

No. 614,105.

Patented Nov. 15, 1898.

I. F. HAUFF.  
CLAMP.

(Application filed June 22, 1898.)

(No Model.)

Fig. 1.

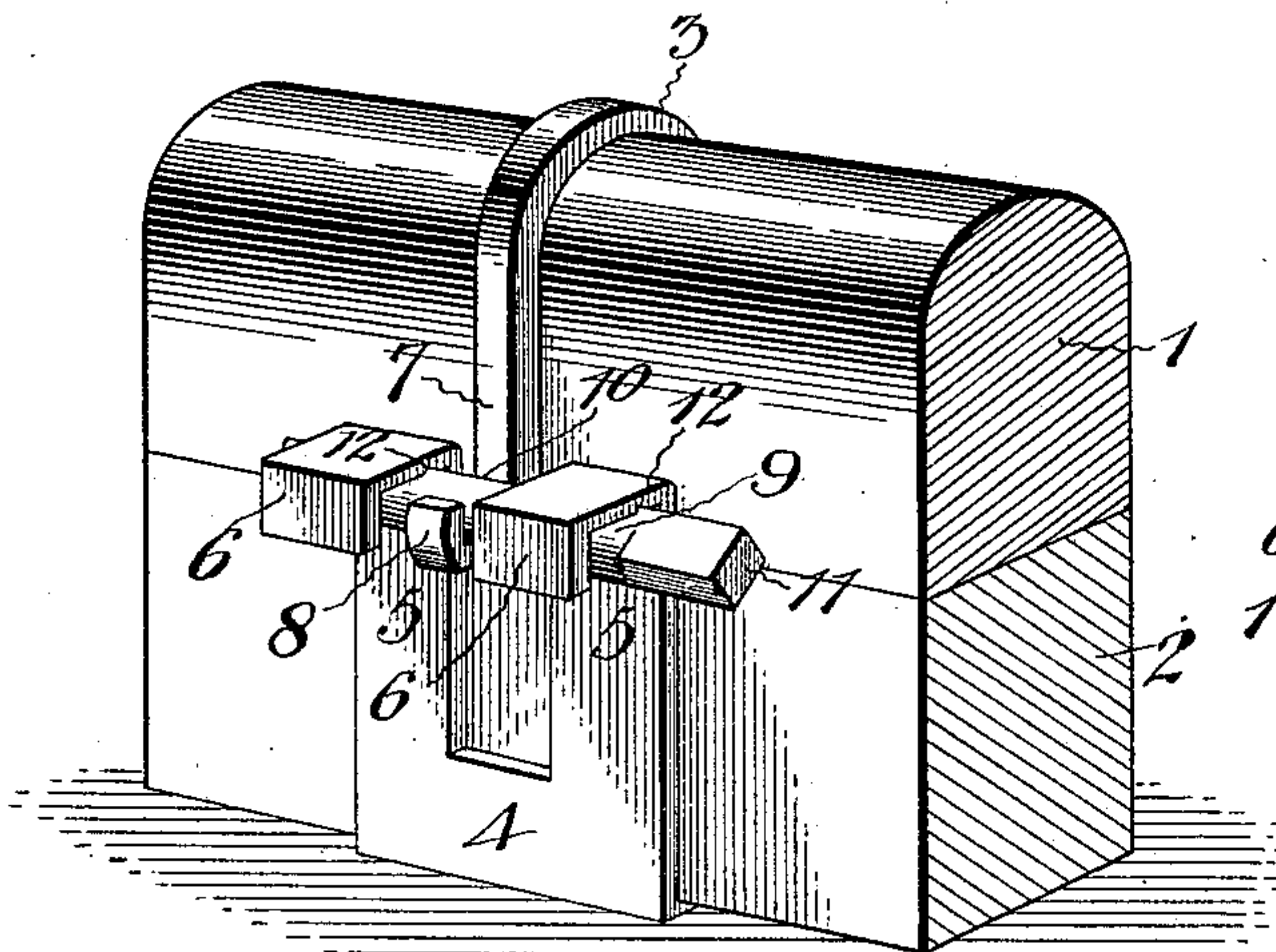


Fig. 2.

