

No. 858,884.

PATENTED JULY 2, 1907.

H. C. LYON.
HAMMER.

APPLICATION FILED SEPT. 21, 1906.

2 SHEETS—SHEET 1.

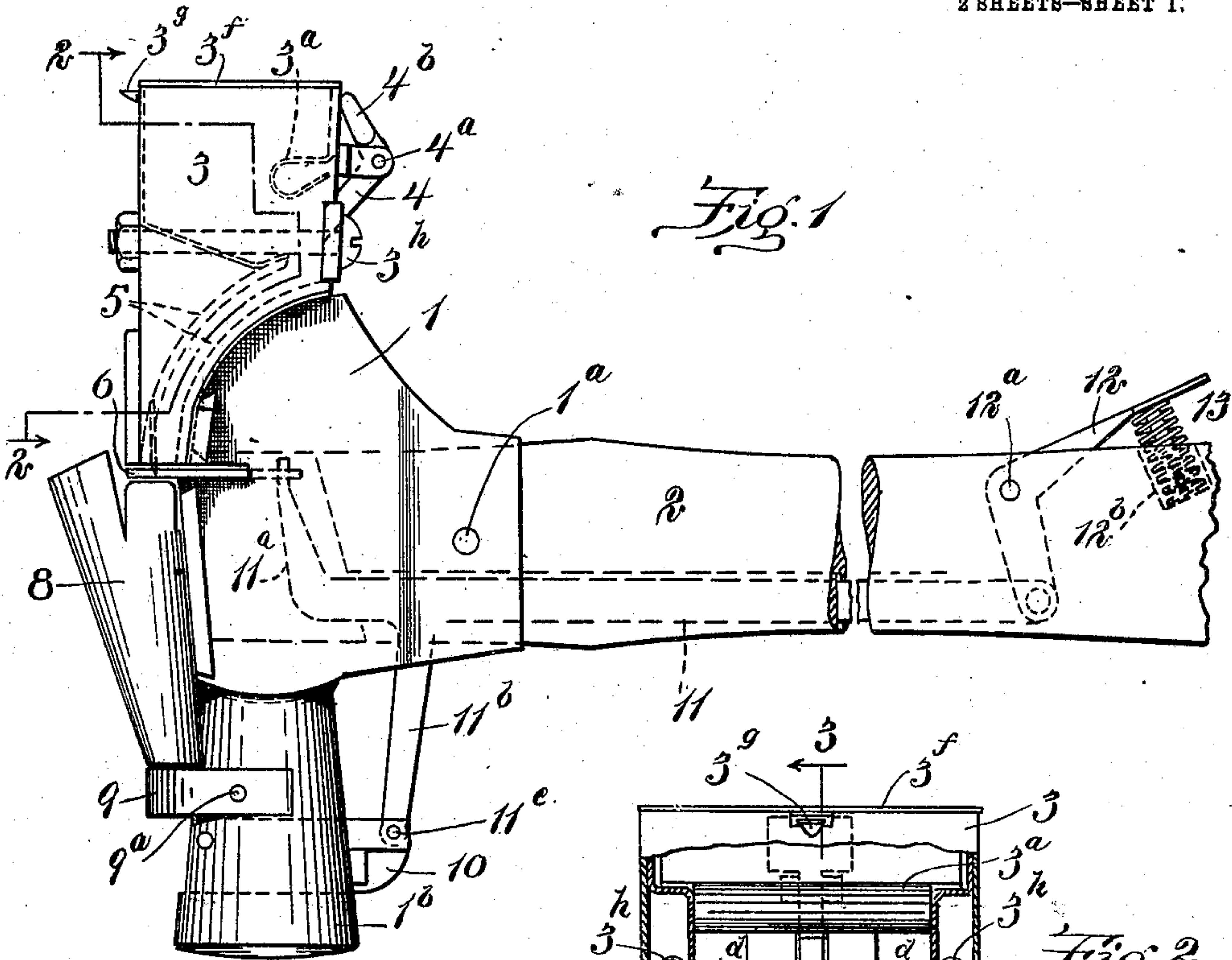


Fig. 1

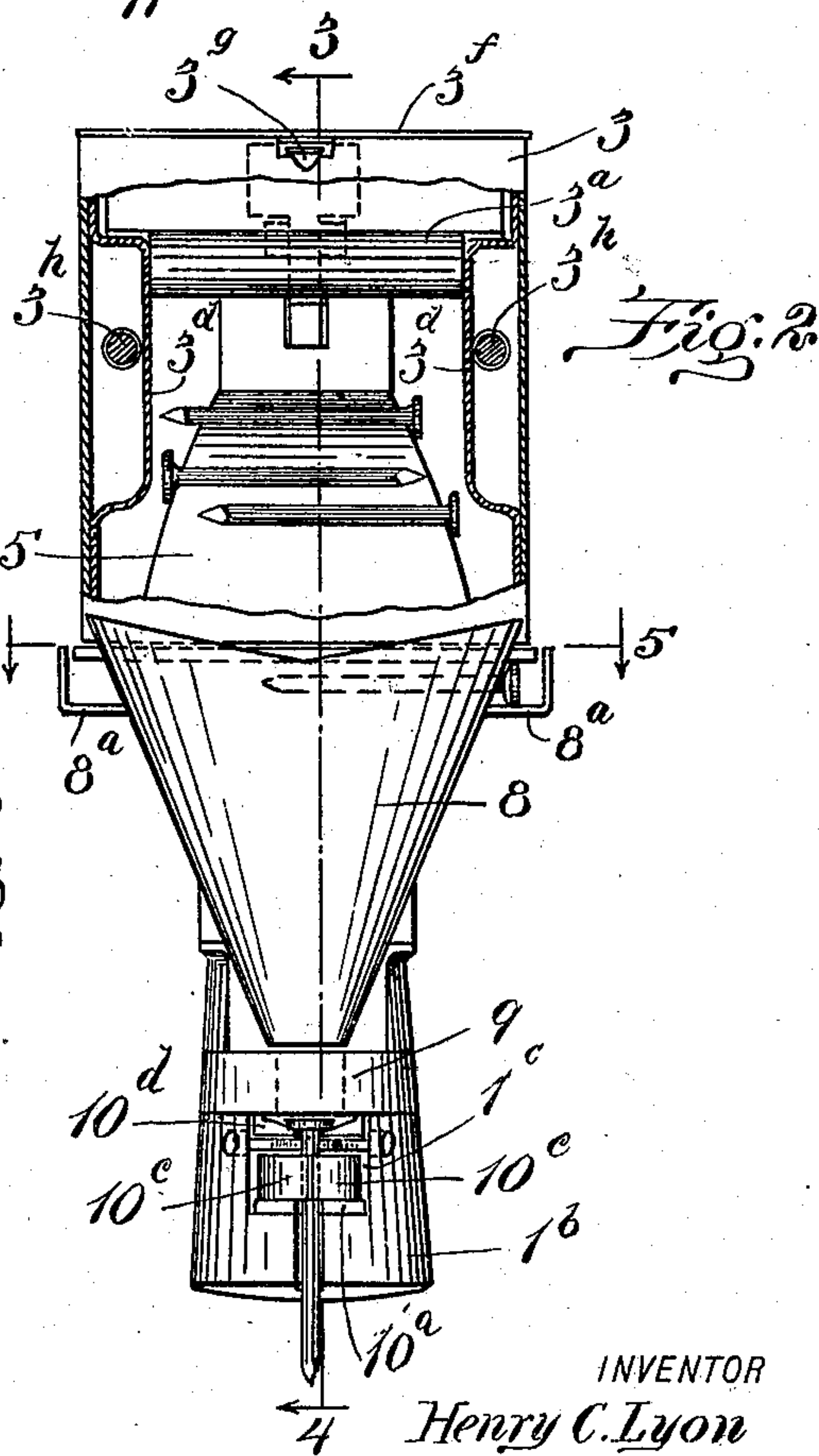


