

F. S. CARR.
 APPLIANCE FOR CUTTING PRONG RECEIVING SLITS IN CARRIAGE CURTAINS, &c.
 APPLICATION FILED APR. 19, 1909.
 945,445. Patented Jan. 4, 1910.

Fig. 1.

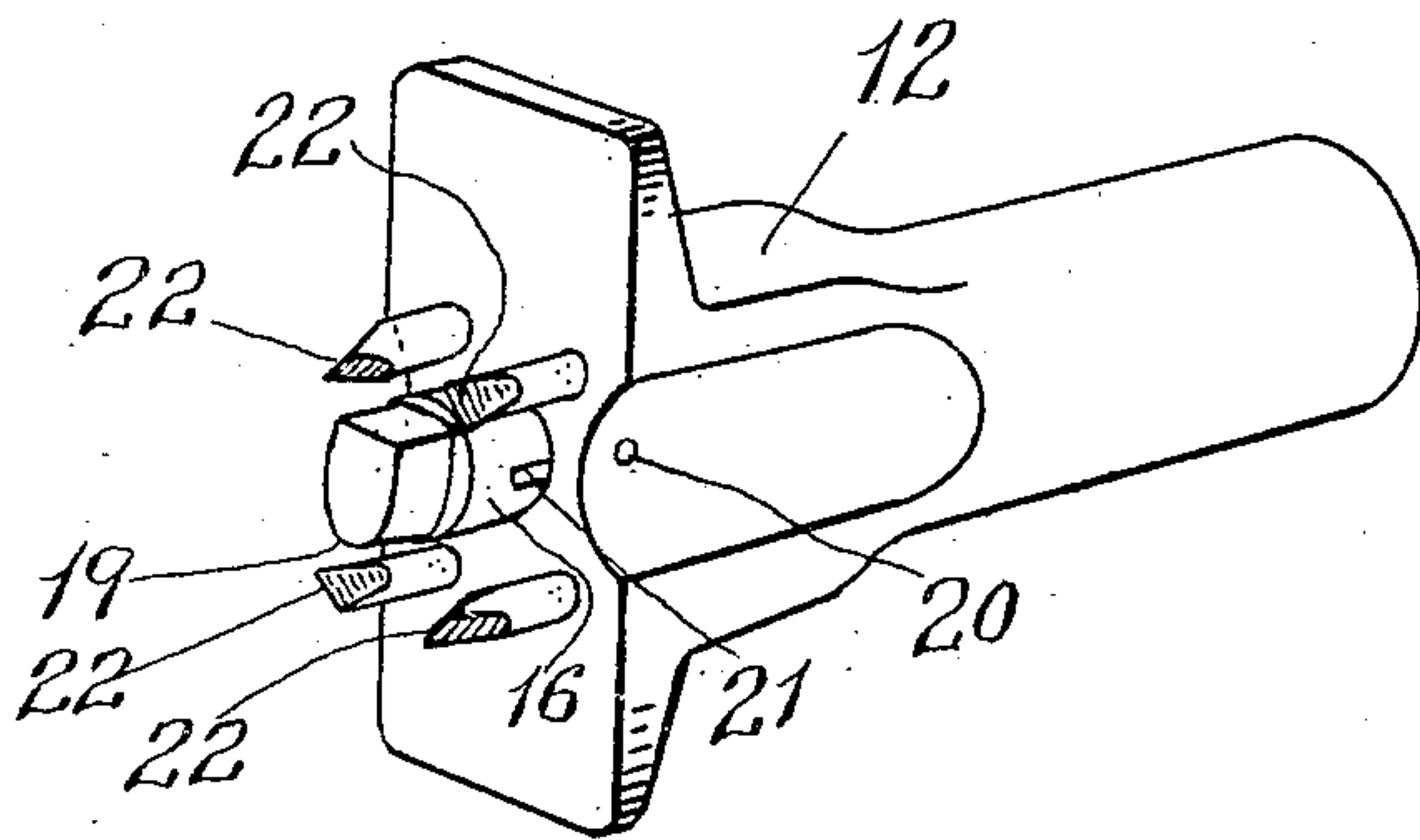


Fig. 2.

