

(No Model.)

G. A. GUYNEMER.  
GATE LATCH.

No. 450,768.

Patented Apr. 21, 1891.

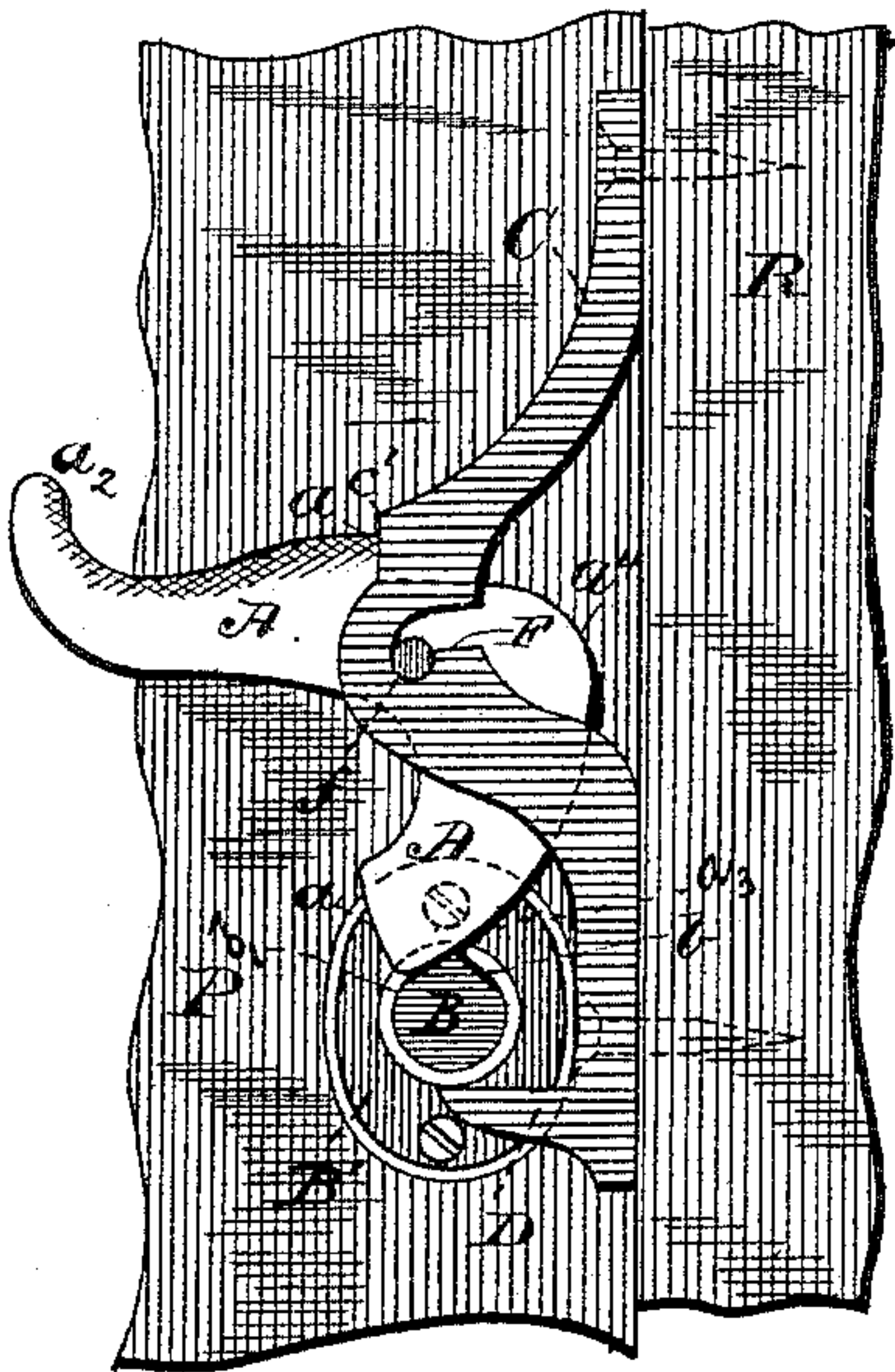


Fig. 1.

