

(No Model.)

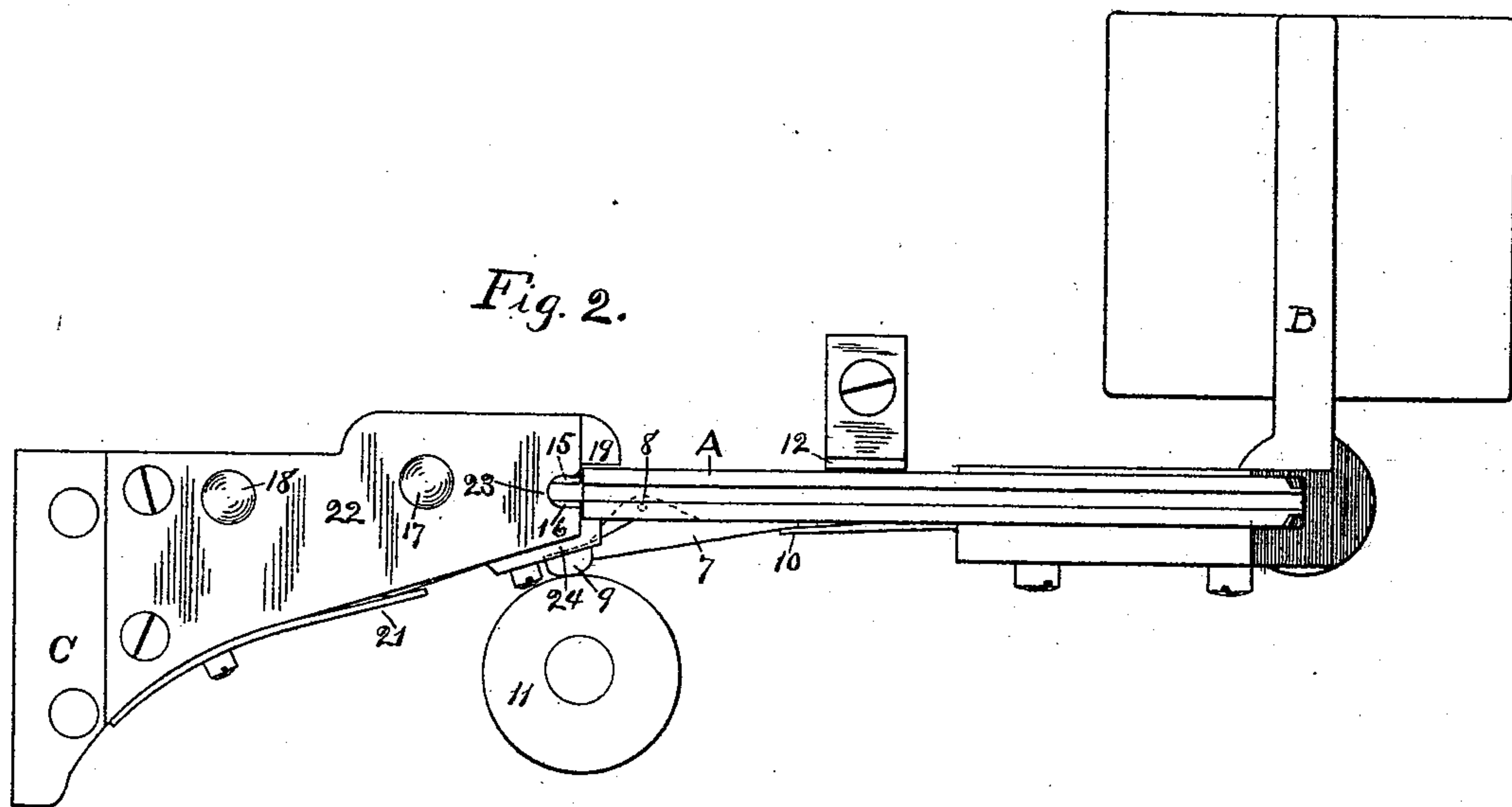