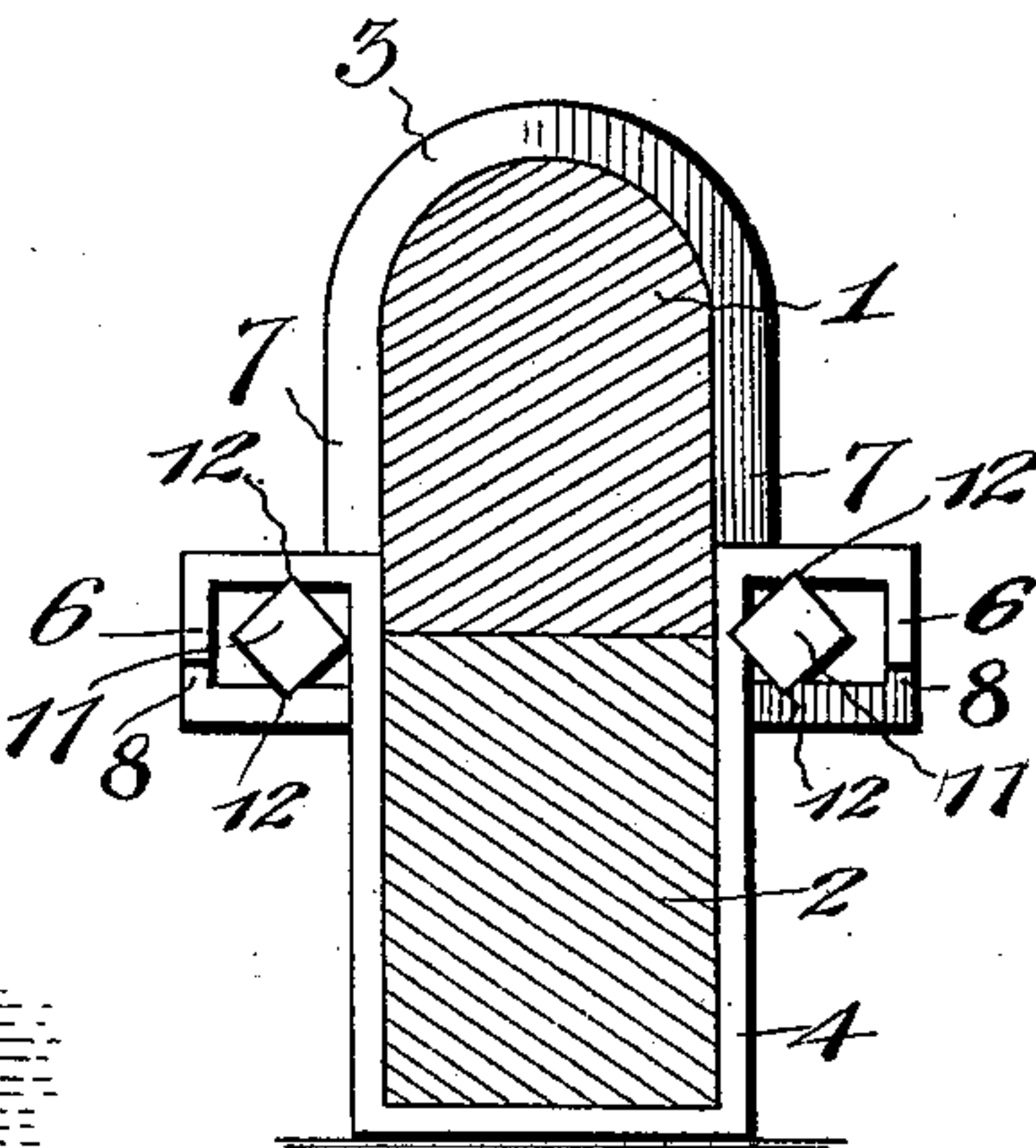


Fig. 3.

