

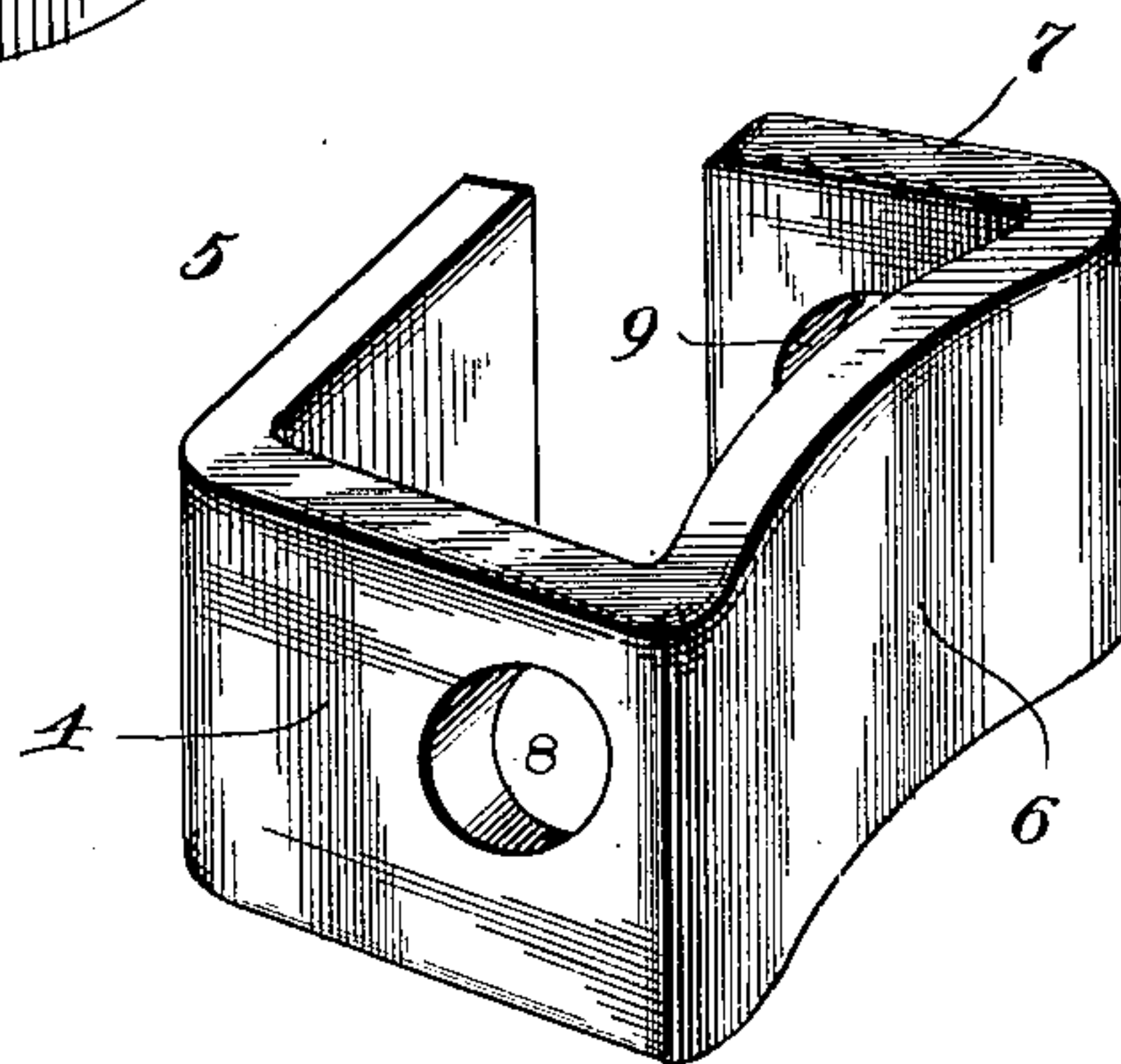
