

(No Model.)

R. ASHE.

MACHINE FOR UPSETTING HEADS ON NAIL STRIPS.

No. 319,381.

Patented June 2, 1885.

Fig: 1.

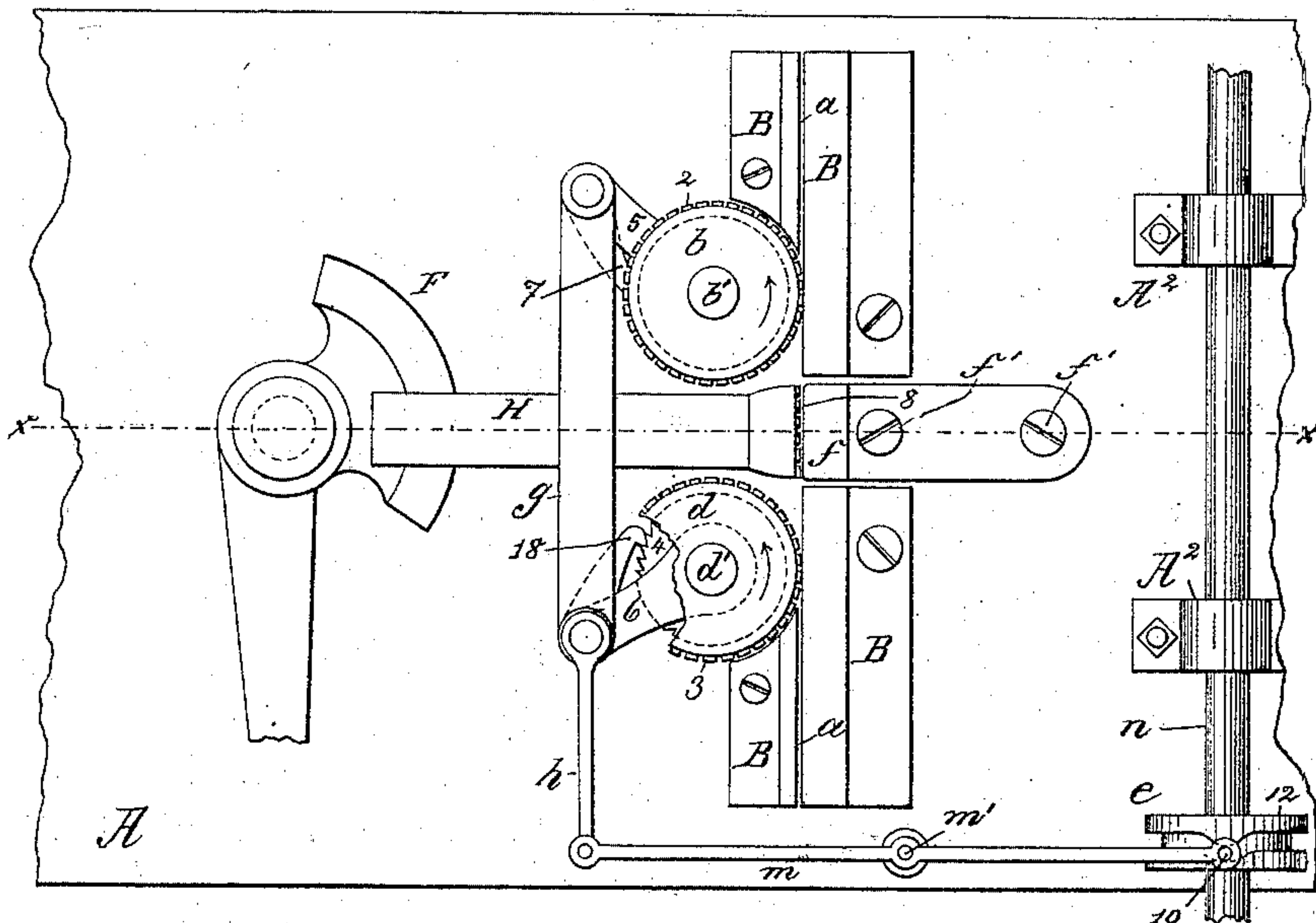


Fig:2.