Fig. 2

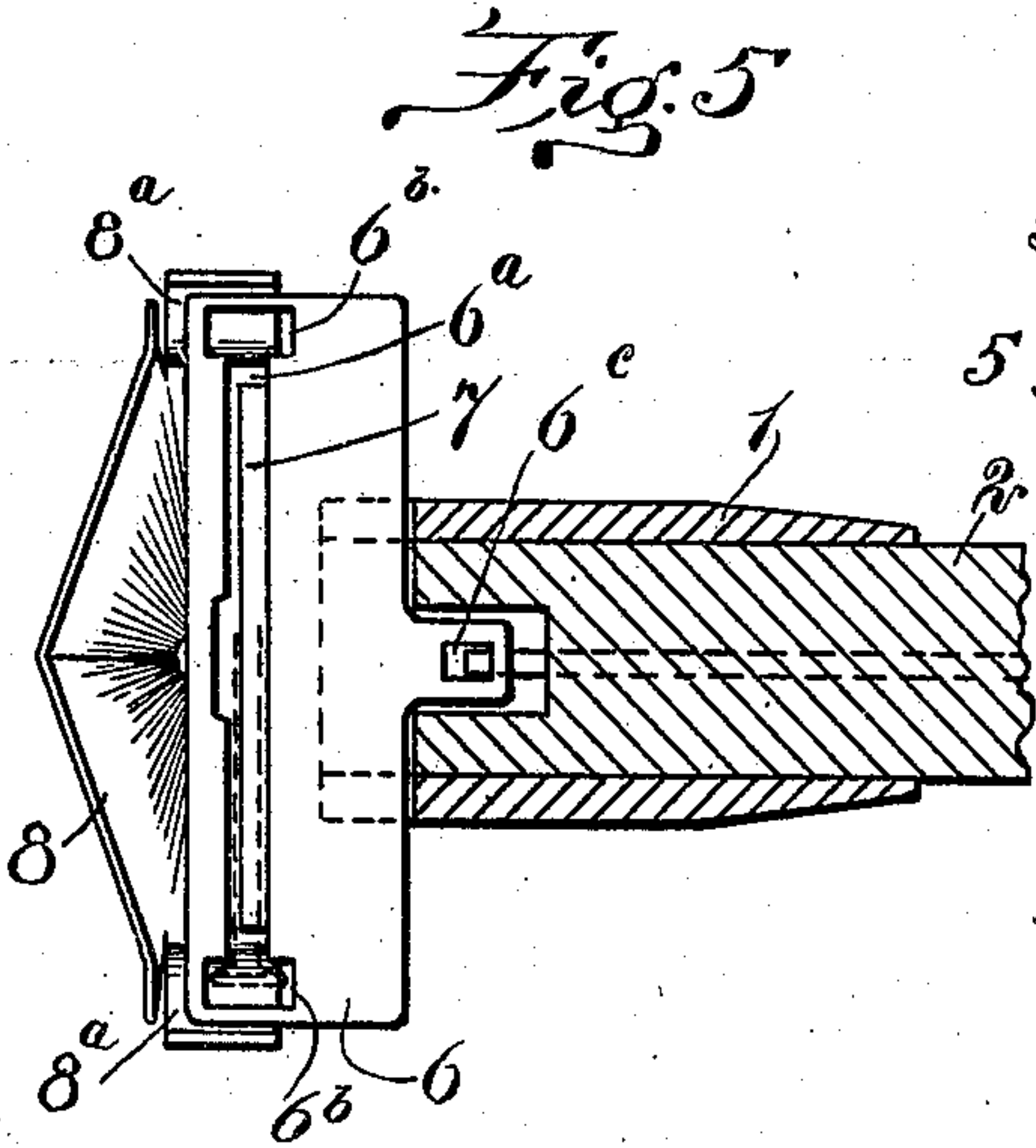


Fig. 5

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