J. G. Howard,

Capping Carpet Tacks,

No. 7,456. Patented June 25 1850.

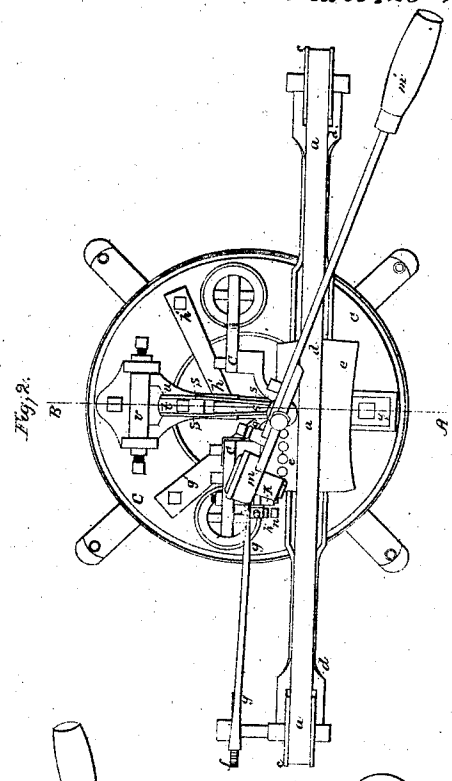

Fig. 2.

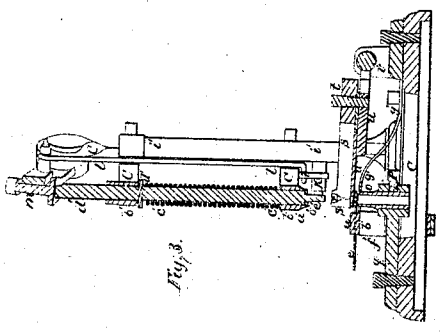

Fig. 3.

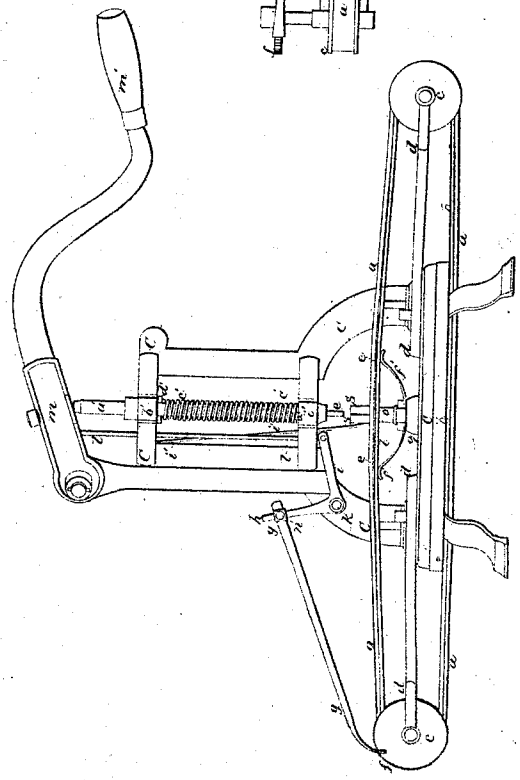

Fig. 1.

UNITED STATES PATENT OFFICE.

J. G. HOWARD, OF NORTH EASTON, MASSACHUSETTS.

MACHINE FOR FORMING WASHERS AND ATTACHING THEM TO CARPET-TACKS.

Specification of Letters Patent No. 7,456, dated June 25, 1850.

To all whom it may concern:

Be it known that I, JASON G. HOWARD of North Easton, in the county of Bristol and State of Massachusetts, have invented a new and useful Machine for Preparing Carpet-Tacks, and that the following description, taken in connection with the accompanying drawings hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said invention by which it may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my machine.

Figure 1 is a side elevation of the same. Fig. 2 is a plan; and Fig. 3 is a vertical section taken in the plane of the line, A, B, Fig. 2.

The carpet tacks prepared by my machine consist of a circular leather washer pressed up against the head of a common tack, which washer prevents the tack from tearing the carpet, and makes it more easy to disengage them from the sides of the carpet, when it is desired to remove it to be shaken, or for any other purpose. These carpet tacks are now getting into very general use, and have, prior to the invention of my machine, been prepared by hand. By my machine the circular leather washer is cut out from a strip of leather properly fed along, as hereinafter explained, and the ordinary tack is guided, and pressed through the center of the said washer, and drops down beneath the machine, all ready for use.