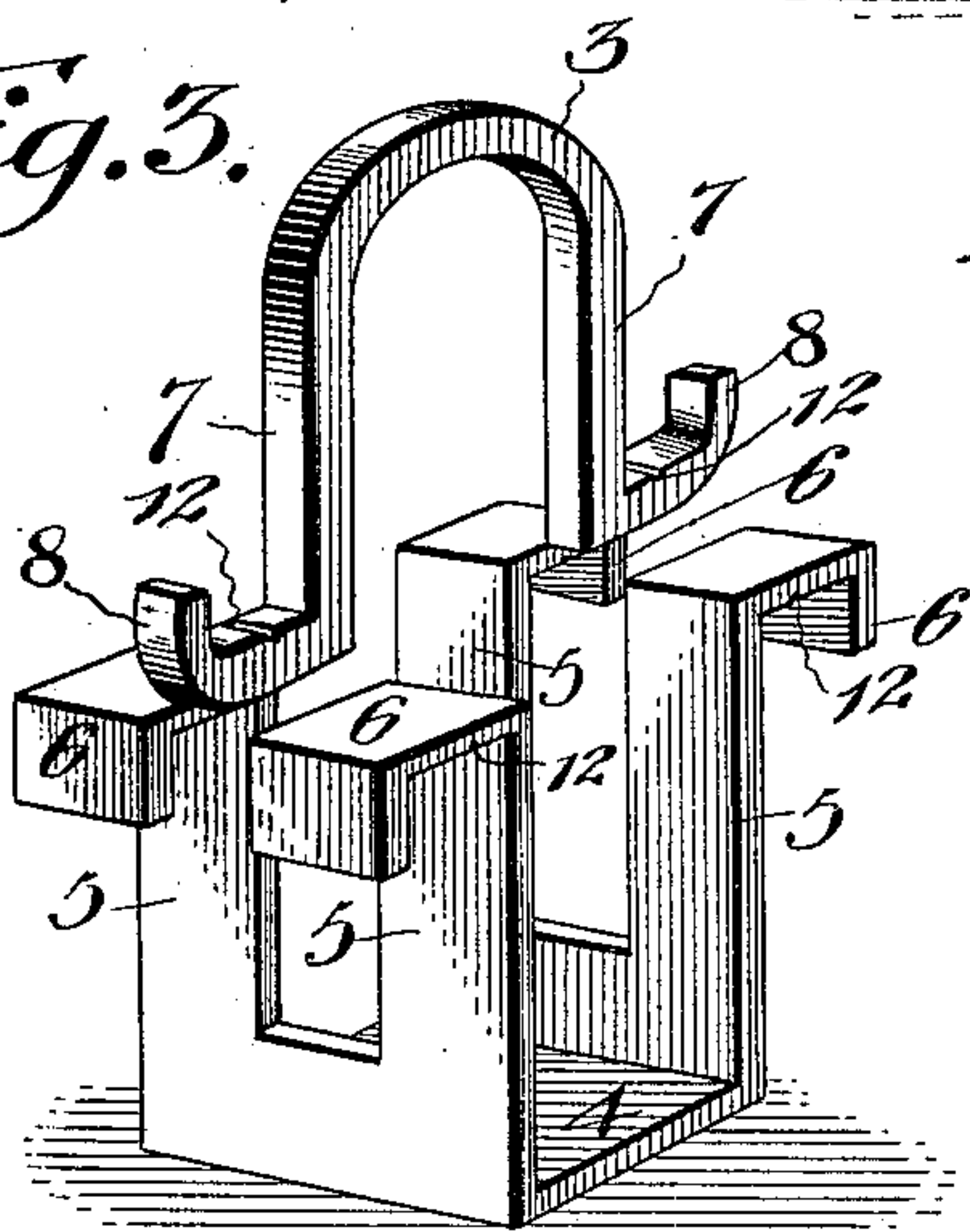


Fig. 5.