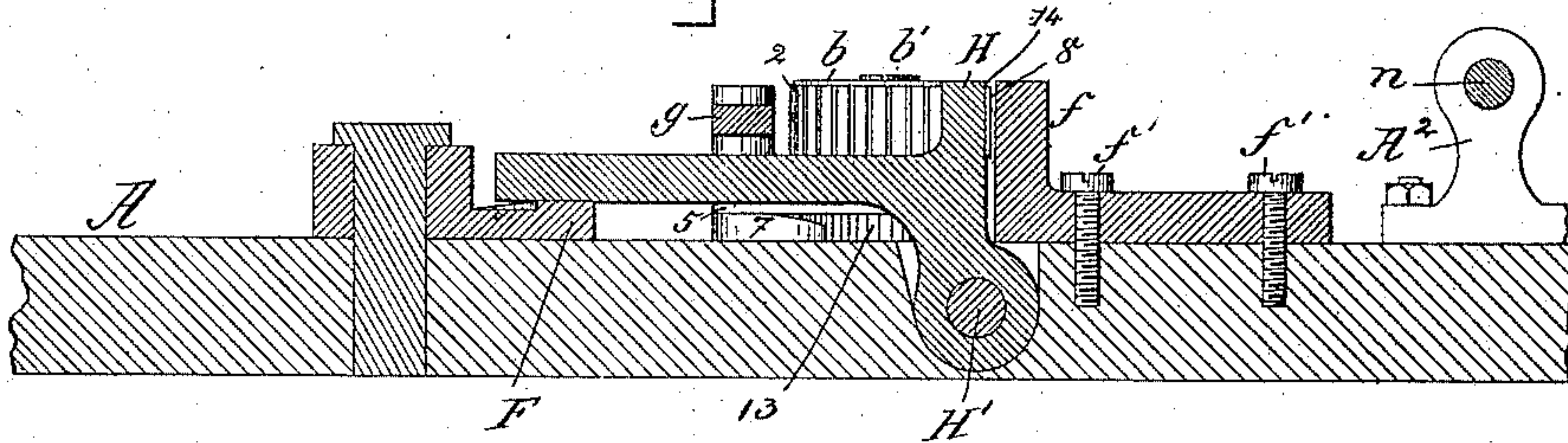


Fig: 3.

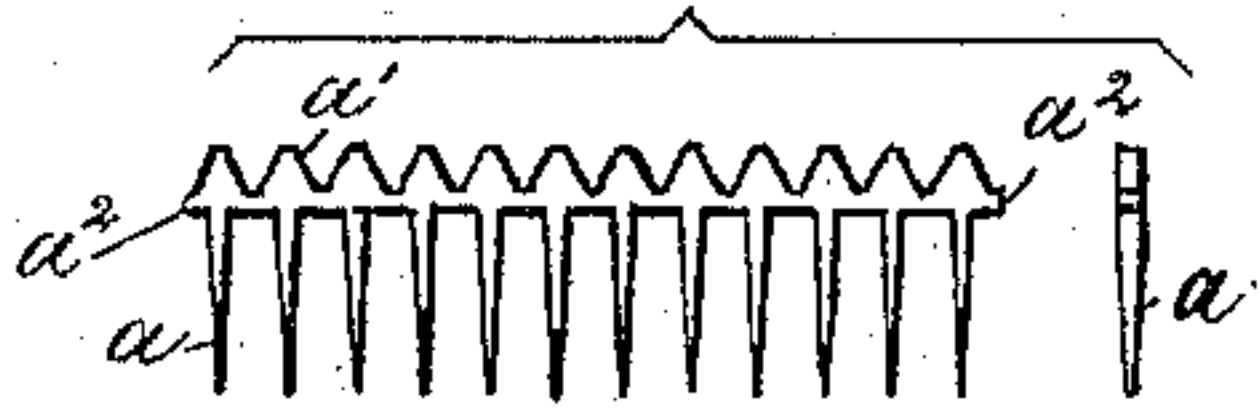
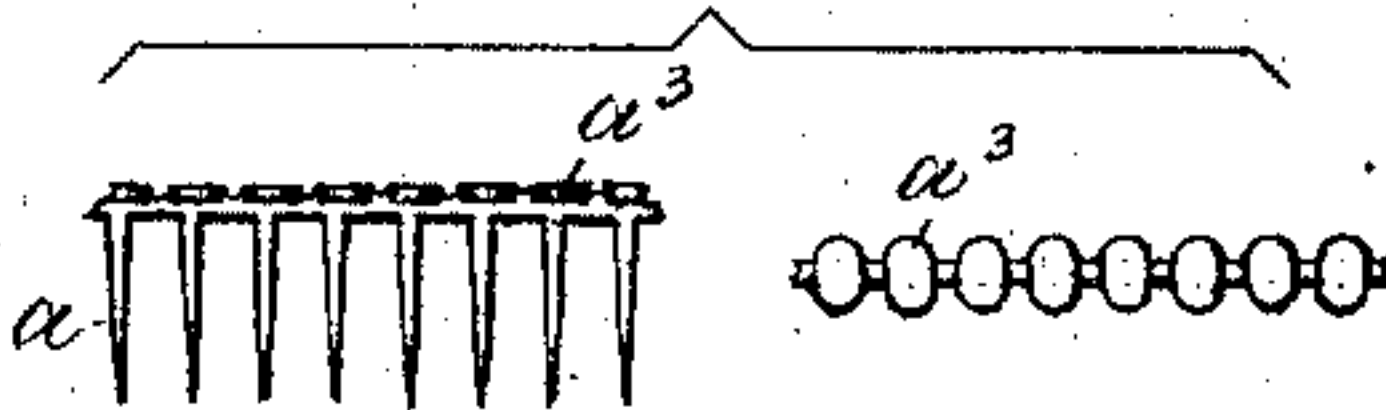


Fig:4.



Witnesses.

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UNITED STATES PATENT OFFICE.

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MACHINE FOR UPSETTING HEADS ON NAIL-STRIPS.

SPECIFICATION forming part of Letters Patent No. 319,381, dated June 2, 1885.