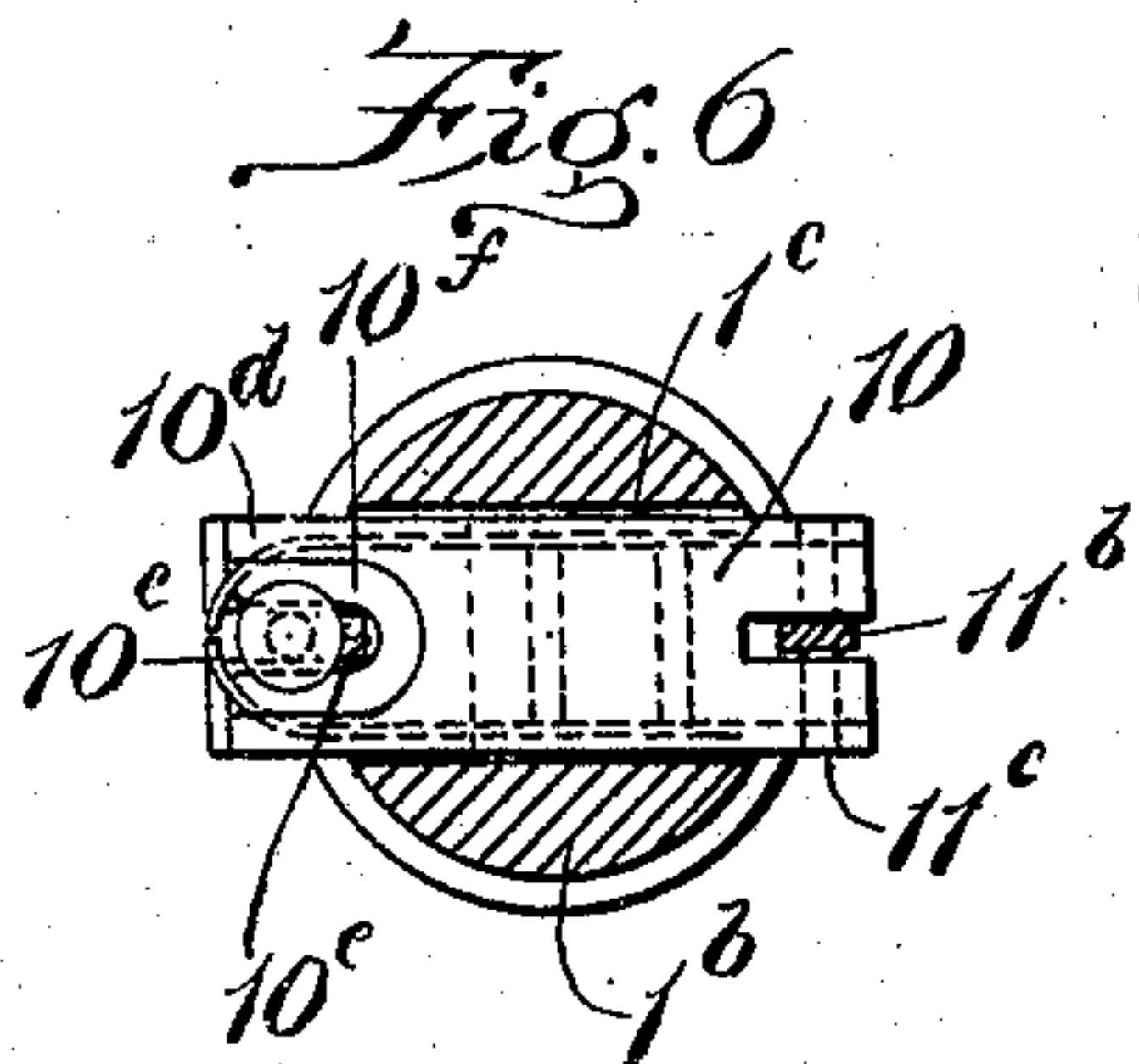
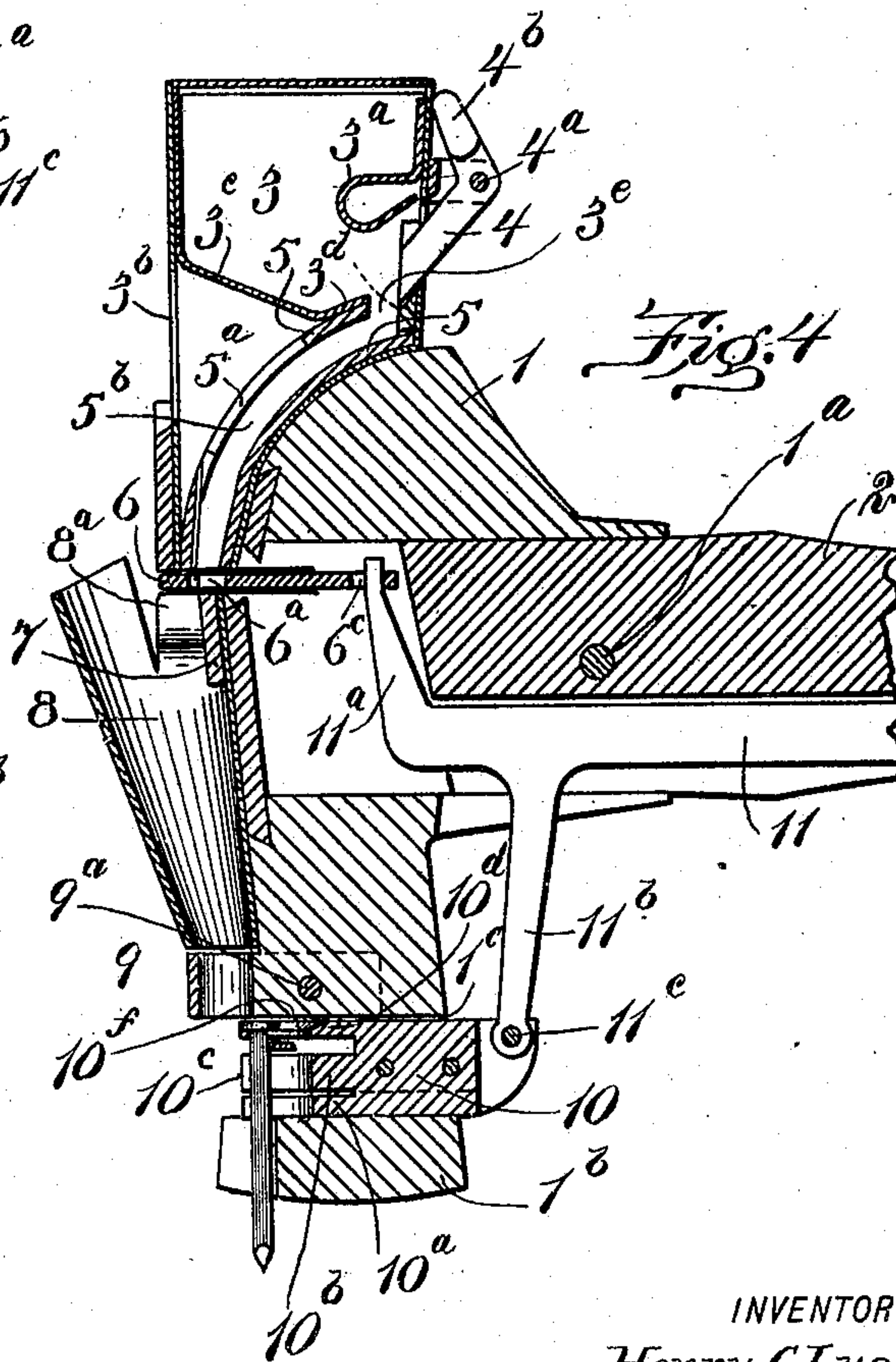