In the drawings, C C C &c. represents the framework of the machine which may be constructed of iron and in any suitable form, to sustain the operative parts of the machine.

The feeding apparatus in which the piece of leather is placed, from which the washers are to be cut, and fed along, is composed of two endless bands, *aaa—bbb*, fitted one over the other, as shown in Figs. 1 and 2, and stretched over two grooved pulleys, *c—c*, each fitted, and turning on arbors in the forked ends of the projecting arms, *dd—dd*. The strip of leather, *ee*, from which the washers are cut, is placed between these two bands, and by the friction of the same, borne along, as these bands are moved. The turning or movement of the bands is effected by means of a ratchet wheel, *f*, with the teeth of which the end of the long pawl, *gg*, engages. The rear end of this pawl is connected to the end of one arm of the right angular lever, *h i*, which has a fulcrum at *k*, on the frame, and the end of which is attached to the vertical rod, *ll*, which rod is raised, and depressed by the crooked driving lever, *m m′*, to which its upper end is connected, said lever having a proper fulcrum on the frame work at *j*. The gaging of the feeding appartus is secured, as will be readily perceived, by the adjustment of the rear end of the pawl, *gg*, upon the arm, *h*, of the lever, *h i*, by means of the confining screw, *n*.

A circular hollow cutter or die, *o*, with its cutting edge facing upward, is set, by the confining screw, *p*, in a socket formed in the end of the arm, *q*, which projects toward the center of the machine, at the middle of the feeding bands. Directly over this circular cutter or die, is the guiding, tapering bore, *r*, formed, one half in each of the inner ends of the spring nippers, *s s—s s*, which are fastened on each side of the block, *t*, and with said block are secured to the vibratory arm, *u*, said arm turning on a proper bearing, *v*, arranged, and secured on the frame-work, C C C, as shown in the drawings. A copper plate, *w*, is fastened to the arm, *u*, and projects in over the top of the die, *o*, having a proper hole through it for the passage of the tack. A cylindrical sliding rod, *a′ a′*, is arranged, so as to move up and down in proper guides, *b′*, *b′*, (formed in the frame-work) directly over the tapering bore, *r*, in the spring nippers. A spiral spring, *c′ c′*, is arranged around this rod, which by pressing against the cross-pin, *d′*, retracts it after it has been made to descend. A tapering punch, *e′*, is secured to the bottom of this sliding rod, and the driving lever worked by the hand applied at *m′*, bears upon its top, and forces the punch into the bore, *r*, formed in the spring nippers. The tack being dropped into this bore, as shown in Fig. 3; and the punch being made to descend a little, first turns the arm, *u*, on its axis, and presses the copper plate, *w*, on the leather, which rests on the cutting edge of the circular die, *o*, then, by the further descent of the punch, the point of

the tack is pressed into the center of said washer, the nippers, *s s—s s*, being sprung apart to permit its passage, and the tapering bore *r*, therein, guiding it, until it passes through to its head, then the pressure of the shoulder at *o'* on the top of the nippers cuts the circular washer out when the tack drops through the center of the circular die, *o*, all prepared, into any proper receptacle beneath the machine.

A bent spring, *f f*, Figs. 1 and 3, supports the bands, *a a a—b b b*, just in front of the die, *o*, so as to guide the leather accurately over said die; while the bent spring, *g' g'*, attached at one end to the frame-work, and having a proper circular hole at its inner end to fit about said die, springs up, and disengages the piece of leather from the washer cut therefrom, *h' h'* and *i' i'* are two guiding springs properly secured to the frame-work at one of their ends, the free end of the former fitting under the arm, *u*, and that of the latter pressing on top of said arm, so as to kep it in proper position, when the punch does not press it down, to allow the piece of leather to pass freely under the copper plate, *w*.

Having thus described my new machine, I shall state my claims, as follows:

What I claim as my invention, and desire to have secured to me by Letters Patent is—

1. The spring nippers, *s s—s s*, arranged on a vibratory arm, and having a tapering bore formed one half in each of said nippers, for guiding the point of the tack to the center of the washer. Also the combination of said nippers with the circular die, and vertical moving punch, arranged, and operating, as above set forth.

2. I also claim a machine for preparing carpet tacks, consisting of the parts above stated, in connection with an adjustable feeding motion, composed of the double endless band, ratchet and pawl, and parts which connect the same with the driving lever, as hereinabove set forth.

In witness whereof I have hereunto set my signature this elventh day of May A. D. 1850.

JASON G. HOWARD.

Witnesses:

EZRA LINCOLN,

RICHD. J. FENNELLY.