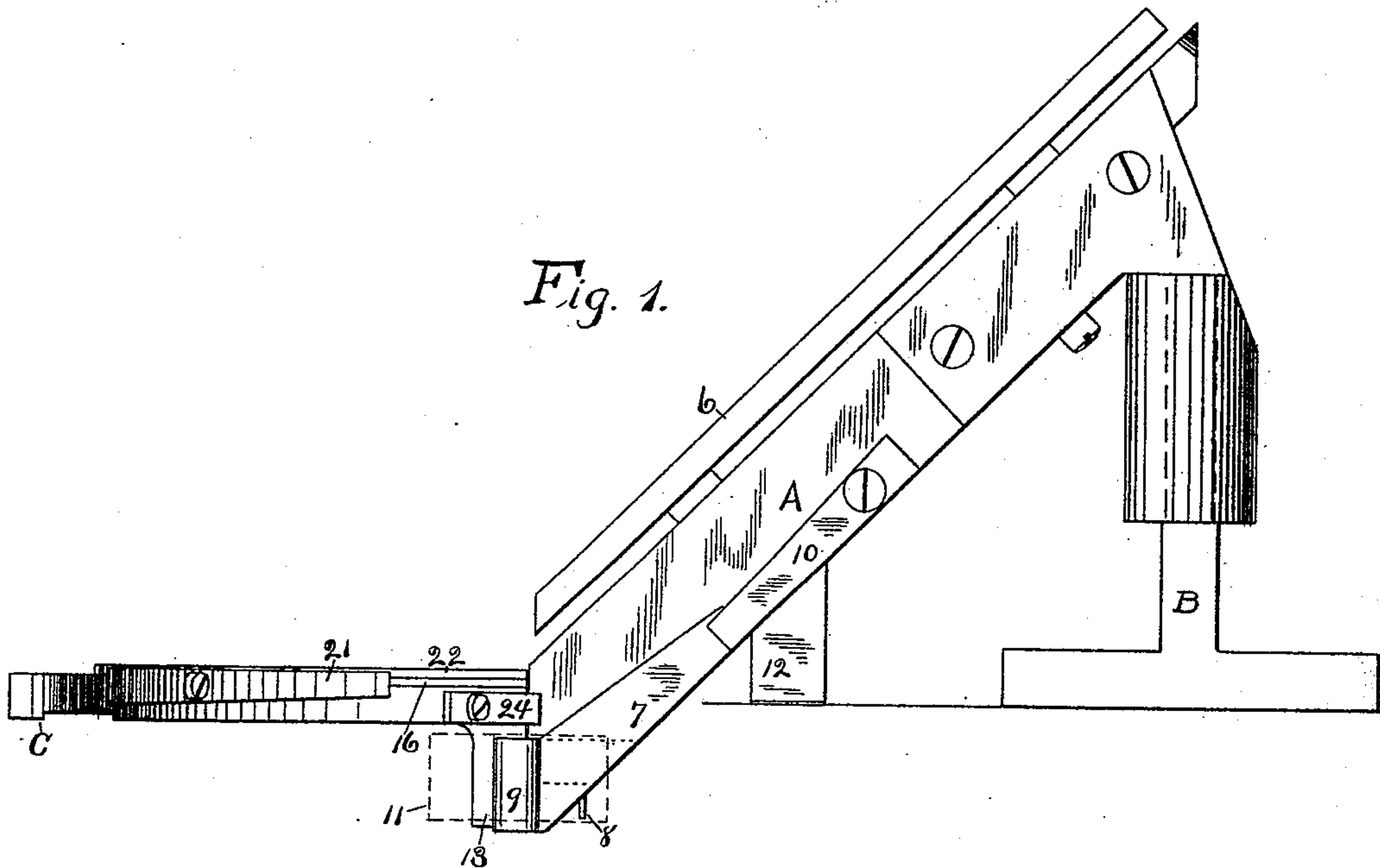
2 Sheets—Sheet 1.