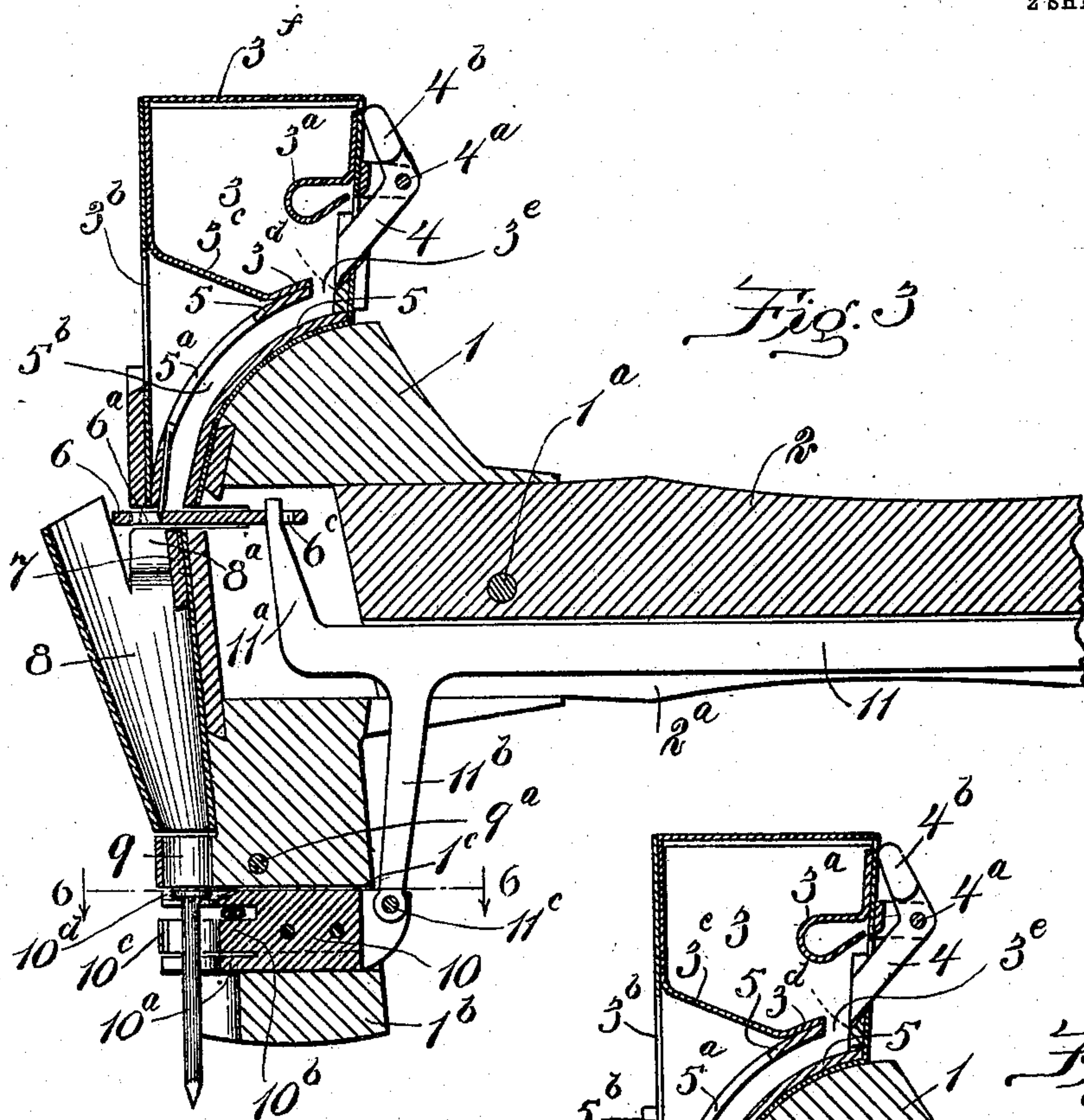
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