Application filed July 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, ROBERT ASHE, of Boston, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Machines for Upsetting the Head-Forming Projections of Comb-Nail Strips, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention is an improvement on a machine represented in United States application No. 137,464, filed July 11, 1884, to which reference may be had.

My invention has especial reference to the feeding and clamping mechanisms to feed the comb-nail strip and clamp it intermittently while the head-forming projections are being upset by a hammer, such as shown in my application referred to, or by hand.

In the machine herein described the movable member of the clamp is provided with rests for the web of the comb-nail strip, and the strip is fed between the clamp by a feed-wheel having teeth to enter the spaces between the shanks of the nails.

Figure 1 in top view represents a sufficient portion of a machine for the purpose described to enable my invention to be understood; Fig. 2, a section thereof in the dotted line $x\ x$. Fig. 3 shows a comb-nail strip such as it is the object of my invention to provide with regular heads, and Fig. 4 shows the same strip after its heads have been upset in the machine.

The comb-nail strip, shown in Fig. 3 as composed of shanks a , head-forming projections a' , and a connected web, a^2 , is to have its head-forming projections upset to constitute heads a^3 , as shown in Fig. 4.

The bed A has secured to it the uprights B B, which constitute the walls or guideway between which is left the space a , for the passage of the comb-nail strip, the same being moved by the teeth 2 3 of the feed-wheels $b\ d$, respectively, the said feed-wheels being mounted on the axles $b'\ d'$. The feed-wheel b is provided with ratchet-wheel 13, the teeth of which are engaged by the push-pawl 7, carried by the pawl-carrier 5. The feed-wheel d is provided with a ratchet-wheel, 4, which is engaged by a pulling-pawl, 18, on a pawl-carrier, 6.

The pawl-carriers 5 and 6 are pivoted to a slide-bar, g , connected by link h with the lever m , pivoted at m' , the other end of the said lever having a stud which enters the groove 12 of the cam e , fast on the shaft n , held in the bearings $A^2\ A^2$ and rotated in any usual manner, the vibration of the lever causing the pawls to simultaneously turn the feed-wheels b and d in the same direction, the teeth of the feed-wheels between the shanks of the nails feeding the strip positively.

Near the central part of the guideway is located the stationary member f of the clamp, it being attached to the bed by the screws $f'\ f'$.

The movable member H of the clamp is pivoted at H' , and is just like the vibrating clamp member marked E in my application referred to, except that herein the movable clamp member is provided at its front side or face with a series of rests, 8, made like gear-teeth, but which do not extend so high but what there is left above their tops a wall, 14, to meet the side of the web of the comb-nail strip, while the under side of the said web is sustained by the said rests, a portion of the wall of the stationary member supporting the opposite side of the said web.

The sides of the web a^2 of the comb-nail strip are supported substantially up to the bottoms of the notches between the head-forming projections a' , and the web is firmly clamped between the jaws f and H, when the head-forming projections are upset by a hammer or hammers. The clamping member H is moved forward toward the clamping member f by the clamp-mover, (shown as a cam, F,) while the feed-wheels b and d remain at rest, the teeth 8 of the clamping member entering between the shanks a of the nails of the comb-nail strip. The clamp H is pressed forward to clamp and hold the web of the strip while the head-forming projections are upset to form heads, as at a^3 , and then the movable member is moved backward far enough to remove its teeth 8 from between the said shanks, and then the feed-wheels are moved to feed the strip the distance of one or more nails, preferably two or three, and then the clamp member H is again turned forward to support and clamp the web as before preparatory to upsetting the projections a' of one or more nails of the strip.

I have not herein shown the hammer, nor any mechanism by which to operate the same and the cam F; but the same may be as in my said application, or, instead of the particular hammer and mechanism for operating it as therein shown, I may employ any other usual or suitable hammer mechanism heretofore used to upset nail-heads.

The employment of two wheels enables me to hold the comb-nail strip at the right and at the left of the clamp, thus insuring the more accurate feeding of the comb-nail strip to place the spaces between the shanks in position to be more certainly entered by the rests 8, attached to the clamp member H.

The part of the bed A which is removed from the right of Fig. 1, if shown, would contain a shaft having a cam, a hammer-carrying lever, an eccentric, a link to vibrate the cam F, the said shaft, cam, lever, eccentric, and link being the same, respectively, as the parts lettered D, F³, F', E³, and E⁴ in my said application, and in practice the shaft referred to and not shown may be connected by toothed gear (not shown) with and to drive the shaft *n* at the proper speed.

The groove *a* will be covered at top, as in my other application referred to.

I claim—

1. In a machine to upset the head-forming projections of a comb-nail strip, the clamp composed of a jaw, *f*, and a movable jaw, H, provided with rests for the web of the strip, the said clamp supporting a part of each side of the web of the strip, combined with two feed-wheels to engage and feed the comb-nail strip between the clamp when the latter is open, substantially as described.

2. In a machine to upset the head-forming projections of a comb-nail strip, a clamp to hold the strip while its head-forming projections are being upset, combined with an independent feed-wheel and means to move it, the feed-wheel engaging the strip and feeding it positively, substantially as described.

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

ROBERT ASHE.

Witnesses:

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