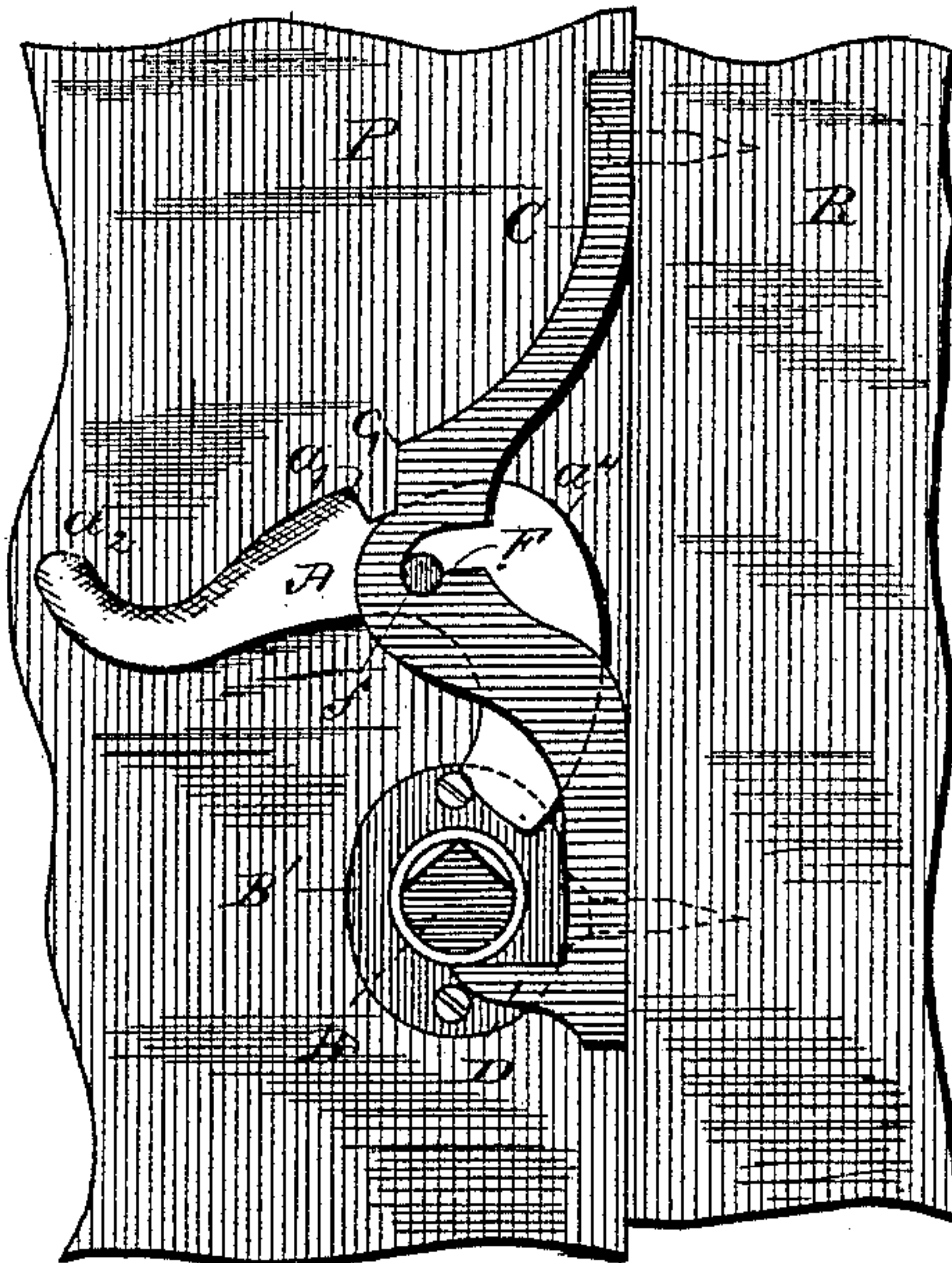


Fig. 3.

