

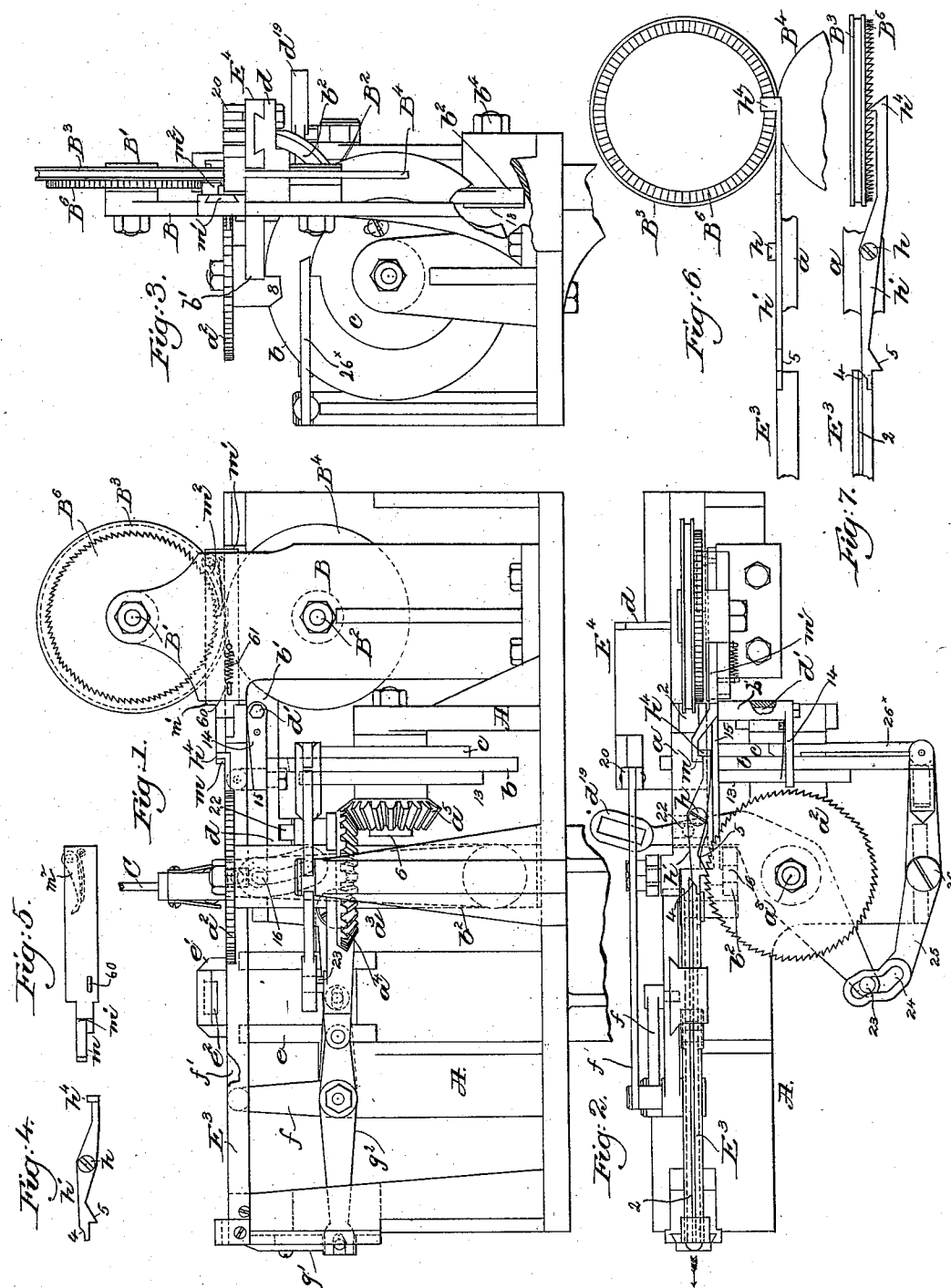
(No Model.)

2 Sheets—Sheet 1.

M. BROCK.
MACHINE FOR MAKING TACK STRIPS.

No. 402,062.

Patented Apr. 23, 1889.



Witnesses.
Fred. S. Green &
Maurice L. Emery.

Inventor.
Matthias Brock,
by Lemby & Gregory Attys

(No Model.)

2 Sheets—Sheet 2.

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Fig: 8.

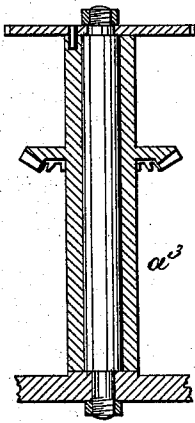


Fig: 9.

