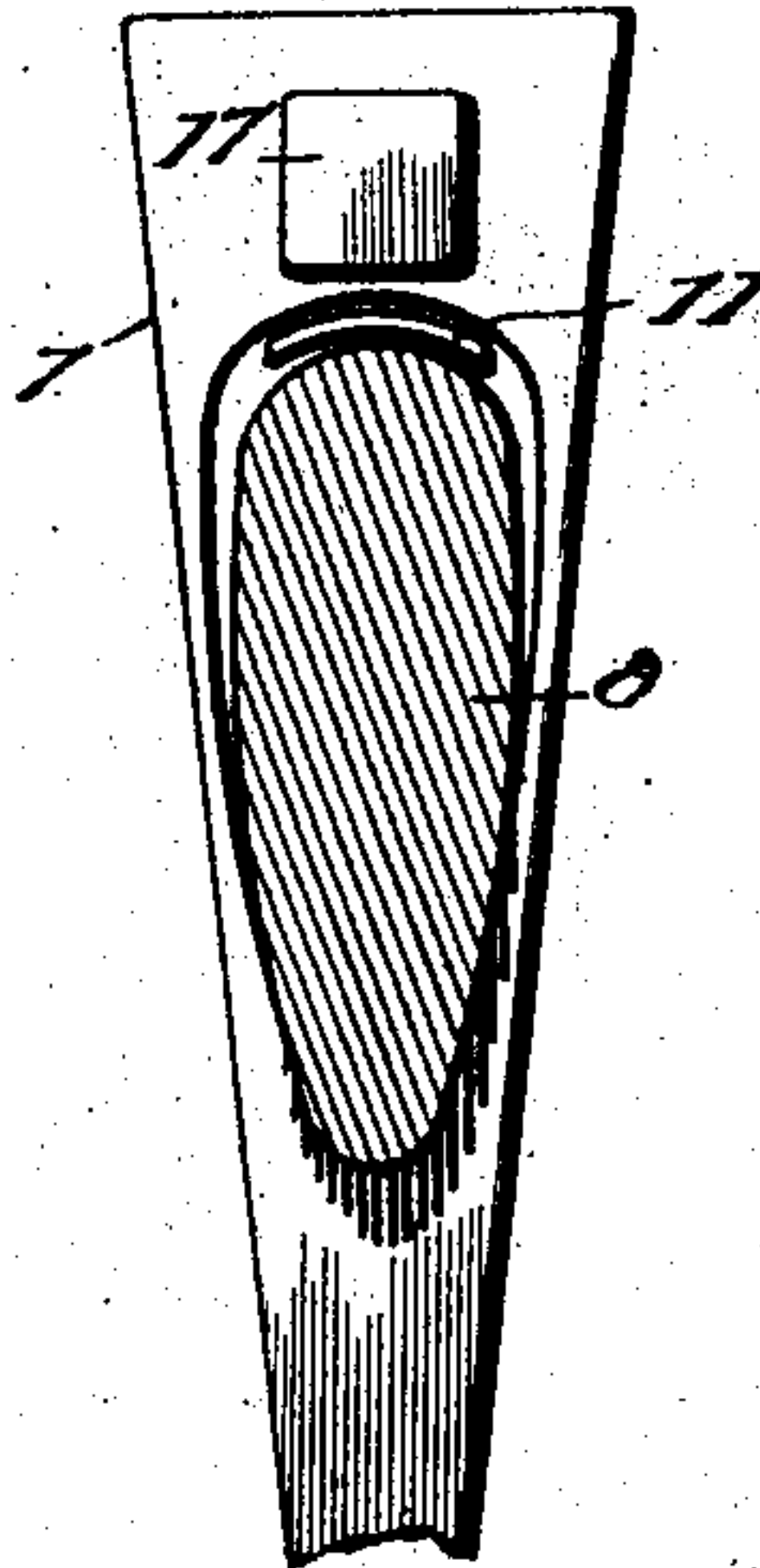


FIG. 3.