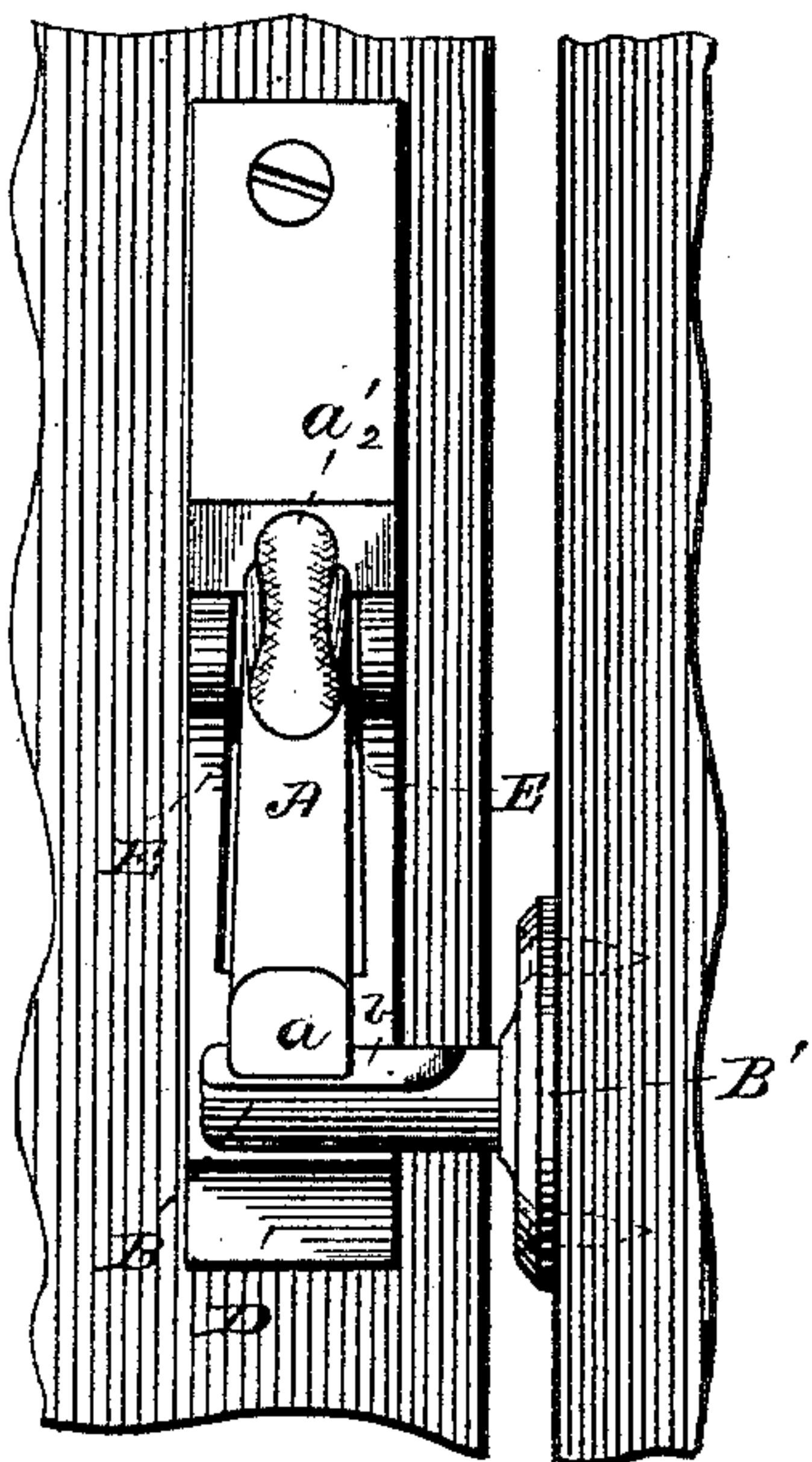


Fig. 2.

Witnesses  
W. B. Harris  
J. C. Wilson.