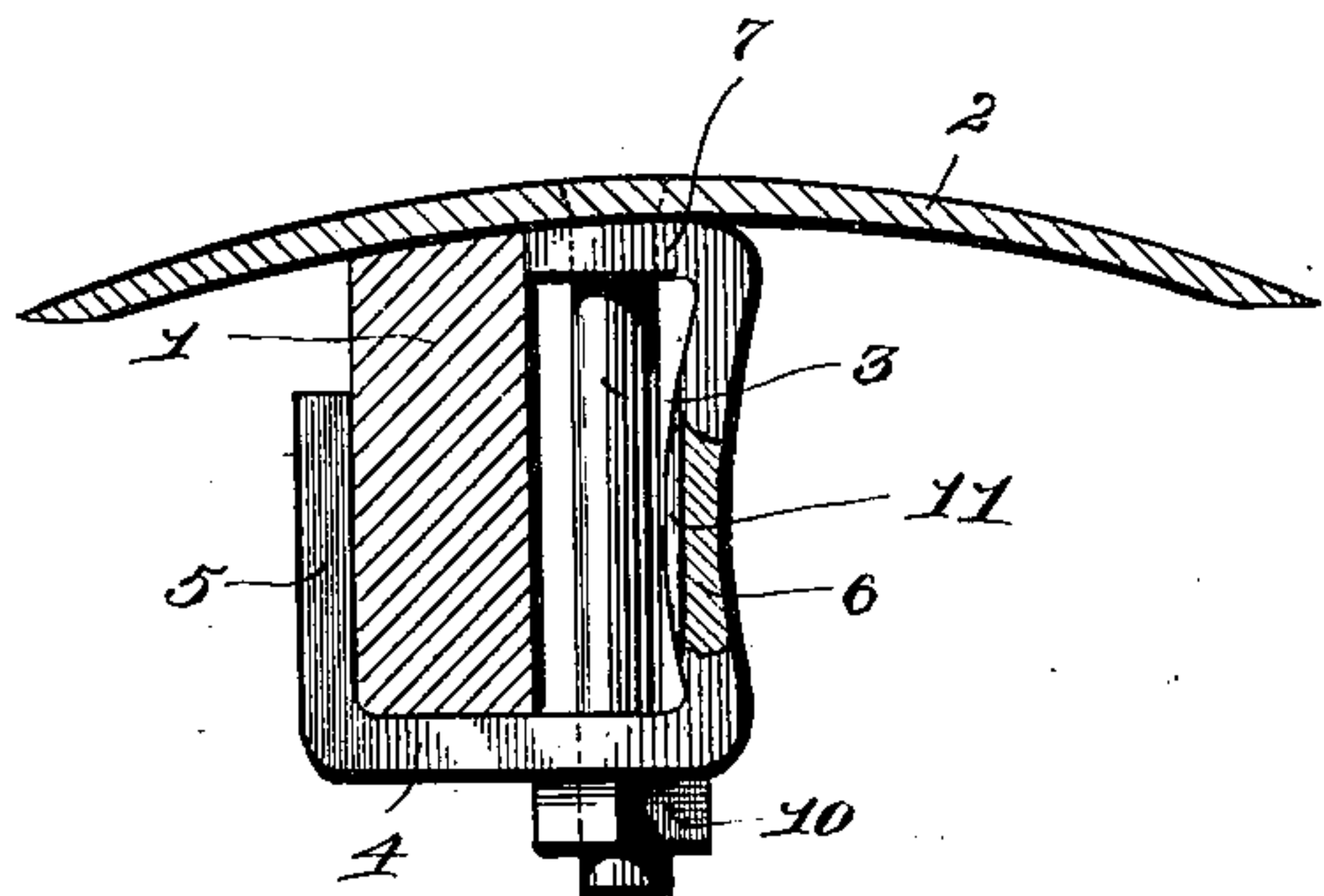