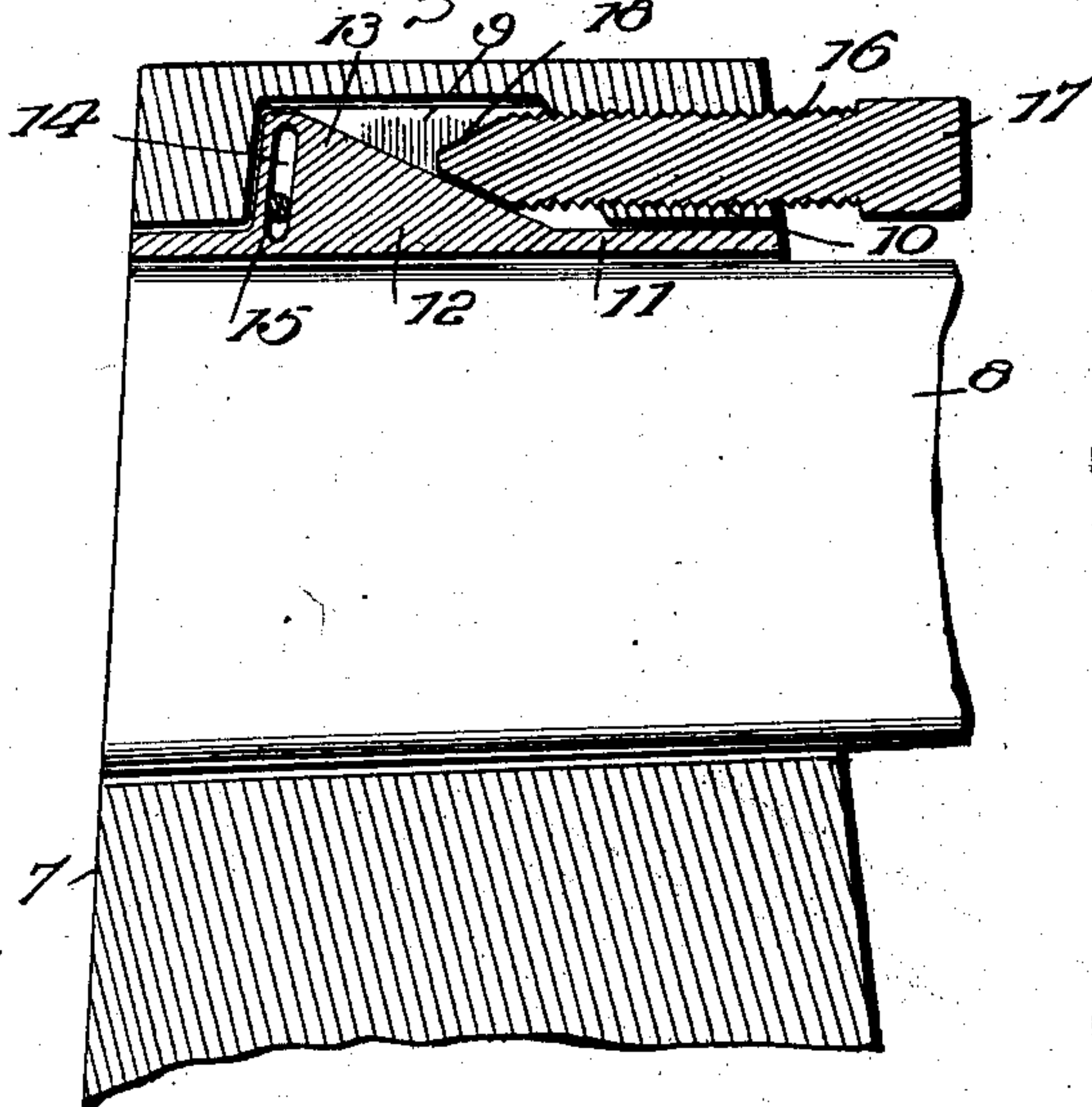


FIG. 4.