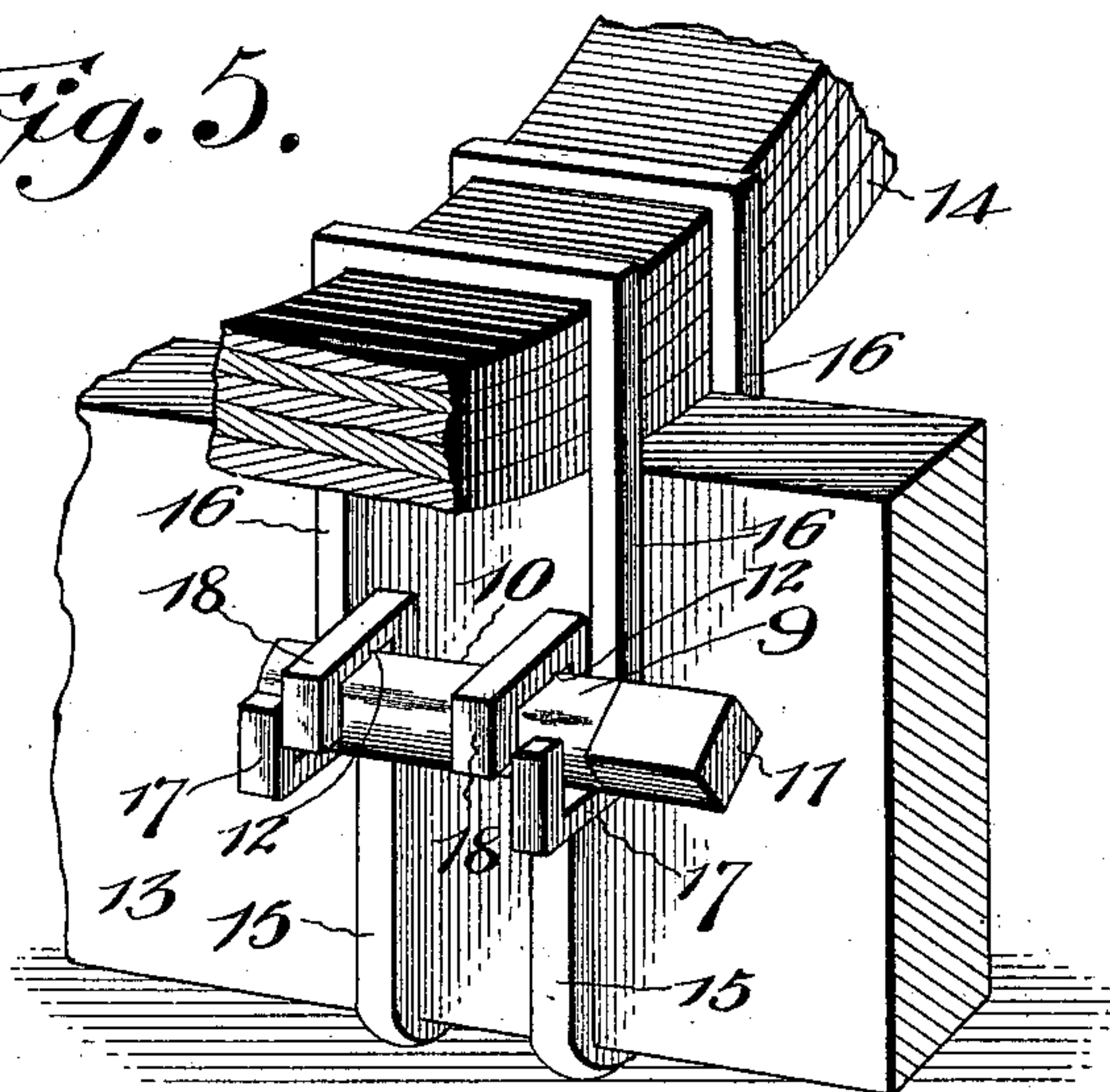
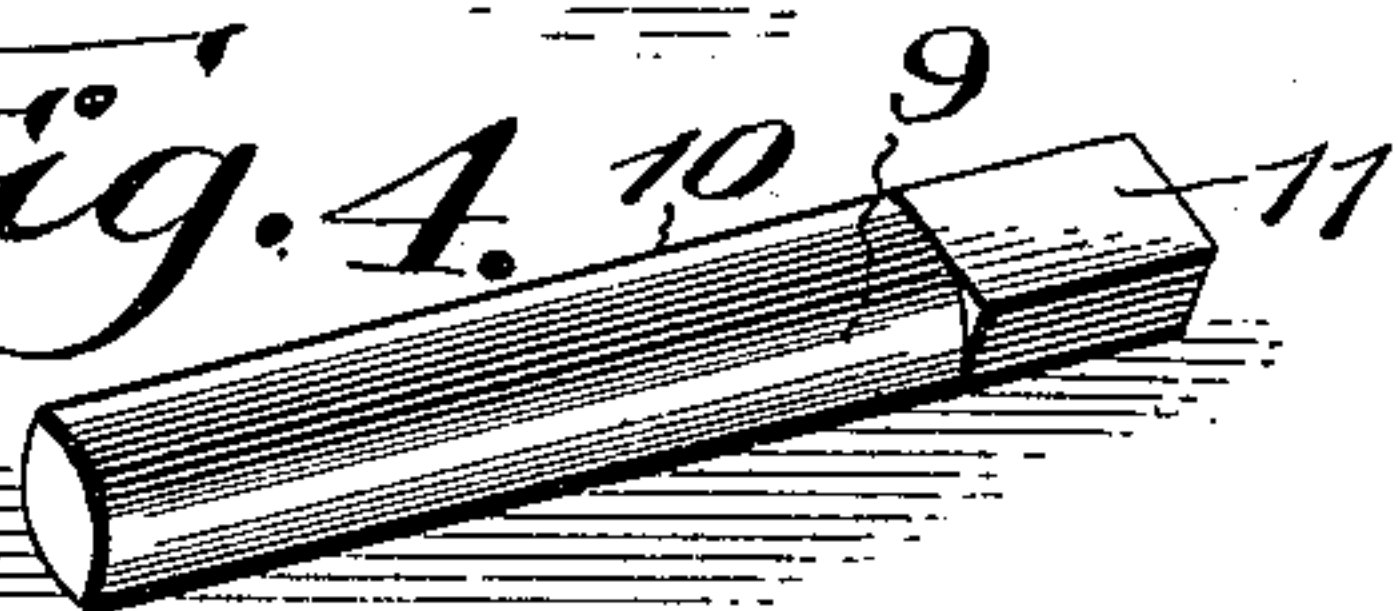