H. K. JONES.

MECHANISM FOR FEEDING HEADED BLANKS.

No. 495,201.

Patented Apr. 11, 1893.



Witnesses.

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C. Darwin Loomis Jr

Inventor:

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Atty.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

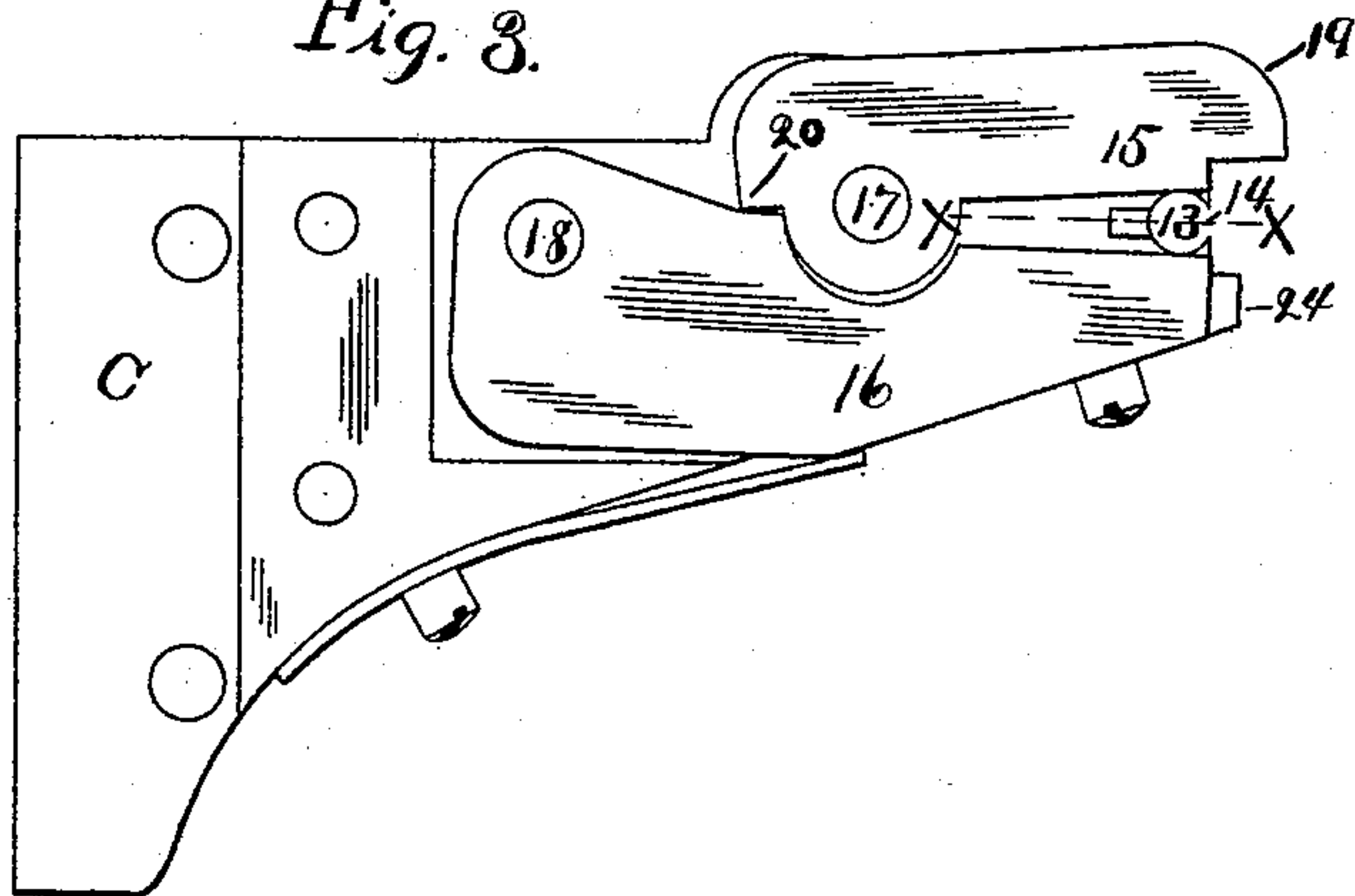


Fig. 4.