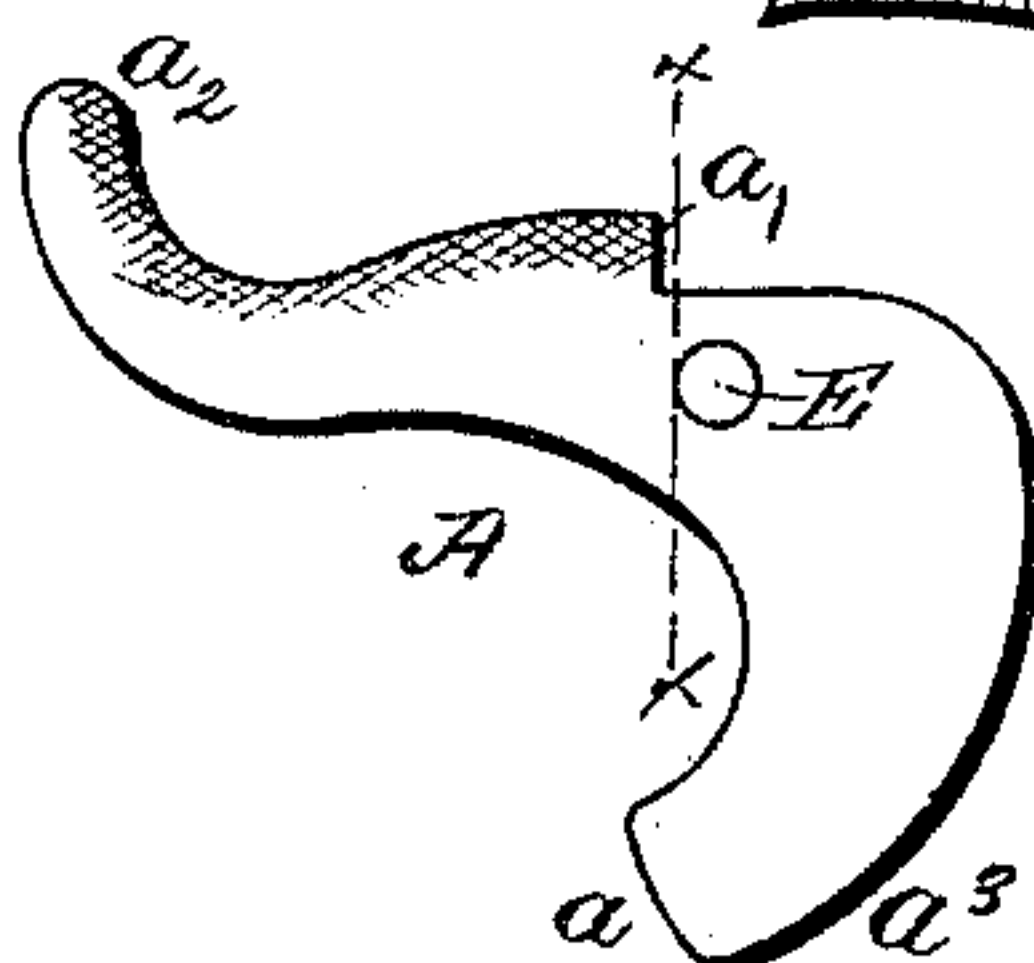


Fig. 4.

