

No. 626,755.

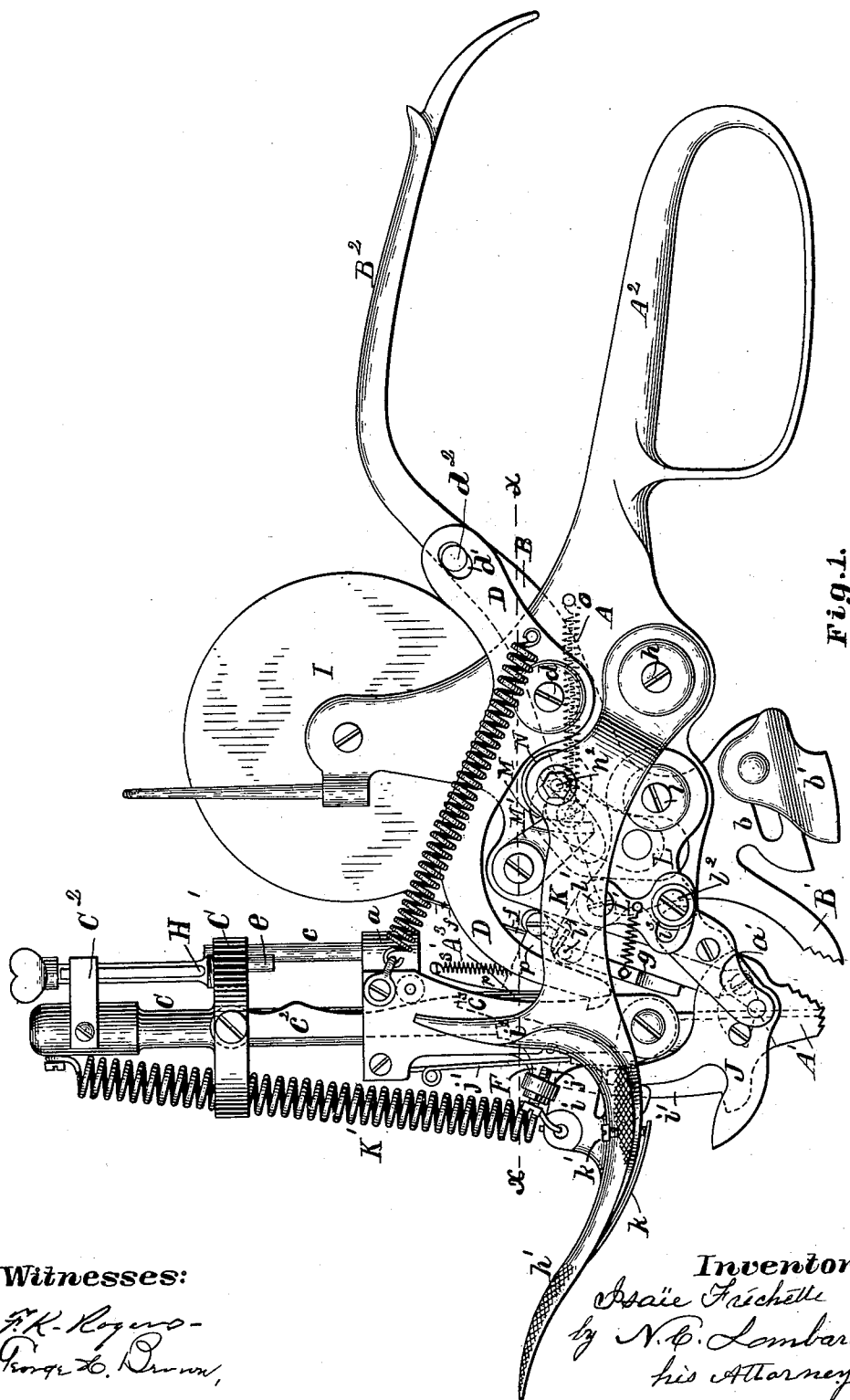
Patented June 13, 1899.