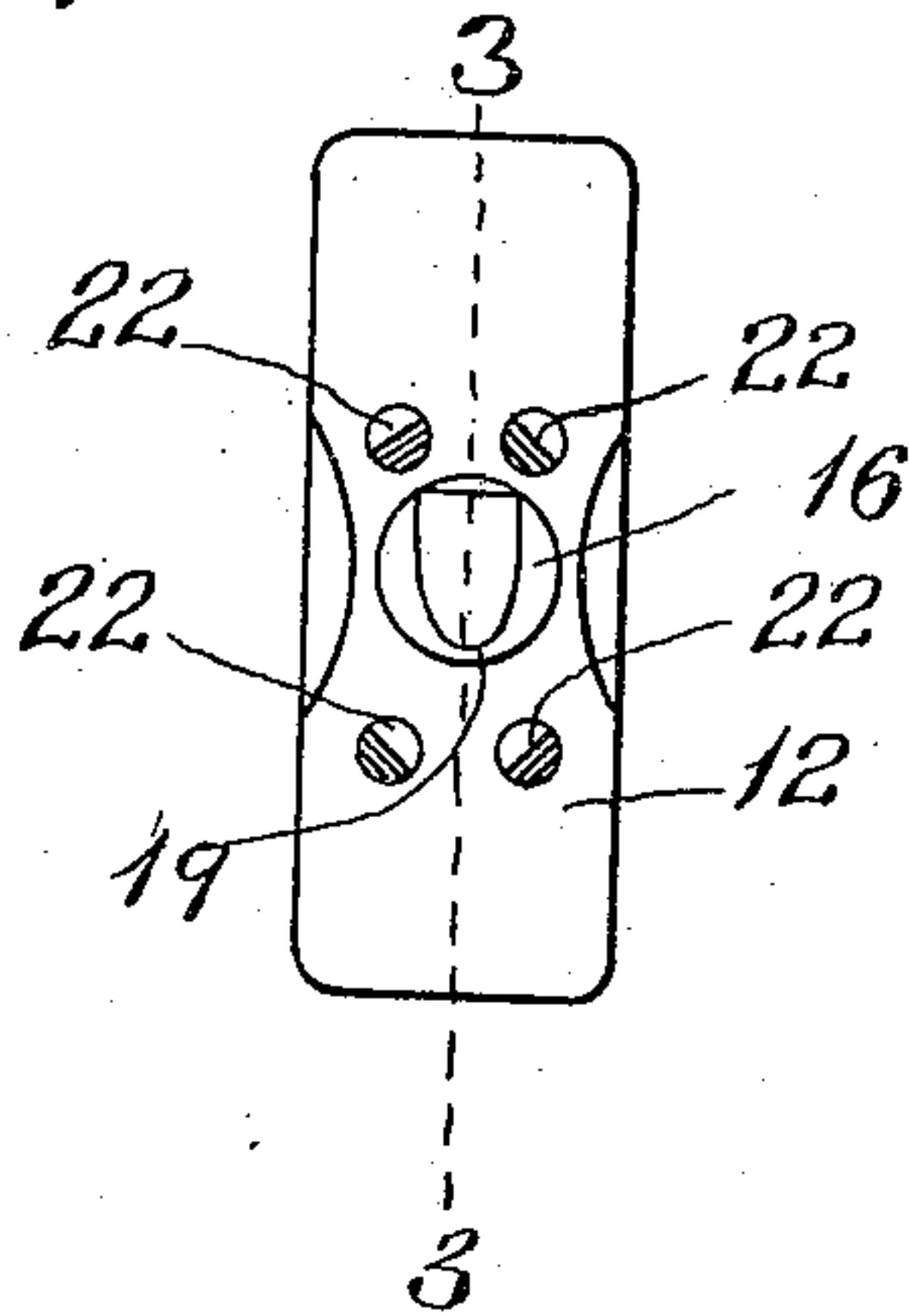


Fig. 3.