HENRY CLAY LYON, OF HOWARD LAKE, MINNESOTA, ASSIGNOR OF ONE-THIRD TO DANIEL ANDREW FOSKET AND ONE-THIRD TO JOHN HAYES MONROE, OF HOWARD LAKE, MINNESOTA.

HAMMER.

No. 858,884.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed September 21, 1906. Serial No. 335,602.

To all whom it may concern:

Be it known that I, HENRY CLAY LYON, a citizen of the United States, and a resident of Howard Lake, in the county of Wright and State of Minnesota, have invented a new and Improved Hammer, of which the following is a full, clear, and exact description.

My invention relates to hammers adapted to be used for driving nails in shingles and lathing, and especially for overhead work such as applying laths to form a ceiling. It is adapted to be used, however, for general purposes, such as nailing boxes and the like.

The object of my invention is to provide a hammer with means adapted to contain a quantity of nails, and to deliver them singly at the ball of the hammer and hold them in such position in line with the hammer head that they may be partially driven into an object by a blow of the hammer without being handled.

Such objects I accomplish by the means illustrated in the accompanying drawings, in which drawings like characters of reference indicate like parts throughout the views, and in which

Figure 1 is a side elevation partly broken away of a hammer embodying my invention; Fig. 2 is an end elevation of the same broken away on the line 2—2 of Fig. 1; Fig. 3 is a central longitudinal section, partly broken away, of the parts shown in Fig. 1; Fig. 4 is a central longitudinal section of the parts shown in Fig. 3, showing some of the elements differently disposed; Fig. 5 is a horizontal section taken on the line 5—5 of Fig. 2; and Fig. 6 is a horizontal section taken on the line 6—6 of Fig. 3.

As illustrated in the drawings, a hammer head 1 is secured to a handle 2 by means of a transverse pin 1^a. A hopper 3 is secured to the upper portion of the head, and opens into a curved passage 5^b formed between curved guide plates 5. The lower ends of the guide plates 5 extend adjacent to a reciprocating shutter 6, which is provided with an elongated slot 6^a having enlarged slots 6^b at each end thereof. Directly below the shutter 6 is a shelf 7 having its upper edge extending in line with the curved passage formed by the plates 5. The shelf 7 is arranged within a conical hopper 8 which is provided on its upper end with offset horizontal lips 8^a extending outward from the sides of the hopper, as shown in Fig. 5. The lower portion of the hopper 8 is arranged in line with a sleeve 9, which is secured to the ball 1^b of the hammer by means of a pin 9^a. Directly beneath the sleeve 9 is a reciprocating head or shuttle 10 provided with a lower guide plate 10^a, a central portion 10^b having

spring jaws 10^c secured thereto, and an upper guide plate 10^d.