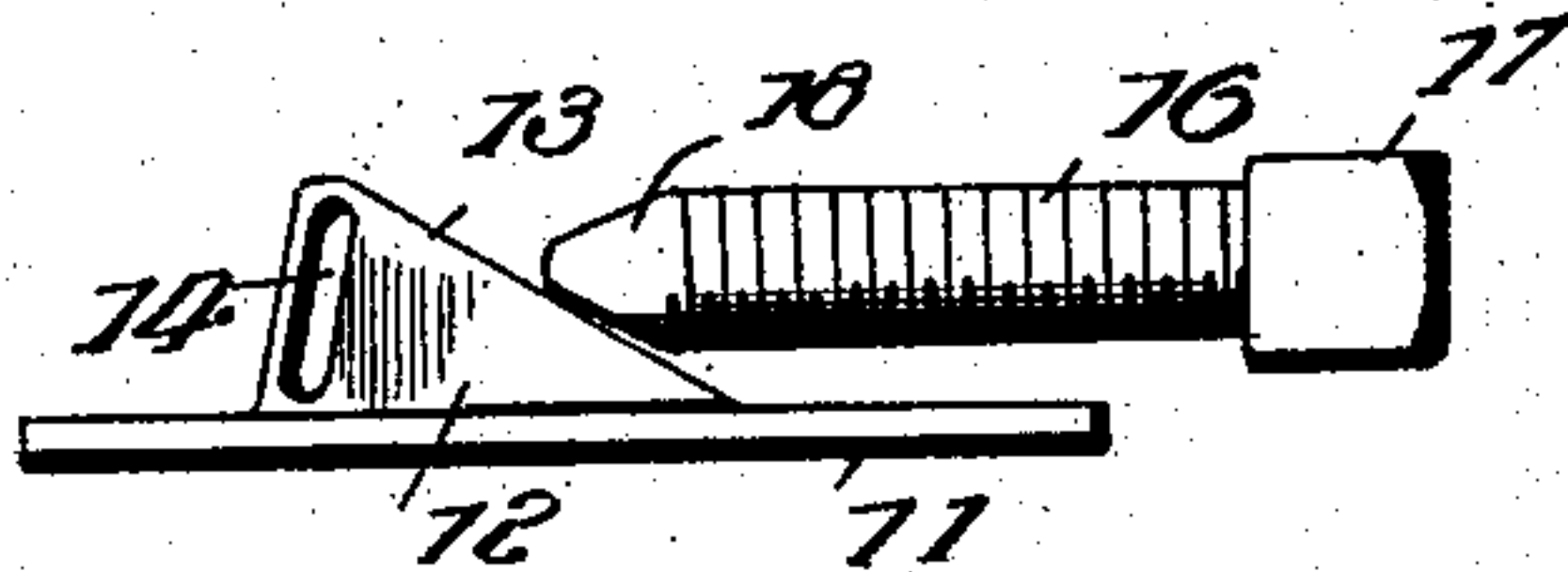


FIG. 5.