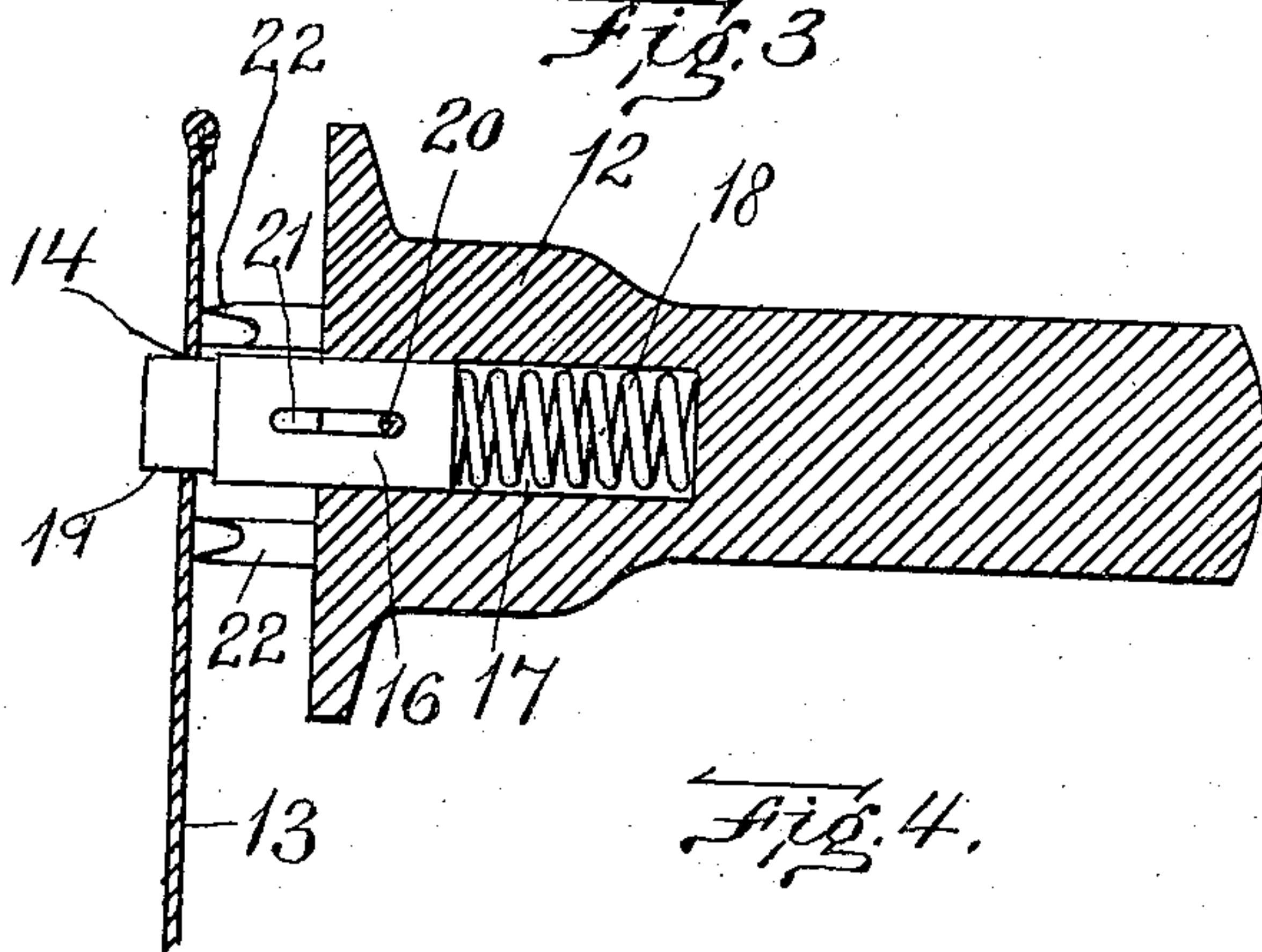