The upper guide plate 10^d is provided with a recess 10^e having an open end, and the upper surface of the guide plate 10^d is beveled or inclined adjacent to said slot, as indicated at 10^f in Fig. 6. A reciprocating bar 11 is mounted on the handle 2 and arranged within a longitudinal slot 2^a formed in the handle. The bar 11 is provided with an arm 11^a extending upwardly and engaging at its end a slot 6^c formed in the shutter 6. An arm 11^b is also connected with the bar 11 and is pivoted at its lower end to the sliding block 10 by means of a pivot pin 11^c. The forward end of the bar 11 is pivotally connected with a bent lever 12, which lever is pivotally mounted upon the handle 2 by means of a pivot pin 12^a. A spring 13 bears at one end against the under side of the lever 12, and its opposite end is held in a recess 2^b formed in the handle 2. When the hammer is in use the hopper 3 is filled with nails and the hopper closed by means of a lid 3^f which may be secured to the hopper in any suitable manner, and held in position by means of a latch 3^g secured to said lid. The bottom of the hopper is provided with a downwardly inclined plate 3^e which bends upward at its edge 3^d so as to aid in holding back the bulk of the nails and allow them to pass singly through the opening 3^e formed in the bottom of the hopper into the curved passage 5^b formed by the curved plates 5. A curved ledge 3^a is also preferably attached to the inner portion of the hopper, which also tends to hold back the bulk of the nails and prevents them from becoming too closely packed around the opening 3^e. Such ledge also tends to keep the nails from binding together and enables them to lie in a horizontal position and thereby pass freely out of the hopper 3 and onto the inclined plates 5. A bent lever 4 is pivotally attached by means of a pin 4^a to the hopper, and the outer arm of said lever is provided with a weight 4^b.

When the hammer is up-ended, as when working on ceiling laths, the weight 4^b causes that arm of the lever to drop back and away from the hopper 3, and to move the opposite arm of said lever into the interior of the hopper so as to close the opening 3^e and prevent the nails lying on the inclined plates 5 from dropping back into the hopper. The inclined plates 5 have diverging edges thereby increasing the width of such plates from the upper to the lower ends thereof, as shown in Fig. 2. As the nails descend on the plates 5 their heads bear against the diverging edges of the plates, and are drawn transversely of the plates 5, so that when they reach the lower end of the passage 5^b,

the heads of the nails drop into the end slots 6^b formed in the shutter 6, the body of the nails lying in the slot 6^a opening into the end slots 6^b. A slot 3^b may be formed in the side of the hopper, and a slot 5^a formed in one of the guide plates 5 so as to aid in removing any obstruction that might lodge between the guide plates. When a nail drops into the slot 6^a of the shutter 6, the nail is supported on the shelf 7 which lies directly below the slot 6^a of the shutter 6, as shown in Fig. 4.

The spring 13 which is mounted upon the handle 2 and bears against the under surface of the bent lever 12 holds the lower portion of said lever forward in its normal position, thereby drawing forward the bar 11 pivoted to the lower end of said lever and drawing backward the shutter 6 so as to hold the slot 6^a in alinement with the lower portion of the passage 5^b. By pressing on the lever 12 which is preferably provided with a thumb piece for that purpose, the lower arm of said lever is thrown backward carrying with it the bar 11 and the shutter 6 connected to the upper end of the arm 11^a formed on said bar. Such backward movement of the shutter 6 carries the nail lying in the slot 6^a off from the shelf 7, thereby permitting the nail to drop into the hopper 8. As the shutter 6 is pressed backward, the end slots 6^b of the shutter extend over the lips 8^a which project outwardly horizontally from the upper portion of the hopper 8, as shown in Fig. 2. When the nail drops from the slot 6^a, therefore, the head of the nail strikes one of the lips 8^a of the hopper which thereby retards the movement of that portion of the nail, and allows the body of the nail to drop vertically into the hopper 8, thereby up-ending the nail into a vertical position. As the nail passes through the opening of the hopper and the sleeve 9, it drops into the slot 10^e formed in the upper guide plate 10^d of the reciprocating block 10, the head of the nail resting on the beveled edge 10^f of said plate, and the body of the nail is clamped by the spring jaws 10^e which are secured to the central portion 10^b of the block 10. When the nail is in such position and pressure is released from the lever 12 mounted on the handle, the tension of the spring 13 draws the bar 11 forward, carrying with it the block 10 supported in a recess 1^c formed in the ball 1^b of the hammer, thereby bringing the nail in line with the ball of the hammer. The nail may then be partially driven into an object by a blow of the hammer. After the nail has been partially driven into such object, the hammer is drawn backwardly so as to release the spring arms 10^e from the body of the nail, the open end of the slot 10^e permitting the head of the nail to be withdrawn from the top plate 10^d. The nail is then driven fully to place by the hammer. The end of the bent lever 12 may then be pressed downwardly against the tension of the spring 13, so as to move backwardly the bar 11 and the shutter 6 connected therewith and thereby remove another nail from the shelf 7 and permit it to drop out of the slot 6^a of the shutter 6 into the hopper 7, and from said hopper into the jaws 10^e of the sliding block 10, to be then drawn forward in the block 10 by means of the tension of the spring 13 so as to bring the nail in striking position in line with the ball of the hammer, as shown in Fig. 4.