I. FRÉCHETTE.
HAND LASTING TOOL.

(Application filed May 9, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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Inventor:

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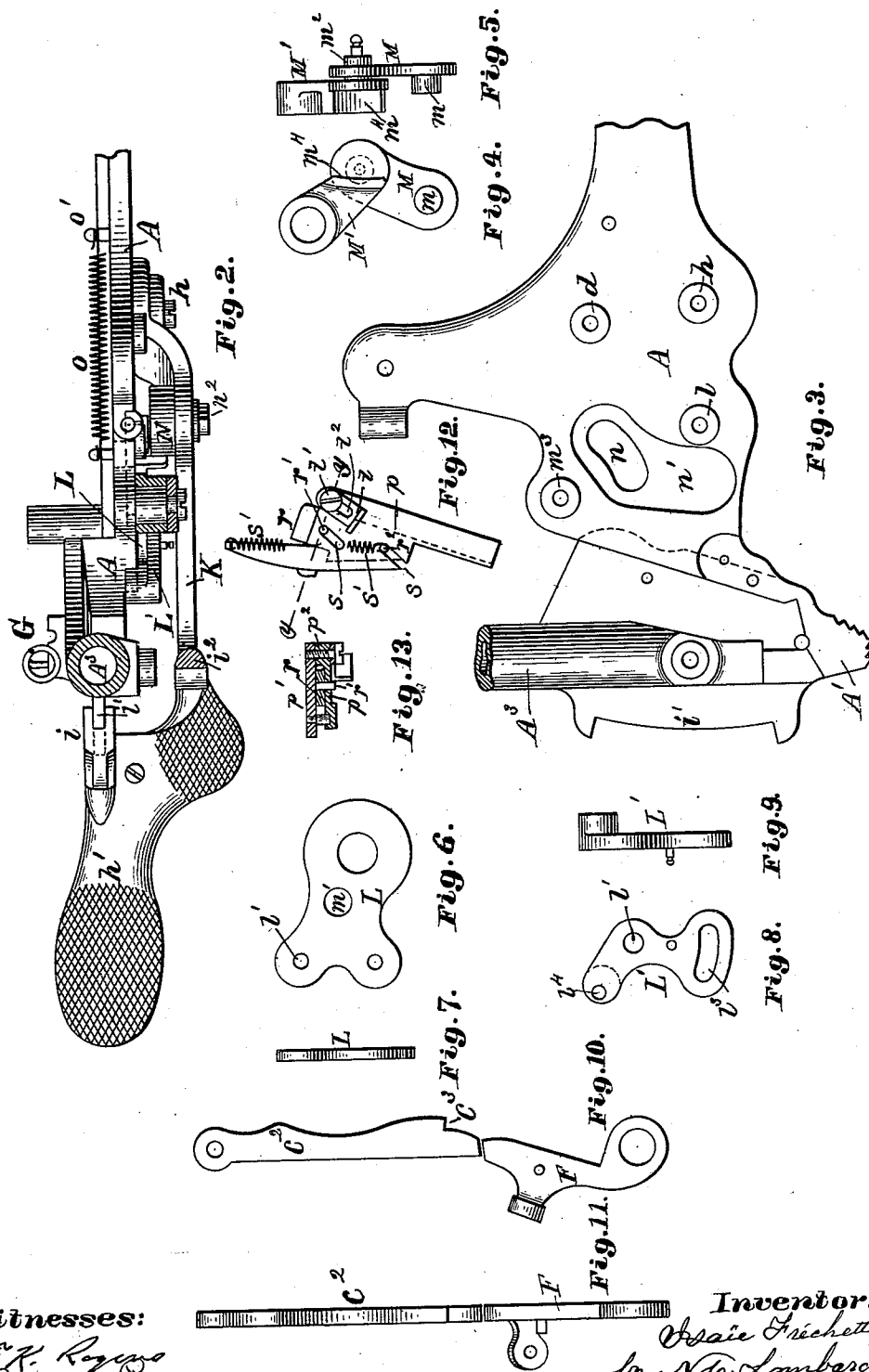
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A. R. Rogers
George H. Brown

Inventor:

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UNITED STATES PATENT OFFICE.

ISAÏE FRÉCHETTE, OF MONTREAL, CANADA.

HAND LASTING-TOOL.

SPECIFICATION forming part of Letters Patent No. 626,755, dated June 13, 1899.

Application filed May 9, 1898. Serial No. 680,086. (No model.)

To all whom it may concern:

Be it known that I, ISAÏE FRÉCHETTE, of Montreal, in the district of Montreal, and Province of Quebec, Canada, have invented certain new and useful Improvements in Hand Lasting-Tools, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to hand lasting-tools, and is an improvement upon the invention described in Letters Patent No. 594,241, issued to me November 23, 1897; and it consists in certain novel features of construction, arrangement, and combination of parts, which will be readily understood by reference to the description of the accompanying drawings, forming a part of this application, and to the claims hereto appended and in which my invention is clearly pointed out.