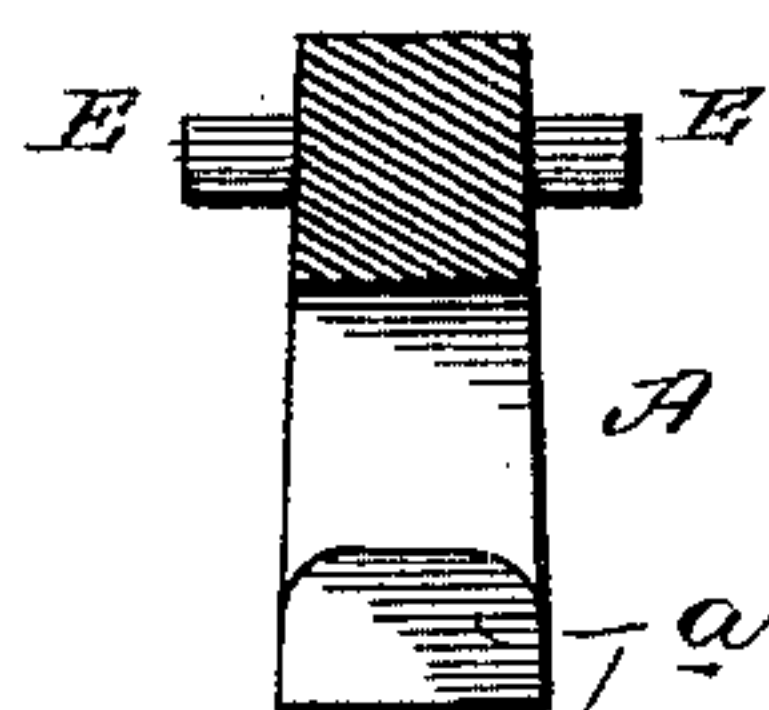


Fig. 6.

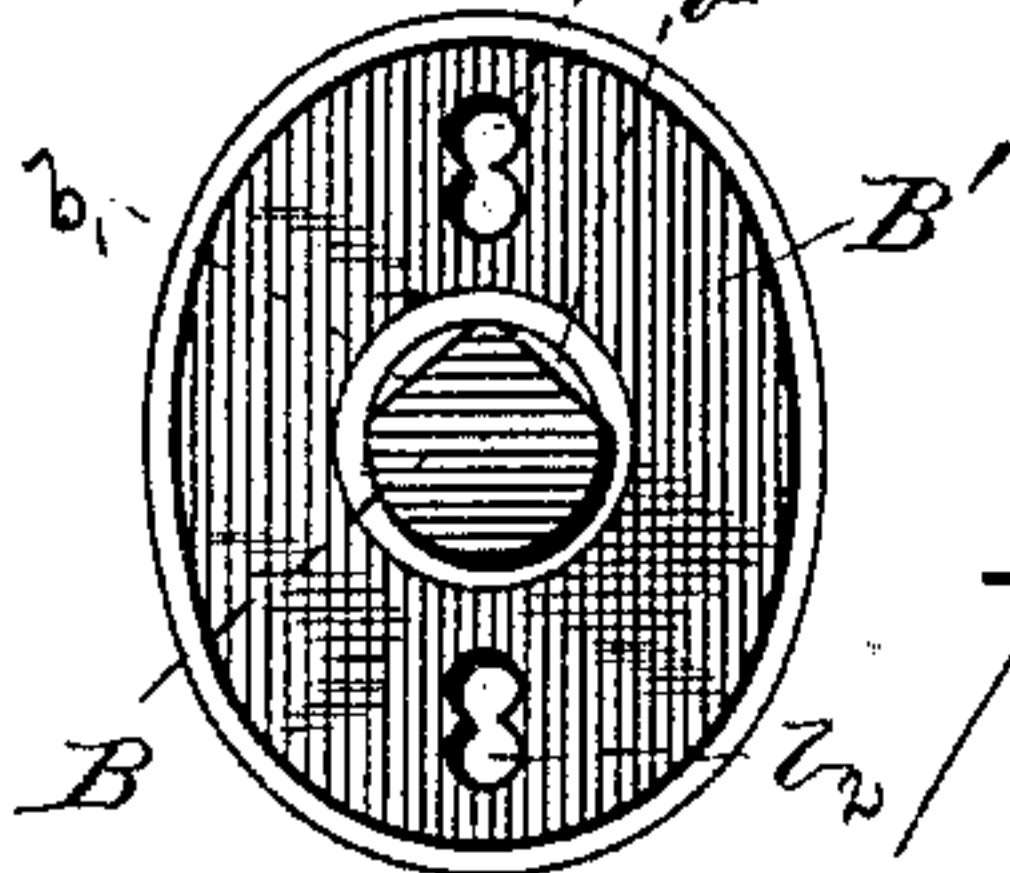


Fig. 7.