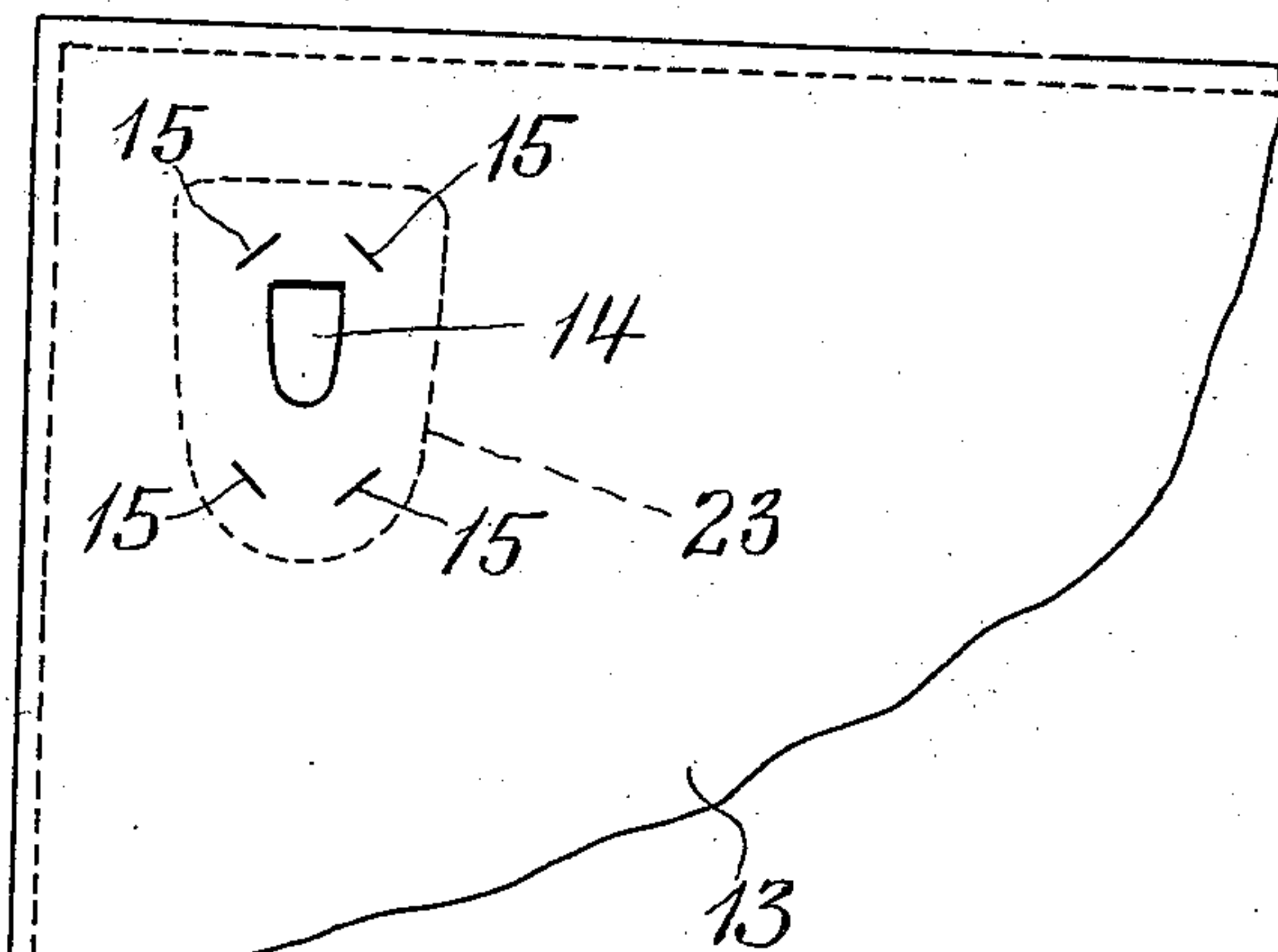