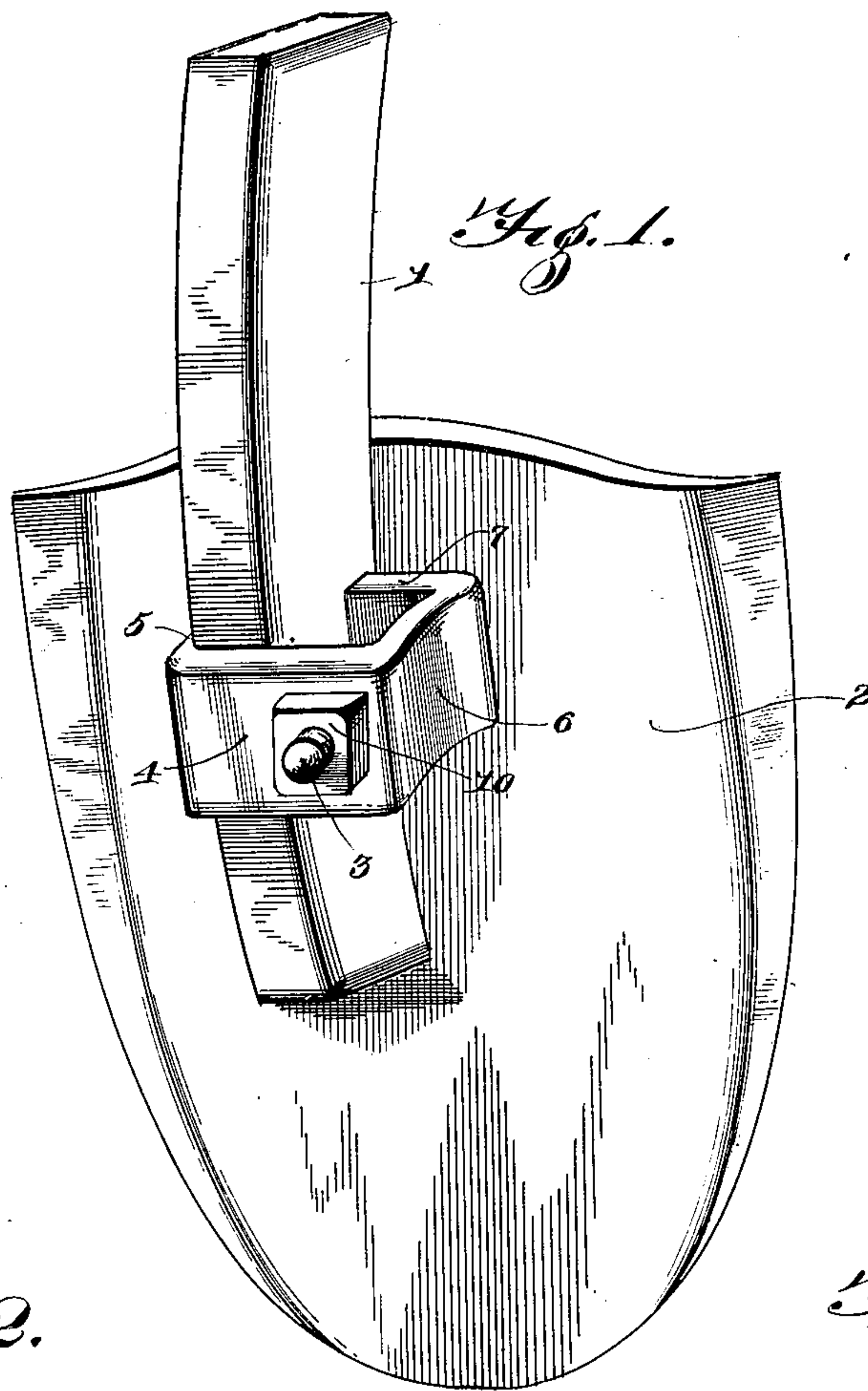
No. 656,175.