Figure 1 of the drawings is a front side elevation of a lasting-tool, illustrating my invention. Fig. 2 is a partial sectional plan of the same, the cutting plane being on line *x x* on Fig. 1. Fig. 3 is an elevation of the larger portion of the driver carrying jaw-lever. Figs. 4 and 5 are respectively a front elevation and an edge view of the toggle-links for operating the feed-pawl. Figs. 6 and 7 are respectively a front elevation and an edge view of the main body of the feed-pawl-operating lever. Figs. 8 and 9 are similar views of the adjustable portion of said feed-pawl-operating lever. Figs. 10 and 11 are respectively a front elevation and an edge view of the driver-lifting link and its locking-pawl. Fig. 12 is a front elevation of the yielding brake or clamp for preventing backward movement of the fastening-wire and the adjustable stop for regulating the length of the feed of the fastening-wire, and Fig. 13 is a transverse section on line *y y* on Fig. 12.

In the drawings, A and B are two levers provided with jaws A' and B' and handles A² and B² and pivoted together and operating substantially as in my before-cited Letters Patent.

The lever B is provided with the lug *b* on its under side, upon which is movably mounted the shoe *b'*, which rests upon the inner sole and serves as a fulcrum when the upper

is gripped between the jaws and the handles are pressed downward to stretch the leather.

The lever A is provided with a socket A³, in which is fitted the vertically-movable plunger C, provided with a steel-nail driver set in its lower end and with the collar or flange C' above the upper end of the socket A³, said plunger extending above said collar, as shown. A guide-rod *c* is secured in the lug *a* on the upper part of the socket A³ and projects through a hole in the collar C', and a lifter-bar *c'* is pivoted to the collar C', so that it can oscillate to a limited extent about said pivot, and is provided with a shoulder C³ on its rear edge, which shoulder is engaged by the forward end of the lever D, which is pivoted at *d* to the lever A and connected at its rear end by means of the slot *d'* and the pin *d²* to the lever B, as shown in Fig. 1.

F is the locking-pawl for holding the driving-plunger in its raised position by engagement with the lower end of the lifter-bar *c²*, as shown in dotted lines in Fig. 1 and in full lines in Fig. 10.

G is a spring connecting the upper end of the plunger C and the lever A and serving to impart a downward movement to said plunger when the pawl F is tripped from beneath the lifter-bar *c²*.

A thumb-screw H is fitted to a threaded hole in the collar C' and has formed upon its lower end an eccentrically-arranged lug or projection *e* and is held against rotation when adjusted to the desired position by the spring C² pressing against one or the other of the flat sides of the shank of said thumb-screw.

I is the reel upon which is wound the fastening-wire composed of a connected series of nails *f*, and *g* is the feed-pawl arranged to engage the heads of the nails to feed said fastening-wire to the position where a nail may be severed therefrom by the vibration of the cutter-lever J, carrying on its back side the cutter *a'*. (Shown only in dotted lines in Fig. 1.)

K is a lever pivoted at *h* to the lever A and provided at its forward end with the handle *h'* for operating it and is connected by the spring K' to the upper end of the plunger C, as shown in Fig. 1. A slotted lug *i* is formed

on the lever K near the root of the handle h' , which embraces the curved guide-rib i' , formed in one piece with the lever A, and said lever K is also provided with the upwardly-projecting tappet-arm i^2 .

All the parts heretofore described and all the parts not herein otherwise described are constructed, arranged, and operate substantially as in my before-cited patent.

The locking-pawl F is provided with an adjustable screw-stop j to be engaged by the tappet-arm i^2 to retract said pawl against the tension of the spring j' when the lever K is depressed. A spring k is secured by one end to the under side of the handle h' and extending to the rear sufficiently far to come in contact with the lower arm of the cutter-lever J, and the lever K has set therein above the rear end of said spring the set-screw k' , by adjusting which the said spring may be made to strike said arm sooner or later, and thus regulate the time of the operation of the cutter for severing the nail to be driven from the continuous line or wire of nails.

In my prior patent before cited the feed-pawl had a reciprocating movement imparted thereto by an adjustable lever mounted loosely upon a pin set in the lever A and forming the fulcrum of the feed and cutter operating lever, which in said patent is designated by the letter I, said adjustable lever being moved about said pin to feed the nail-wire by means of a toothed segment connected to and movable with said lever I and a second segment engaged thereby and carrying an antifriction-roll which engaged and acted upon said adjustable lever to depress it against the tension of a spring, which when the motions of the parts are reversed moves said feed-pawl upward preparatory to feeding another nail. Instead of this arrangement of parts I mount the adjustable lever composed of the two parts L and L' upon an independent fulcrum l , formed upon the lever A in front of the fulcrum-pin h of the lever K, the part L' being pivoted to the part L at l and adjustably clamped thereto by the clamping-screw l^2 , passing through the slot l^3 in said part L' and screwed into the part L, and said part L' is connected to the feed-pawl g at l^4 , as shown in Fig. 1, and substantially the same as in my prior patent.