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRED S. CARR, OF BROOKLINE, MASSACHUSETTS, ASSIGNOR TO CARR FASTENER COMPANY, OF BOSTON, MASSACHUSETTS. A CORPORATION OF MAINE.

APPLIANCE FOR CUTTING PRONG-RECEIVING SLITS IN CARRIAGE-CURTAINS, &c.

945,445.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed April 19, 1909. Serial No. 490,728.

To all whom it may concern:

Be it known that I, FRED S. CARR, of Brookline, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Appliances for Cutting Prong-Receiving Slits in Carriage-Curtains, &c., of which the following is a specification.

This invention has for its object to provide a device for forming slits or openings in a carriage curtain, or other flexible piece of sheet material, which is provided with stud-receiving holes adapted to receive studs on the supporting frame work to which the curtain or sheet is applied when in use; for example, the frame work of a carriage top is provided with outwardly projecting studs which constitute the stud members of stud and socket fastening devices, the socket members of which are on a curtain adapted to be detachably secured to the frame work by said fastening devices. Stud-receiving holes are first formed in the curtain by means of a suitable punch which forms a hole corresponding in area to the cross section of the stud to be inserted in the hole. After the formation of the hole, a metallic socket member or bushing formed to surround the hole, is attached to the curtain, the opening in the metallic part coinciding with the hole cut in the curtain. The metallic part or member is provided with flexible prongs which are passed through slits or openings cut in the curtain adjacent to the stud-receiving hole, the prongs being clenched upon one side of the curtain to secure the metallic socket member or bushing thereto.

The appliance of my invention is intended to form the prong-receiving openings or slits in the curtain, the slits having a predetermined arrangement relatively to the stud-receiving hole, so that when the metallic part of the fastening member is attached to the curtain, it will occupy an exact predetermined position relatively to the hole in the curtain.

The invention is embodied in a device of the character stated, comprising a shank having a gang of cutters adapted to simultaneously form a group of prong-receiving slits or openings in a carriage curtain, and means carried by the shank for engaging the stud-receiving hole in the curtain and de-

termining the location of the prong-receiving openings by said hole.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of an appliance embodying my invention. Fig. 2 represents an end view of the same. Fig. 3 represents a section on line 3—3 of Fig. 2. Fig. 4 represents a side view of a portion of a carriage curtain having a stud-receiving hole and prong-receiving slits formed by the said appliance.

The same reference characters indicate the same parts in all the figures.

In the drawings,—12 represents a stock or shank adapted to be conveniently held by the operator's hand, and to be struck by a mallet or other tool to force the cutters, hereinafter described, into and through a carriage curtain 13 having a stud-receiving hole 14, and thus form a plurality of slits or openings 15 having a predetermined arrangement relatively to said hole.

16 represents a plunger which is movable in a socket 17 in the shank, and is normally projected therefrom by a spring 18, the outer end of the plunger having a portion 19 formed to enter and accurately fit the hole 14.

20 represents a stop pin affixed to the shank 12, and passing through a slot 21 in the plunger, said pin and the inner end of the slot limiting the projection of the plunger by the spring.

22, 22 represent a series of cutters preferably four in number, affixed to the shank, and projecting therefrom as indicated in Figs. 1 and 3, each cutter being preferably a cylindrical body beveled on opposite sides at its outer end to form a cutting edge. The outer end portion 19 of the plunger is normally projected beyond the cutting edges of the cutters, so that the said portion is adapted to enter a stud-receiving hole 14 before the cutters come in contact with the curtain.

The device is operated by first inserting the outer end of the plunger in a hole 14, and then striking the outer end of the shank a blow sufficient to force the cutters through the curtain, the slits 15 being thus formed simultaneously, and given a predetermined arrangement relatively to the hole 14, so that prongs formed on a metallic socket member or bushing 23, shown by dotted lines

in Fig. 4, when inserted in the slits 15, will insure the exact registration of the opening in the member 23 with the hole 14 in the curtain.

5 I claim:

1. A device of the character stated, comprising a shank having a gang of cutters adapted to simultaneously form a group of independent openings in a carriage curtain
10 or the like, and a device carried by the shank for engaging an orifice previously formed in the curtain and determining the location of the said openings relatively to said orifice, the shank and cutters being
15 movable endwise relatively to the said device.

2. A device of the character stated, comprising a shank, a spring-pressed plunger

movable in and normally projected from the shank, and having its outer end portion 20 formed to engage and fit a socket hole in a carriage curtain or the like, and a gang of cutters affixed to the shank and adapted to simultaneously form a series of openings in the curtain, having a predetermined rela- 25 tion to the socket hole determined by the engagement of the plunger therewith, the plunger being normally projected beyond the cutting edges of the cutters, and adapted to be retracted behind said edges. 30

In testimony whereof I have affixed my signature, in presence of two witnesses.

FRED S. CARR.

Witnesses:

C. F. BROWN,

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