Patented Aug. 21, 1900.

W. H. CURD & O. V. HANGER.  
PLOW CLIP.

(Application filed Apr. 7, 1900.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM HENRY CURD AND ORION V. HANGER, OF DEARBORN, VIRGINIA.

## PLOW-CLIP.

SPECIFICATION forming part of Letters Patent No. 656,175, dated August 21, 1900.

Application filed April 7, 1900. Serial No 12,029. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM HENRY CURD and ORION V. HANGER, citizens of the United States, residing at Dearborn, in the county of Amherst and State of Virginia, have invented a new and useful Plow-Clip, of which the following is a specification.

This invention relates to cultivators, and has for its object to provide improved means for securing the cultivator-shovels to the standards, so that the former may be vertically adjustable upon the latter. It is furthermore designed to provide an improved form of attaching-clip to adjustably embrace the standard and firmly secure an ordinary shovel thereto without altering or changing either of the members, to conveniently take up any looseness occasioned by wear, and also to accommodate the clip to slight variations in the size of different standards.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view showing the application of the present invention. Fig. 2 is a transverse sectional view taken immediately above the connection between the shovel and the standard. Fig. 3 is a detail perspective view of the clip removed.

Corresponding parts in the several figures of the drawings are designated by like characters of reference.

Referring to the accompanying drawings, 1 designates the lower portion of a common or ordinary cultivator-standard, and 2 designates an ordinary shovel having the usual centrally-located bolt 3 projecting at the rear side of the shovel and which is ordinarily connected directly to the standard.

In carrying out the present invention there is provided a clip 4, of which one side or arm 5 is shorter than the other arm 6, the latter being bowed inwardly to form a spring-arm,

and the free extremity thereof is bent or directed transversely inward to form a foot or flange 7, which terminates about midway between the opposite sides of the clip. The transverse head portion of the clip and the foot thereof are provided with the aligned corresponding perforations or openings 8 and 9, respectively, which are located adjacent to the longer or spring arm or side of the clip and are designed to receive the bolt 3, carried by the shovel. Thus the clip comprises the opposite substantially-parallel arms or sides 5 and 6, which are connected at one end of the clip only by means of the transverse bar or head 4, the opposite end of the clip being partially open to receive the standard of a plow or cultivator.

In the application of the device the clip is placed with its foot against the rear side of the shovel, so as to receive the bolt 3 within the bolt-openings 8 and 9, and then a suitable nut 10 is fitted to the projecting rear end of the bolt, so as to bind against the head of the clip and adjacent to the bowed arm 6. The lower end of the standard is then received within the clip and between the short arm 5 and the bolt 3, after which the nut 10 is set up against the head of the clip to bind the latter firmly against the standard and the shovel, whereby the latter is rigidly secured to the former. It will be observed that the standard is engaged at opposite sides by the arm 5 and the adjacent end of the foot 7, so as to prevent twisting of either part. Should the clip work loose, it may be readily tightened by setting the nut up against the head of the clip to bend the spring-arm 6, and by reason of this adjustment the clip may be accommodated to any slight variations in the thickness of different cultivator-standards. Moreover, the clip and the shovel may be adjusted vertically upon the standard without removal therefrom.

From the foregoing description it will be apparent that no changes whatsoever are made in the shovel and the standard, and the only addition to these common parts is the clip, the usual shovel-bolt being employed to connect the three parts in a simple and effective manner. By the employment of the present device it is not necessary to weaken the standard by the formation of perforations therein,



although should the standard have any perforations they would not interfere with the application of the clip. As best indicated in Fig. 2 of the drawings, the inner face of the  
 5 spring-arm is provided with a longitudinal groove 11, so as to receive the bolt and admit of any lateral movement of the spring-arm during a tightening of the nut. It will be understood that the clip may be used at either  
 10 side of the shovel-bolt, so that the shovel may be located at either side of the standard, and the bolt may also be turned in the clip to adjust the lateral inclination of the shovel. Moreover, the clip is adjustable longitudinally upon the standard, so that the shovel  
 15 may be lowered as it becomes worn, thereby lengthening the life of the shovel.