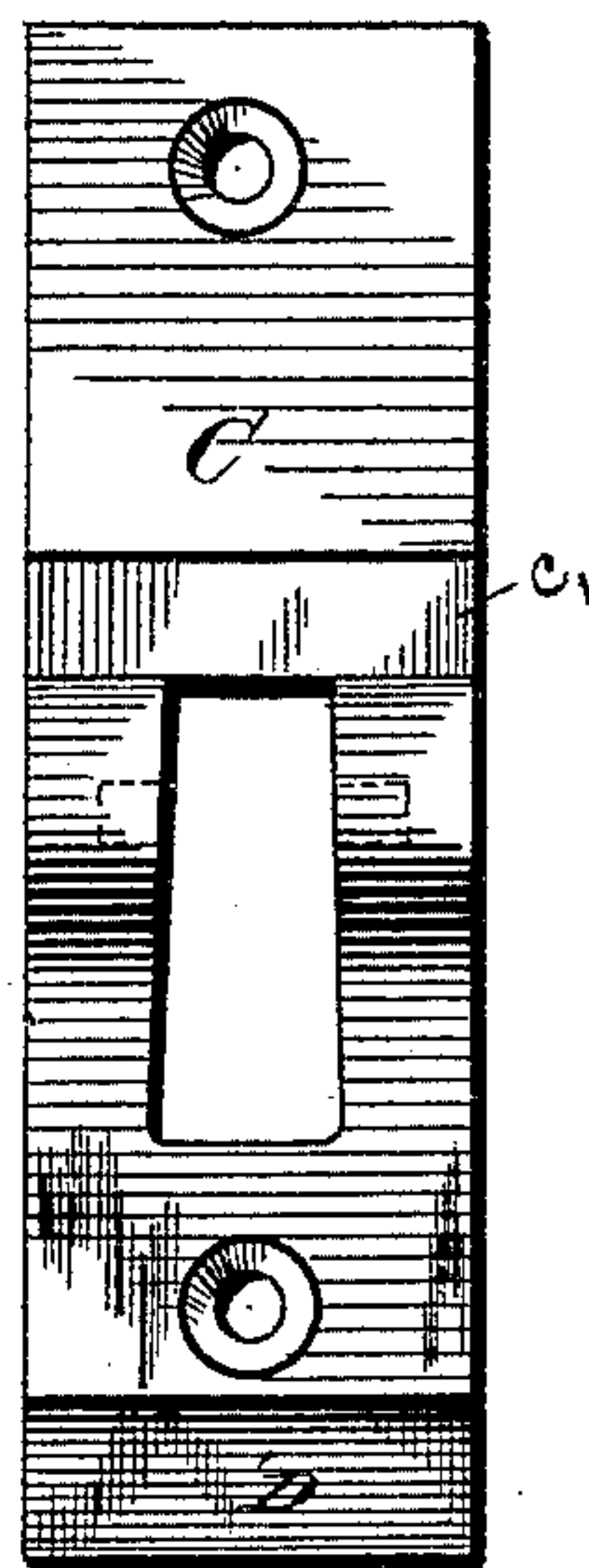


Fig. 5.

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# UNITED STATES PATENT OFFICE.

GUSTAVUS A. GUYNEMER, OF SHREVEPORT, LOUISIANA.

## GATE-LATCH.

SPECIFICATION forming part of Letters Patent No. 450,768, dated April 21, 1891.

Application filed January 17, 1891. Serial No. 378,117. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAVUS A. GUYNEMER, a citizen of the United States, residing at Shreveport, in the parish of Caddo and State of Louisiana, have invented certain new and useful Improvements in Gate-Latches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to latches for gates, doors, &c.; and it consists of the devices hereinafter described and claimed.

Reference is had to the accompanying drawings, wherein my device is shown as applied to a gate.

The same parts are indicated by the same letters.

Figure 1 represents a profile view of a portion of a gate-frame and gate-post carrying my devices, showing the gate latched. Fig. 2 represents a view of the same from the rear. Fig. 3 represents my device as unlatched, with the gate being just about to swing open. Fig. 4 represents a side view of the latch detached. Fig. 5 represents a rear view of the latch-plate with the latch removed. Fig. 6 represents a section along the line  $x x$  of Fig. 4. Fig. 7 represents my device for adjusting the stud engaging the latch to allow for any sagging of the gate.