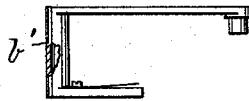


Fig: 10.

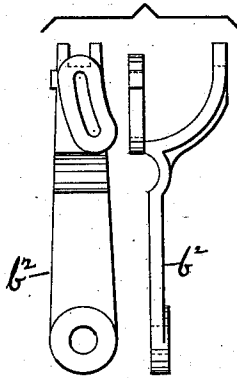
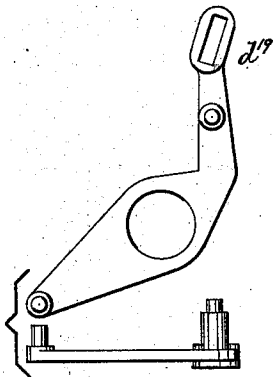


Fig: 11.



Witnesses.

Fred. L. Hunt of
John F. C. Vinton, both

Inventor.

Matthias Brock,
by Crosby & Son, attys

UNITED STATES PATENT OFFICE.

MATTHIAS BROCK, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE MCKAY & COPELAND LASTING MACHINE COMPANY, OF PORTLAND, MAINE.

MACHINE FOR MAKING TACK-STRIPS.

SPECIFICATION forming part of Letters Patent No. 402,062, dated April 23, 1889.

Application filed December 18, 1888. Serial No. 293,944. (No model.)

To all whom it may concern:

Be it known that I, MATTHIAS BROCK, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Machines for Making Tack-Strips, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention is intended as an improvement upon the class of machine represented in application Serial No. 293,943, filed 18th day of December, 1888.

15 The machine described in the application referred to contains a finger having a projection and an inclined face, the said finger being connected with a slide or equivalent device by which to reciprocate it, so that when a tack is present in the strip the tack by its contact with the finger will cause a projection thereon to engage and move a ratchet-wheel. The finger described in the said application has a shoulder which acts directly upon a driven tack, and by pressure against the tack 25 in the strip moves the strip through the machine.

In my present invention I employ a finger mounted upon a slide, the finger having a projection and also an inclined face, as represented in the said application; but instead of the shoulder to strike the body of the tack and feed the strip I have provided the machine with a projection, which is controlled by or through the movement of the finger to effect 35 the movement of the strip-feeding mechanism, the said projection, as shown, engaging or moving a pawl-carrier having a pawl, which in turn engages a ratchet-wheel which imparts motion to the strip-feeding mechanism. (Shown as a wheel.)

40 In my improvement, when the inclined part of the finger acts against a tack properly driven into the strip, the finger, by its movement in connection with the device referred to, effects a movement of the feed mechanism or wheel; but in case a tack is not properly driven into the strip then the finger referred to is not actuated, and the feeding mechanism referred to, which acts directly upon the 50 strip, is not moved.

My invention in tack-strip-making machines consists, essentially, in a feeding mechanism to engage and feed a tack-strip, a guide-way for the tacks, a driver to drive the tacks, and a roadway for the tacks driven into the strip, combined with a slide and a finger thereon having a beveled face and a projection, whereby the finger moved by a tack as the slide is moved toward a driven tack is made to effect the movement of the feeding 60 mechanism to feed the strip, substantially as will be described.

Figure 1 in elevation shows a sufficient portion of a tack-strip-making machine embodying my invention to enable the same to be 65 understood. Fig. 2 is a top or plan view of Fig. 1. Fig. 3 is a right-hand end view of the parts shown in Fig. 1. Fig. 4 shows the finger detached. Fig. 5 shows the pawl-carrier and pawl for actuating the feeding mechanism which operates directly upon the strip. Fig. 6 is a detail showing a modification, and Fig. 7 is a top view of Fig. 6. Fig. 8 is a sectional detail chiefly to show the sleeve a^3 ; Fig. 9, a detail of the rocking lever b' ; Fig. 10, details 75 showing the lever b^2 in two different positions, and Fig. 11 two different views of the lever d^{19} .