Having thus described the preferred form of my in-

vention, what I claim as new and desire to secure by Letters Patent is:

1. The combination with a hammer head having a handle secured thereto, of a hopper, curved guide plates connected with said hopper, a movable shutter provided with an elongated slot extending transversely of said head, adapted to register with a passage formed by said guide plates, a shelf arranged below said shutter extending transversely of said handle, a hopper inclosing said shelf, a block having a reciprocating movement in the hammer head, and means for moving said shutter and block together, substantially as shown and described.

2. The combination with a hammer head having a handle secured thereto, of a hopper mounted on said head, and provided with a transverse slot, and a bent lever pivoted on said hopper and adapted to extend at one end into said hopper, substantially as shown and described.

3. The combination with a hammer head having a handle secured thereto, of a hopper, curved guide plates having vertically inclined edges arranged below said hopper, a reciprocating shutter provided with a slot extending transversely of said hammer head adapted to register with a passage formed by said guide plates, a shelf arranged beneath said hopper extending transversely of said head, a conical hopper inclosing said shaft, a reciprocating block adapted to slide transversely of said head and provided with clamping jaws, and means for operating said shutter and block together, substantially as shown and described.

4. The combination with a hammer head having a handle secured thereto, of a hopper, inclined guide plates arranged beneath said hopper, a reciprocating shutter provided with an elongated slot having end slots connected therewith, a shelf arranged below said shutter, a conical hopper inclosing said shelf, a reciprocating block provided with clamping jaws, and means for operating said shutter and block together, substantially as shown and described.

5. The combination with a hammer head having a handle secured thereto, of a hopper, inclined guide plates connected with said hopper, a reciprocating shutter provided with an elongated slot, a shelf adapted to register with the slot of said shutter, a conical hopper provided with off-set lips adapted to register with the ends of the slot formed in said shutter, a reciprocating block provided with clamping jaws, and means for operating said shutter and block together substantially as shown and described.

6. The combination with a hammer head having a handle secured thereto, of a hopper, curved guide plates connected with said hopper, a reciprocating shutter provided with an elongated slot, a shelf arranged beneath said shutter, a hopper inclosing said shelf and provided on its sides with off-set lips extending outward from said hopper, a reciprocating block provided on its upper portion with a guide plate having an open ended slot and with spring clamping jaws secured to the central portion of said block, and means for operating said shutter and block together, substantially as shown and described.

7. The combination with a hammer head having a handle secured thereto, of a hopper, curved guide plates connected therewith, a reciprocating shutter, a shelf arranged beneath said shutter, a conical hopper inclosing said shelf, a block adapted to reciprocate transversely in said hammer head and provided with longitudinally extending jaws adapted to be arranged in line with the conical hopper, and a retaining plate provided with a slot adapted to support a nail head, a rod having a longitudinal movement on said handle and provided with an upper arm engaging said shutter, and a lower arm engaging said block, a bent lever pivoted on said handle and connected with said rod, and a spring bearing against said lever and handle, substantially as shown and described.

8. In a hammer having a ball provided with a transverse recess, the combination with a hopper, of curved guide plates connected therewith, a reciprocating shutter provided with a slot extending transversely of said head, adapted to register with a passage formed by said plates, a block adapted to reciprocate transversely in the recess of said ball and provided with clamping jaws, and a reciprocating bar provided with arms connected with said shut-

ter and block respectively, substantially as shown and described.

5 9. In a hammer, the combination with a handle having a head secured thereto and provided with a transverse recess, of a hopper, a block movable in said recess and provided with spring jaws, and an upper guide plate having an open ended slot and beveled edges adjacent to said slot, a reciprocating bar mounted upon said handle, and connected with said block, and means for reciprocating said

block in one direction, substantially as shown and described. 10

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY CLAY LYON.

Witnesses:

F. VOLLMER,
C. R. VOLLMER.