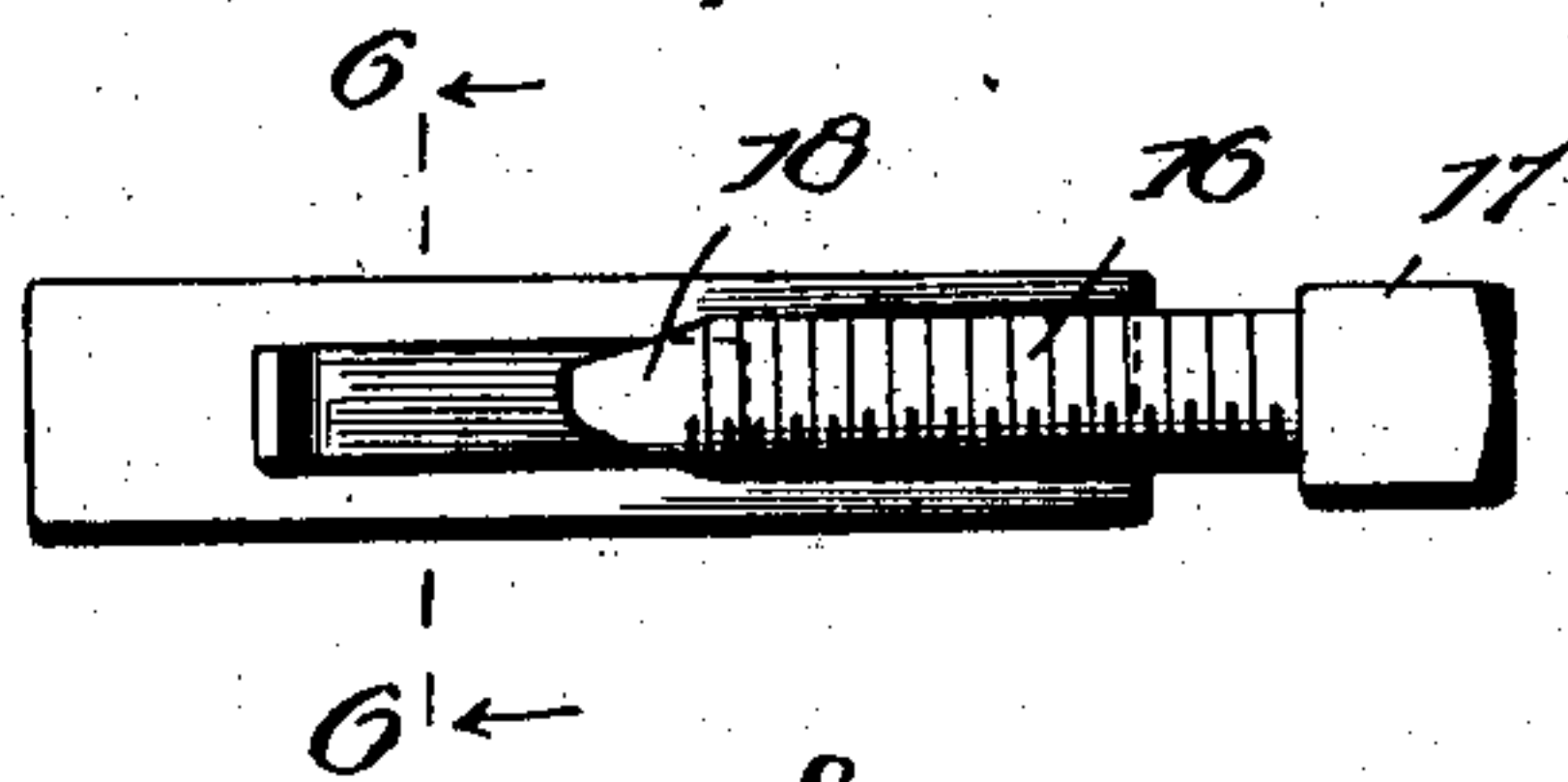
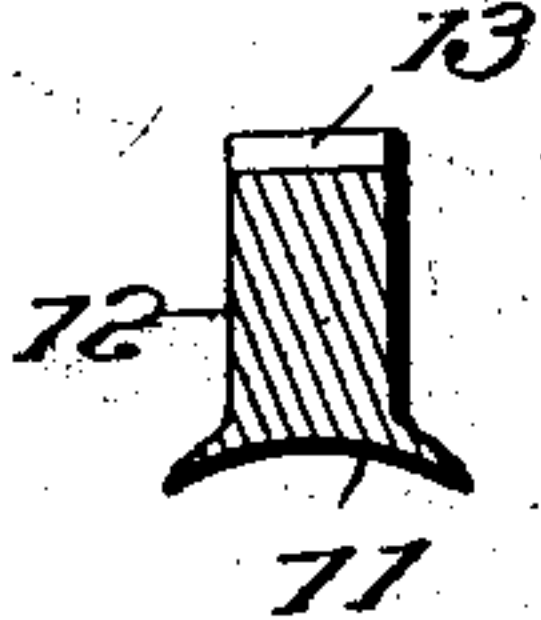


FIG. 6.



Witnesses

*Handwritten signatures of witnesses: Harold Shurt and J. H. J. J. J.*

*Richard S. Hoyt, Inventor*  
*Ernest Hoyt*  
*Henry P. Hoyt*  
*Palston E. Siddons, Attorneys*



# UNITED STATES PATENT OFFICE.

RICHARD S. HOYT, HENRY P. HOYT, AND ERNEST C. HOYT, OF FORT FAIRFIELD, MAINE.

## HANDLE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 746,086, dated December 8, 1903.

Application filed April 18, 1903. Serial No. 153,250. (No model.)