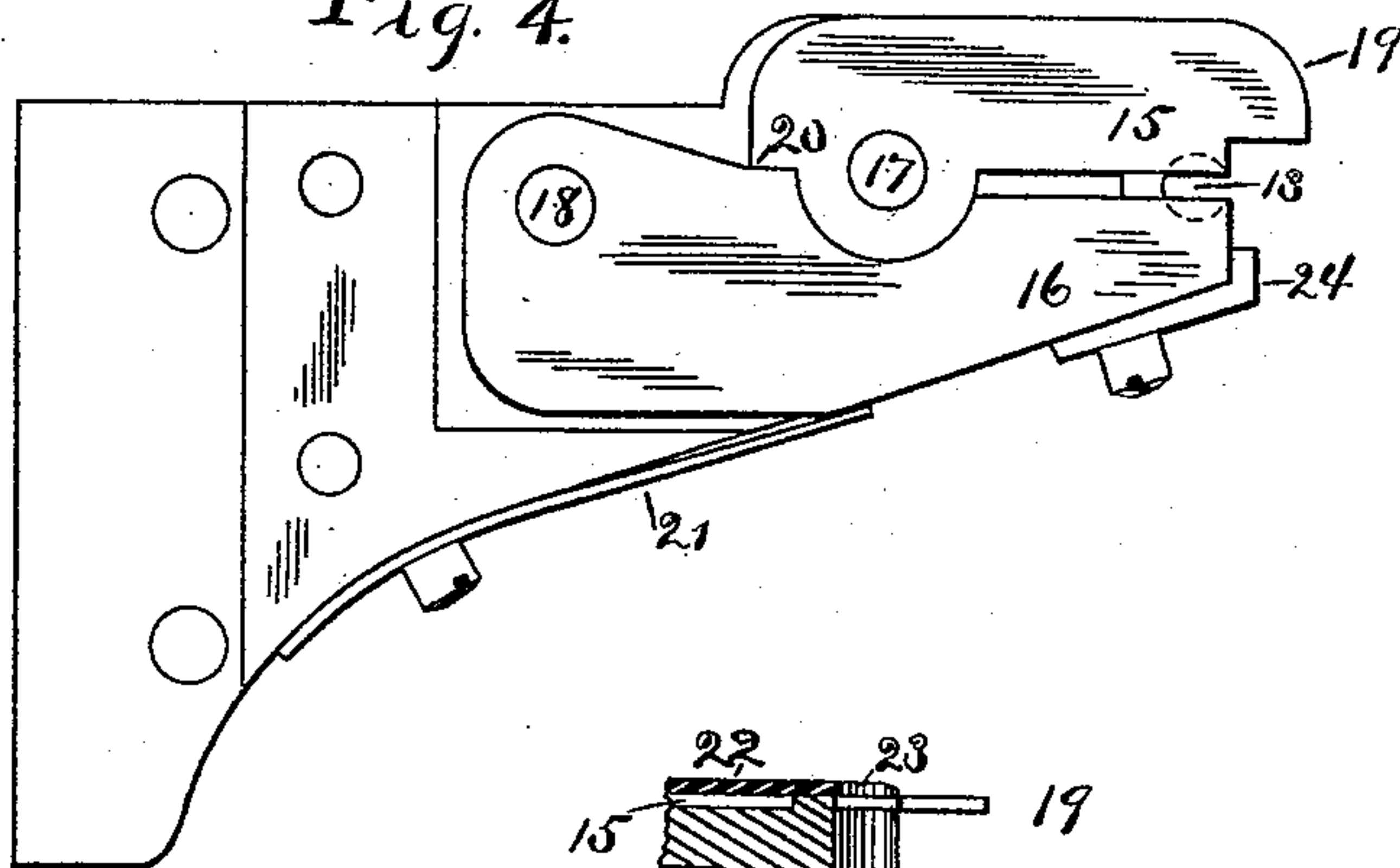
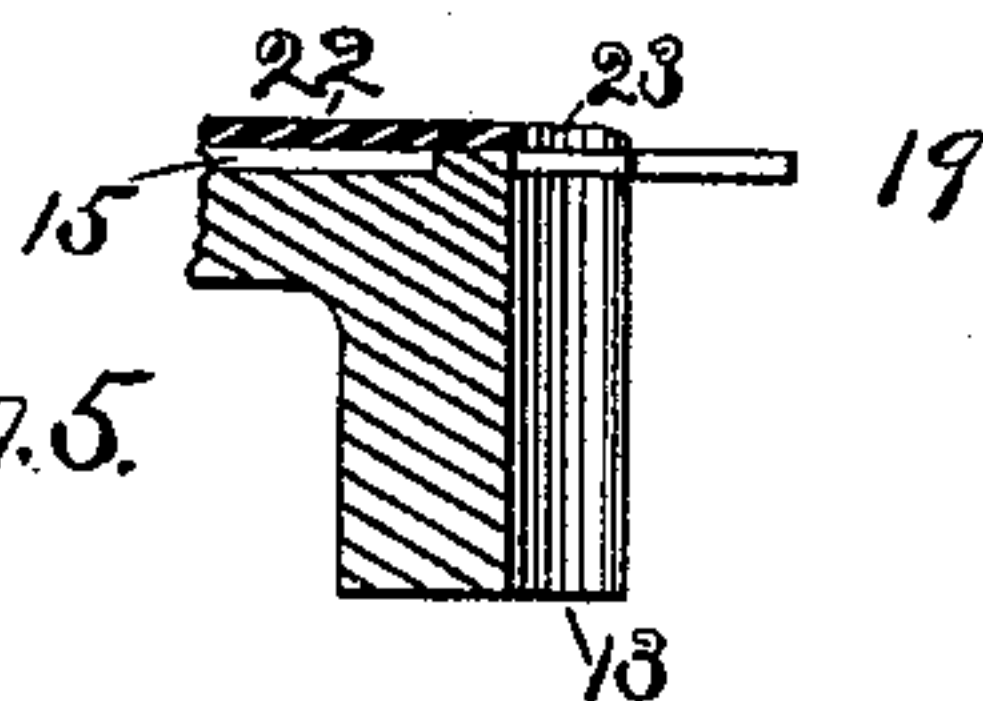