M and M' are two links of a toggle, the former of which is provided at its lower end with the hub or journal m , which fits an opening m' through the part L of the adjustable feed-lever and at its upper end with an opening to receive the stud m^2 , formed on the lower end of the link M' and projecting through said link M and the curved slot n , cut through the lever A, said link being mounted at its upper end upon the hub M^3 , formed upon the lever A. (See Figs. 3, 4, and 5.)

The lever A has formed in its front face a recess n' , surrounding the slot n , said recess having a depth equal to the thickness of the

link M and an area and shape in outline sufficient to permit the requisite movement of said toggle to move the lever L L' the necessary distance to give the desired movement to the feed-pawl.

The link M' has formed thereon near its pivotal connection to the link M the slightly-curved abutting surface M^4 , against which the truck N, mounted upon a stud n^2 , set in the back side of the lever K, acts to straighten the toggle and move the lever L L' to feed the nail-wire when the lever K is depressed.

The links M M' are returned to their normal positions, as shown in Fig. 1, when the lever K is raised by the tension of the spring o , connected at one end to the rear end of the stud m^2 and at its other end to a pin o' , set in the back side of the lever A, as shown in dotted lines in Fig. 1 and in full lines in Fig. 2.

Just above the feed-pawl g is secured in a fixed position the wire-guiding device, comprising the plates p and p' , secured together so as to form a channel between them, except along their rear edges, where one of said plates is provided with a longitudinal ledge or rib p^2 , having a projection equal to the desired distance apart of the other portions of said plates, and between said plates is arranged a brake-shoe r , in which are set two pins r' and r^2 , which project through slots s s , cut through the plate p , said slots being arranged obliquely to the line of feed of the nail-wire, so that any tendency to move the nail-wire upward will cause said shoe to be pressed hard against said wire and prevent any upward movement thereof.

The pin r^2 has connected thereto one end of the spring s' , the other end of which is connected to the upper end of an upward extension of said plate p and tends to move said shoe upward till the pins r' and r^2 reach the ends of the slots s s , as shown in Fig. 12. When the wire is inserted between said shoe and the ledge p^2 , said shoe is forced downward against the tension of said spring, which tension presses said shoe into firm contact with said wire, but presents no obstacle to the downward movement of the wire when acted upon by the feed-pawl, but effectually prevents any upward movement of said wire when said feed-pawl is moved upward. A stop-plate t is adjustably secured to the plate p by the clamping-screw t' , passing through the slot t^2 and screwed into said plate p , said stop serving to limit the upward movement of the feed-pawl and determine the length of wire fed at each stroke thereof.

What I claim as new, and desire to secure by Letters Patent of the United States, is—
1. In a lasting-tool the combination with a nail-wire-receiving reel, and means for intermittently feeding said nail-wire from said reel distances equal to the length of a nail; of the pivoted lever A; a nail-cutter journaled in a recess in said lever; the lever J carrying said nail-cutter; the lever K pivoted to the

lever A and provided with the handle *h'*; the spring *k* secured to the under side of said handle with its free end in position to engage the lower arm of said lever J; and the set-screw *k'* set in said lever K whereby said spring may be adjusted to regulate the time of contact thereof with said lever J.

2. In a lasting-tool the combination, with the pivoted lever A, a nail-wire-receiving reel carried thereby, a suitable nail-wire guide, a feed-pawl, and a feed-lever made in two parts adjustable one upon the other; of a toggle comprising two links pivoted together and at one end to said lever A and at the other end to said feed-lever; the lever K pivoted to said lever A and provided with the handle *h'*; a truck carried by said lever K and arranged to act upon said toggle to move its central portion in one direction to depress the feed-lever; and a spring connected at one end to the pivotal

connection of said toggle-links, and at its other end to a pin set in said lever A and adapted to retract said toggle, feed-lever and pawl when said lever A is raised.

3. In a lasting-tool the combination with the pivoted lever A the levers J and K pivoted to said lever A, and the cutter *a'* carried by said lever J, of an adjustable stop, or contact-surface, carried by said lever K, and adapted to engage the lower end of said lever J to impart a cutting movement to said lever J and cutter *a'*.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 5th day of May, A. D. 1898.

ISAÏE FRÉCHETTE.

Witnesses:

N. C. LOMBARD,
LÉON DION.