A represents the latch, having a beveled face  $a$ , shoulder  $a'$ , thumb-lug  $a^2$ , rear face  $a^3$ , and trunnions E. The center of gravity of A is to the right of the vertical line through the trunnions.

B represents the stud attached to the gate-post. The upper face of the stud is beveled both ways, as shown at  $b$  and  $b'$ . This stud is preferably cast in one with the plate  $B'$ , said plate preferably having two pairs of screw-holes  $b^2 b^2$ , (see Fig. 7,) of which the upper one of each pair or the lower one of each pair, as the case may be, should be used in screwing the plate to the gate-post.

C represents the latch plate or frame screwed to the gate. This latch-plate has a rectangular slot in its lower center to receive the latch, with a face  $c'$ , adapted to engage the shoulder  $a'$  of the latch. In the walls of the score for the latch are two slots F, terminating in a

U-shaped bearing  $f$  for the trunnions E. At the lower end of the latch-plate the stop D prevents the gate from being lifted clear of the stud B, and so becoming unfastened.

P represents the gate-post, and R the gate-frame.

The operation of my device is as follows: Suppose the gate to be open. Since the center of gravity of the latch is to the right of the trunnions, the heavy end of the latch will tend to fall, causing the shoulder  $a'$  to bear against the face  $c'$ . Now, when the gate is swung to, the beveled face  $a$  of the latch will strike the beveled face  $b$  of the stud secured to the gate-post, and the latch will be tilted up until the apex of the stud has passed the lowest point of the latch, when the rear edge  $a^3$  falls behind the face  $b'$ , securely locking the gate. It will readily be seen that if the distance between the rear face  $a^3$  and the stop D be less than the vertical diameter of the stud B it will be impossible, without breaking some part, to open the gate by merely pushing back upon it or lifting it. When it is desired to unlatch the gate, by merely pressing down upon the thumb-lug  $a^2$  the latch is removed from behind the lug and the gate is easily opened. To facilitate opening the latch, the faces  $a^3$  and  $b'$  should be struck with a curve very nearly coinciding with that in which each particle of  $a^3$  moves in raising the latch. It will be noted that, except for the slight effort spent in raising the latch as the gate swings to, all the strains on the trunnions will be downward, and that hence there will be no appreciable effort to throw the trunnions out of their slots; but as an additional precaution the length of the slot may be so determined that the rear edge  $a^4$  of the latch may strike the gate-frame before the trunnions escape from their slots. In any case it will be necessary to put the latch in place before screwing down the latch-plate.

I may use a through-bolt in lieu of the trunnions, slots, &c.; but I prefer the trunnions, as they are less likely to work stiffly from rust and other causes, and, moreover, being cast or pressed in one with the latch, they avoid multiplicity of parts and consequent expense.

I have shown the latch secured to the gate



and the stud to the gate-post; but it is evident that their relative positions may be reversed, in which case the stud would swing against the latch, and not the latch against the stud. The same general effect would be obtained, however.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

- 10 1. In a latching device, the combination of the latch A, having trunnions E away from the center of gravity of the said latch, a thumb-lug  $a^2$  and shoulder  $a'$  on the exterior lighter arm, and beveled face  $a$  and curved  
15 face  $a^3$  on the interior heavier arm, with a latch-plate slotted in its lower center to receive the latch, and having slots F, shoulder  $c'$ , and stop D, and the stud B, having beveled faces  $b$  and  $b'$ , all substantially as de-  
20 scribed.

2. In a latching device, the combination, with a latch having trunnions or pivots separating it into two arms, the lighter exterior arm having a thumb-lug and a check-shoulder and the heavier interior arm having a beveled  
25 lifting-face and a holding-face, of a support for the said trunnions or pivots, a projection on or near said support engaging said check-shoulder in the latch and preventing the turning of the latch backward, and a stud engaging  
30 said lifting-face or holding-face, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GUSTAVUS A. GUYNEMER.

Witnesses.

CHAS. SCHAEFFER,  
JAS. B. NOLAN.