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

HORACE K. JONES, OF HARTFORD, ASSIGNOR TO THE RUSSELL & ERWIN
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MECHANISM FOR FEEDING HEADED BLANKS.

SPECIFICATION forming part of Letters Patent No. 495,201, dated April 11, 1893.

Application filed October 22, 1892. Serial No. 449,639. (No model.)

To all whom it may concern:

Be it known that I, HORACE K. JONES, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Mechanism for Feeding Headed Blanks, of which the following is a complete specification.

My invention relates to improvements in mechanism for feeding rivets, screws and analogous headed blanks; and the objects of my improvement are simplicity of construction and especially to provide a mechanism for rapidly feeding small blanks.

In the accompanying drawings, Figure 1 is a side elevation of my feeding mechanism as adapted to be attached to a screw threading machine. Fig. 2 is a plan view of the same. Fig. 3 is a plan view of the holding fingers and feeding tube on a larger scale. Fig. 4 is a like view of the same with the holding fingers in a different position, and Fig. 5 is a vertical section of parts thereof on the line x of Fig. 3.

In another application, Serial No. 449,638, filed October 22, 1892, I have shown the mechanism herein described as a modification of another improvement of mine for the purpose of laying a basis for such claims as are common to both of my said improvements. The present application is intended to cover the specific devices of said modification, which could not be covered in the application claiming other specific devices.

A designates a laterally moving chute with its upper end pivoted on a vertical axis to the bracket B, whereby its lower end may be moved laterally as said chute is swung on its pivot. This chute is provided with an upper guard 6, which is omitted in Fig. 2. It is intended to be supplied with blanks from an ordinary hopper having any ordinary lifting devices. At the lower end of this chute is a lever 7 pivoted thereto at 8 and having a projection 9 on one end, while its opposite end is pressed upon by a spring 10 for holding it in its normal position. By the side of the projection 9 there is an eccentric or cam 11 which is made to rotate by any suitable means. It bears upon said projection of the lever and moves the lower end of the chute laterally in

one direction. A spring 12 on the opposite side of the chute bears against it with a constant tendency to keep the projection 9 of the lever 7 in contact with the cam, unless it is prevented from so doing by the stop 24. Said spring serves to move the chute toward said stop when the eccentric or cam permits it so to do. The cam 11 is indicated by broken lines in Fig. 1.