Referring to the drawings, the driver C and the driveway or throat having a driver-passage therein through which the tack passes 80 as it is being driven by the driver into the paper or other strip, the arm d^{19} , the roadway E^3 , in which travel the shanks or bodies of the tacks after they have been driven into the usual paper or other strip, the frame-work A, the groove 2 in the roadway E^3 , the slide a therein, the ratchet-wheel a^2 , the sleeve a^3 , to which it is attached, the beveled gear a^4 , the pinion a^5 , engaged by it and mounted 90 loosely on the stud 6, the bolt a^8 , the shoulder-plate 13 loose on the stud 6, the disk b , it forming part of a spacing mechanism and having a notch, 8, and the cam-plate c , the enlargement E^4 of the roadway E^3 , the sliding 95 carriage d , having a projection, 20, the stud d' , extended from one side of the carriage d , the lever b' , made as a hollow sleeve, having a short arm, 14, and a long arm, 15, having a pin, 16, the slotted lever b^2 , mounted loosely 100

upon the headed stud 18, the studs 22 23, extended from the lever d^{19} , the said stud 22 entering a transverse slot in the carriage d , and the stud 23 entering the cam-slot 24 of a lever, 5 25, pivoted at 26 and having a pawl, 26*, attached thereto by a knuckle-joint of any usual construction, the frame-work e , having a suitable guideway in which slides a presser-foot, e' , having a block, e^2 , the means to move it and 10 the said presser-foot e' , the lever f , the link f' , connected to the carriage e^4 at 20, and the means operated by the said lever f and the arm g^2 and the cutting mechanism g' are and may be all as fully described in the application 15 referred to, wherein the same letters are employed to designate like parts; so the construction and specific operation of the said devices need not be herein further specifically described.

20 Herein it will be noticed that the slide a has pivoted upon it at h a finger, h' , having a beveled side, 4, and a projection, 5. The projection 5 engages and operates the ratchet-wheel α^2 whenever the inclined side 4 of the 25 finger comes in contact with a tack which has been properly driven. The finger h' (see Figs. 1 to 5) is so mounted and constructed as to move in unison with it a projection, h^4 , and cause it to engage a projection, m , on and reciprocate a pawl-carrier, m' , herein shown as 30 a slide and provided with a pawl, m^2 , the said pawl-carrier being herein represented as of dovetailed shape in cross-section, (see Fig. 3,) and fitted to slide in a dovetailed guideway 35 in an upright frame or stand, B, constituting a part of the frame-work of the machine.

The stand B, as herein represented, has two stud-screws, $B' B^2$, which receive upon them 40 two wheels, $B^3 B^4$, between which passes the strip of paper into which are to be driven the tacks to constitute the tack-strip, the said paper being taken from a suitable reel or source of supply. The wheel B^3 has attached 45 to or forming part of it a ratchet-wheel, B^5 , which is engaged and rotated intermittently by the pawl m^2 , mounted upon the pawl-carrier m' . The pawl-carrier has a projecting pin, 60, (see Fig. 1,) which is engaged by a 50 spring, 61, having one end secured to the stand B, the said spring acting to move the pawl-carrier backward as the slide a is retracted or moved to the right. The pawl is normally pressed toward the ratchet-wheel B^5 by a suitable spring.

55 Instead of the pawl-carrier and pawl for

moving the feed mechanism described for the strip, I may employ any other equivalent mechanism commonly employed for rotating a feed-wheel in a sewing or other machine.

It will be noticed that the feeding mechanism herein described acts directly upon the strip into which the tacks are to be driven, and that the said feeding mechanism is not 60 actuated to feed the strip except when a tack has been properly driven into the same. 65

I do not desire to limit my invention to the exact shape of that part of the finger having the projection h^4 , whereby the movement of the finger derived by coming in contact with a driven tack is made to actuate the feeding 70 mechanism.

In the application referred to I have shown the finger itself as provided with a toe which enters a notch in the strip itself.

In Figs. 6 and 7, showing a modification of 75 my invention, I have represented the finger h' as prolonged, and the projection h^4 at its inner end is made to engage side ratchet-teeth of a ratchet-wheel, B^6 , (shown as a ring secured to the feed-wheel B^3), the engagement 80 of the projection h^4 with the teeth of the ratchet-wheel being determined by the action of the beveled end 4 of the forwardly-moving finger against a tack previously driven into the strip. The engagement of the projection 85 h^4 with the feed-wheel continues so long as the finger acts against the tack; but when the slide a is retracted the projection 5, by slipping back over the teeth of the ratchet-wheel, causes the projection h^4 to be disengaged from 90 the teeth of the ratchet-wheel.

I claim—

In a tack-strip-making machine, feeding mechanism to engage and feed the tack-strip, a guideway for the tacks, a driver to drive 95 the tacks, and a roadway for the tacks driven into the strip, combined with a slide and a finger therein having a beveled face and a projection, whereby the finger moved by a tack, as the slide is moved toward a driven 100 tack, is made to effect the movement of the feeding mechanism to feed the strip, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two 105 subscribing witnesses.

MATTHIAS BROCK.

Witnesses:

G. W. GREGORY,

FREDERICK L. EMERY.