What is claimed is—

1. The combination with a standard, and a  
 20 shovel, of a fastening-clip for the latter, comprising arms passing on opposite sides of the standard, a transverse head or bar connecting the arms at one end only of the clip, one arm fitting snugly the adjacent side of the  
 25 standard, and the opposite arm having an inwardly-directed foot-flange, the outer side of which bears against the shovel, and its extremity bears against the opposite side of the standard, and a fastening securing the clip to the shovel.  
 30

2. The combination with a standard, and a shovel, of a fastening-clip for the latter, comprising arms passing on opposite sides of the standard, and a transverse head or bar connecting the arms at one end only of the clip,  
 35 one arm having a terminal foot-flange bearing against the shovel and also against the adjacent side of the standard, and a fastening passing through the shovel, the foot-flange and the head of the clip.  
 40

3. The combination with a standard, and a shovel, of a fastening-clip therefor, comprising arms passing on opposite sides of the standard, and a transverse head or bar connecting the arms at one end only of the clip,  
 45 one arm of the clip being longer than the other and made elastic, the terminal end of said elastic arm bearing against the rear side of the shovel, and a fastening device connecting the clip to the shovel and located between the elastic arm and the standard.  
 50

4. The combination with a standard, and a shovel, of a fastening-clip therefor, consisting of arms passing on opposite sides of the  
 55 standard, and a transverse head or bar connecting the arms at one end only of the clip, one arm being longer than the other, bowed to form a spring-arm, and having its outer terminal end bearing against the rear side of

the shovel, and a fastening device connecting  
 the clip to the shovel and located between the spring-arm and the standard. 60

5. The combination with a standard, and a shovel, of a fastening-clip, consisting of arms passing on opposite sides of the standard, and  
 65 a transverse head or bar connecting the arms at one end only of the clip, one arm being longer than the other and bearing against the rear side of the shovel, and also bowed to form a spring-arm, an inwardly-directed foot  
 70 at the free end of the spring-arm and bearing against the adjacent side of the standard, and a bolt carried by the shovel and passing through the foot and the transverse head or bar of the clip. 75

6. A cultivator-shovel fastening, consisting in a clip, having opposite sides or arms, a transverse head or bar connecting the arms at one end only of the clip, and an inwardly-directed foot-flange at the free end of one arm,  
 80 said foot-flange and the transverse head or bar being provided with corresponding openings.

7. A cultivator-shovel fastening, consisting in a clip, having opposite sides or arms, and a transverse head or bar connecting the arms  
 85 at one end only of the clip, one of the arms being longer than the other and bowed to form a spring-arm, an inwardly-directed foot-flange provided at the free end of the spring-arm, and the foot-flange and the transverse  
 90 head or bar having corresponding openings formed therein and located adjacent to the inner side of the spring-arm.

8. The combination with a standard, and a shovel, of a fastening-clip therefor, consisting in arms passing on opposite sides of the  
 95 standard, a transverse head or bar connecting the arms at the outer end only of the clip, one arm being in contact with the adjacent side of the standard, and the opposite arm being longer than the former arm and also bowed transversely inward to form a spring-arm, an  
 100 inwardly-directed foot-flange at the free end of the spring-arm and bearing against the adjacent side of the standard, and a longitudinal fastening passing through the transverse head or bar and the foot-flange and securing the clip to the shovel, the inner face of the bowed spring-arm being provided with a longitudinal groove to receive the fastening. 105

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM HENRY CURD.  
 ORION V. HANGER.

Witnesses:

PERCY HARRIS,  
 W. E. SANDIDGE.