C designates a plate or bracket which may be fixedly secured to any suitable support and on which is formed or attached the stationary feeding tube 13. This feeding tube, as its name implies has a tubular passage through it. This passage is large enough to let the headed blank fall through it. It is left open or slotted vertically upon one side as at 14, Fig. 3, which opening faces the lower end of the laterally moving chute A as shown in Fig. 2.

On the top of the plate or bracket C is a pair of movable holding fingers 15 and 16, the former being pivoted at 17, while the latter is pivoted at 18. The finger 15 is provided with a projection 19 at its outer end for being engaged by the laterally moving chute, and at its inner end with an angular corner or heel 20 for acting upon the edge of the companion finger 16 as best shown in Figs. 3 and 4. The spring 21 presses upon the edge of the finger 16 with a constant tendency to hold both fingers in the position illustrated in Fig. 4. When in this position the fingers stand centrally over the feeding tube 13 and are a distance apart that will admit the shank of the blank between them, while they are close enough together to catch the head of the blank and prevent it from falling through the feeding tube. These fingers are covered by a cap 22 which is removed in Figs. 3 and 4. This cap is provided with a notch 23 which is central over the bore of the feeding tube and is designed to receive the head of the blank and hold it centrally with reference to said tube while the fingers are being opened. When the chute A is moved up against the stop 24 as shown in Fig. 2, the passage through the chute registers with the opening in the confronting side of the feeding tube 13. This will permit the lowermost blank to fall upon the fingers over the feeding tube and to be caught thereon by its head. The cam 11 then

moves the chute away from the stop 24 and striking the projection 19 on the end of the holding finger 15 presses that finger away from its companion finger and through the heel 20 of said finger 15. The other holding finger 16 is simultaneously moved in the opposite direction, while the recess 23 in the cap 22 keeps the blank in a central position. When the fingers are thus opened sufficiently to let the head of the blank pass between them, it falls down through the feeding tube. At this time the passage in the laterally moving chute will not register with the slot or opening in the feeding tube, and consequently said feeding tube acts as a stop to prevent the blanks in the chute from falling down while the holding fingers are thus open to discharge a blank. As the cam or eccentric 11 travels onward, the spring 12 moves the chute back again to its normal position, and the passage through the chute and the slot in the feeding tube again register so that another blank falls down and is caught by the holding fingers which have been returned to their normal position by the spring 21. Ordinarily the lever 7 and the spring 10 move bodily with the chute A, without any movement of their own; but in case a chip or any obstruction comes in the path of the laterally moving chute as it is being moved by the cam, then said spring 10 will yield and permit the lever 7 to move on its fulcrum and the eccentric or cam 11 can complete its work without doing any damage to the machine. This feeding mechanism is particu-

larly adapted to feeding very small blanks and is found to work with certainty and rapidity.

I claim as my invention—

1. The combination of the feeding tube, the movable holding fingers mounted at the upper end of said tube; the laterally moving chute and operating mechanism, substantially as described and for the purpose specified.

2. The combination of the feeding tube, the holding fingers mounted at the upper end of the same; the cap 22 having the centering notch or recess 23; the laterally moving chute and operating mechanism, substantially as described and for the purpose specified.

3. The combination of the holding fingers; the laterally moving chute; the cam or eccentric for moving the same in one direction; the spring for moving said chute in the opposite direction; the lever 7 and yielding spring 10 interposed between said eccentric and chute, substantially as described and for the purpose specified.

4. The combination of the pivoted holding finger 15 and the heel 20; the companion pivoted finger 16 with its edge arranged opposite said heel 20, means for moving said finger 15 away from its companion finger and the spring 21, whereby said fingers are opened and closed simultaneously, substantially as described.

HORACE K. JONES.

Witnesses:

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EDWARD W. BUSH.