Fig. 4.



Witnesses

A. Roy Appleman  
W. B. Shepard

Isaac F. Hauff, Inventor.  
By his Attorneys,

Cashnow & Co.



# UNITED STATES PATENT OFFICE.

ISAAC F. HAUFF, OF TEMPLE, TEXAS.

## CLAMP.

SPECIFICATION forming part of Letters Patent No. 614,105, dated November 15, 1898.

Application filed June 2, 1898. Serial No. 682,368. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC F. HAUFF, a citizen of the United States, residing at Temple, in the county of Bell and State of Texas, have invented a new and useful Clamp, of which the following is a specification.

This invention relates to clamps; and its object is to provide a simple and durable clamp to be used for any purpose—as, for example, springs upon a vehicle-axle, &c.—which can be quickly placed in position and as readily removed and which dispenses with all bolts, nuts, and screws. This and other objects and advantages of a clamp constructed in accordance with my invention will be hereinafter more fully shown in the drawings and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my clamp in use. Fig. 2 is an end view thereof. Fig. 3 is a detail perspective view of the clamp members removed. Fig. 4 is a detail perspective view of the locking-key. Fig. 5 is a perspective view of a modified form of clamp in use upon a vehicle-spring.

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

Referring to the drawings, 1 and 2 designate two sections of timber having my improved clamp applied thereto, comprising clamp members 3 and 4, respectively. The member 4 is in the form of an approximately U-shaped strap, having its sides formed into a pair of arms 5 of equal length, the respective ends of which are formed into hooks 6, disposed upon the outside of the strap. The other member 3 is also of an approximate U shape; but instead of being in the form of a broad strap is simply a thin or narrow clip, having the extremities of its arms 7 bent into hooks 8, disposed in the plane of the body and at the outside thereof. These two clamp members are placed upon the timbers 1 and 2 or whatever is to be secured together, as shown in Fig. 1, having the hooked ends 8 of the members 3 disposed between the respective arms 5 of the strap 4, the length of the arms of the two clamp members being of a sufficient length for the hooks to register and form an eye into which the keys 9 are adapted to be placed to lock the members tightly upon the timbers 1 and 2. Each of these

keys 9 is wedge-shaped in cross-section, being preferably elliptical, as plainly illustrated, with straight edges 10 arranged at the ends of the longest diameter of the ellipse and extending the full length of the key, which is formed into a rectangular wrench-head 11 at one end thereof. By reason of the keys being elliptical or rounded upon their sides allows of the same being easily turned, as hereinafter described.