*To all whom it may concern:*

Be it known that we, RICHARD S. HOYT, HENRY P. HOYT, and ERNEST C. HOYT, citizens of the United States, residing at Fort Fairfield, in the county of Aroostook and State of Maine, have invented certain new and useful Improvements in Handle-Fasteners, of which the following is a specification.

Our invention relates to improvements in appliances for fastening handles to axes, hammers, and other handled tools.

In the drawings, Figure 1 is a side elevation of an ax, broken away, with our invention applied. Fig. 2 is a bottom plan view of the same. Fig. 3 is a central sectional view of the same on the line 3 3, Fig. 2. Fig. 4 is a side elevation of our appliance detached. Fig. 5 is a top plan view of the appliance. Fig. 6 is a sectional view on the line 6 6, Fig. 5, looking in the direction of the arrows.

7 represents an ax, shown for purpose of illustration, and 8 is a handle of any approved style therefor, both being broken away, the handle being in the usual opening through the ax provided for that purpose.

9 is a recess formed in the ax and communicating with the handle-opening referred to, the rear wall of which is parallel with the butt-end of the ax, while the top wall, as well as the bottom wall, of the recess is formed on an oblique angle, as more clearly shown in Fig. 3.

10 is an opening formed in the ax and leading upward from the bottom thereof into the recess 9 and provided with suitable screw-threads to be hereinafter referred to.

11 is a crescent-shaped plate having a curvature on its under side like that of a tool-handle, as best seen in Fig. 9. This plate is equal in length to the height of the tool for which it is adapted and is of a suitable material.

12 is a lug integral with and extending from the base-plate 11 and is provided with a cam-face 13. Said lug is provided near its upper end with a cam-slot 14, extending in a direction transverse of the base-plate 11.

15 is a screw passing through the ax and through the cam-slot 14, whereby the plate 11 and its lug are held against displacement and at the same time guided in their movement.

16 is a combined set and locking screw adapted to enter the opening 19, the threads thereof intermeshing with the thread of the said opening.

17 is a rectangular head integral with the screw 16. This screw 16 is provided with a conical point 18, the cone being on the same angle as that of the cam-face 13 of the lug 12, with which it coacts, as will be fully hereinafter pointed out.

The parts being assembled in the position shown in Fig. 3, a wrench or other suitable tool is applied to the screw 16, whereupon it is revolved and working upon the threads of the opening 10 it is advanced. In advancing its conical point 18 engages the cam-face 13 of the lug 12, whereupon by its continued advancement the plate 11 is crowded toward and against the handle of the tool, thus wedging or locking the handle in the tool or ax head. The angle of the top wall of the recess 9 facilitates the movement of the lug 12 and plate 11, as does also the cam-slot 14 and the screw 15, by guiding it and keeping the cam-face of the lug in proper relative position with the conical point 18 of the screw 16, as will be understood by all mechanics.

Any desired pressure may be applied by the continued turning of the screw 16.

Should the handle become loose by reason of shrinkage or for any other reason, it is only necessary to give the set-screw 16 several turns to again tightly clamp the handle in ax or other tool.

The top of the lug 12 is beveled to adapt it to slide readily on the top wall of the recess.

It will be thus seen that we have provided a cheap, simple, but effective clamp for the purpose set forth.

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

1. The combination with a tool-head, of a locking-plate placed in the eye thereof, so that one edge may engage the handle and the other edge presenting an incline, a screw passing through the head and engaging the said incline and thereby forcing the plate laterally against said handle.

2. The combination with a tool-head, of a locking-plate placed in the eye thereof, so that

one edge may engage the handle and the other  
edge presenting an incline, a screw passing  
through the head and engaging the said in-  
cline and thereby forcing the plate laterally  
5 against said handle, a pin engaging a trans-  
verse slot in the plate to retain it in the head  
while permitting such lateral movement of  
the plate.

In testimony whereof we have signed our

names to this specification in presence of two to  
witnesses.

RICHARD S. HOYT.  
HENRY P. HOYT.  
ERNEST C. HOYT.

Witnesses:

HERBERT W. TRAFTON,  
JOHN E. MAGILL.