When the clamp members have been assembled as above described, a key 9 is inserted at each side and between the respective hooked ends of the clamps with the edges 10 transverse, which allows of the key being easily inserted, when a wrench is applied to the head 11 and the key turned until the respective edges 10 are seated in notches 12 in each of the respective hooks, thus firmly drawing the clamps together and locking the key from accidental displacement. To unclamp the device, it is simply necessary to turn the keys by use of a wrench, and the members are at once free to be removed.

The device as above arranged is used to clamp two timbers or the like longitudinally one upon the other; but where the two pieces cross each other at an angle another form is necessary, which is shown in Fig. 5. In this arrangement I have shown a modified form of clamp for connecting a spring upon the shaft of an axle, in which 13 designates an axle and 14 a spring secured thereto by my clamp. The clips 15 correspond to the clamp member 4, which could be used here just as well; but the clips 16 differ from the clip 3 by having their hooked ends 17 disposed at right angles to the plane of the body of the clip in order to aline with the hooks 18 of the clips 15, the only difference between the two forms of clamp being the disposition of the hooked ends of one of the members.

It will thus be readily understood that the clips may be interchanged and either one used in conjunction with the other, and instead of using one clip 3, as in Fig. 1, two more might be used by forming the key 9 somewhat longer and arranging the clips at each side of the clamp 4. The clips 3, instead of being narrow bands, may be broad straps having the hooked end portions reduced in width to fit between the arms 5 of the clamp 4.



Other changes in the form, proportion, and minor details of my device may be made without departing from the spirit and scope or sacrificing any of the advantages of my invention, and I therefore do not wish to be understood as limiting myself to the precise construction and arrangement as herein described, and shown in the drawings.

By the combination of the loop clamp members having hooked ends to receive a wedging key I have provided a simple, durable, and effective clamp which does away with the use of all bolts, screws, and nuts, which soon become worn or lost and thus render a clamp useless.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. A clamping device, comprising approximately U-shaped clips or members, having their ends formed into hooks, the hooks of the respective clips being reversely arranged, and keys inserted between the respective pairs of hooks, substantially as shown and described.

2. A clamping device, comprising approximately U-shaped clips or members having their ends formed into hooks, the hooks of the respective clips being reversely arranged and provided with notches, and keys inserted between the respective pairs of hooks, and elliptical in cross-section, forming a pair of oppositely-disposed longitudinal edges, and provided with a wrench-head at one end thereof, whereby the key may be turned and the edges thereof caused to seat themselves in the notches of the respective hooks, substantially as shown and described.

3. In a clamping device, the combination of an approximately U-shaped strap, having each of its sides formed into arms, the arms of the respective sides being spaced apart and the oppositely-arranged pairs of arms having

their extremities formed into reversely-disposed hooks, the latter having notches as described, and an approximately U-shaped clip having its ends formed into reversely-disposed hooks arranged in the plane of the clip, with a key having a pair of longitudinal edges formed at opposite ends of the greatest diameter thereof, and provided with a wrench-head at one end, whereby the key may be turned and the edges thereof caused to seat themselves in the said notches formed in the inner face of the respective hooks, substantially as shown and described.

4. In a clamping device, the combination with a pair of approximately U-shaped clips having their extremities respectively formed into reversely-disposed hooks, arranged in the plane of the clip, and a pair of approximately U-shaped clips having their extremities formed, respectively, into hooks arranged at right angles to the plane of the clip and upon the same side thereof, the hooks of the respective pairs of clips being reversely arranged, and keys inserted between the respective pairs of hooks, each key being elliptical in cross-section forming a pair of oppositely-disposed longitudinal edges, substantially as shown and described.

5. A clamping device, comprising clips or members having their ends formed into hooks, the hooks of the respective clips being reversely arranged, and keys inserted between the respective pairs of hooks, substantially as shown and described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ISAAC F. HAUFF.

Witnesses:

C. P. DODGE,  
W. W. STEPHENS.