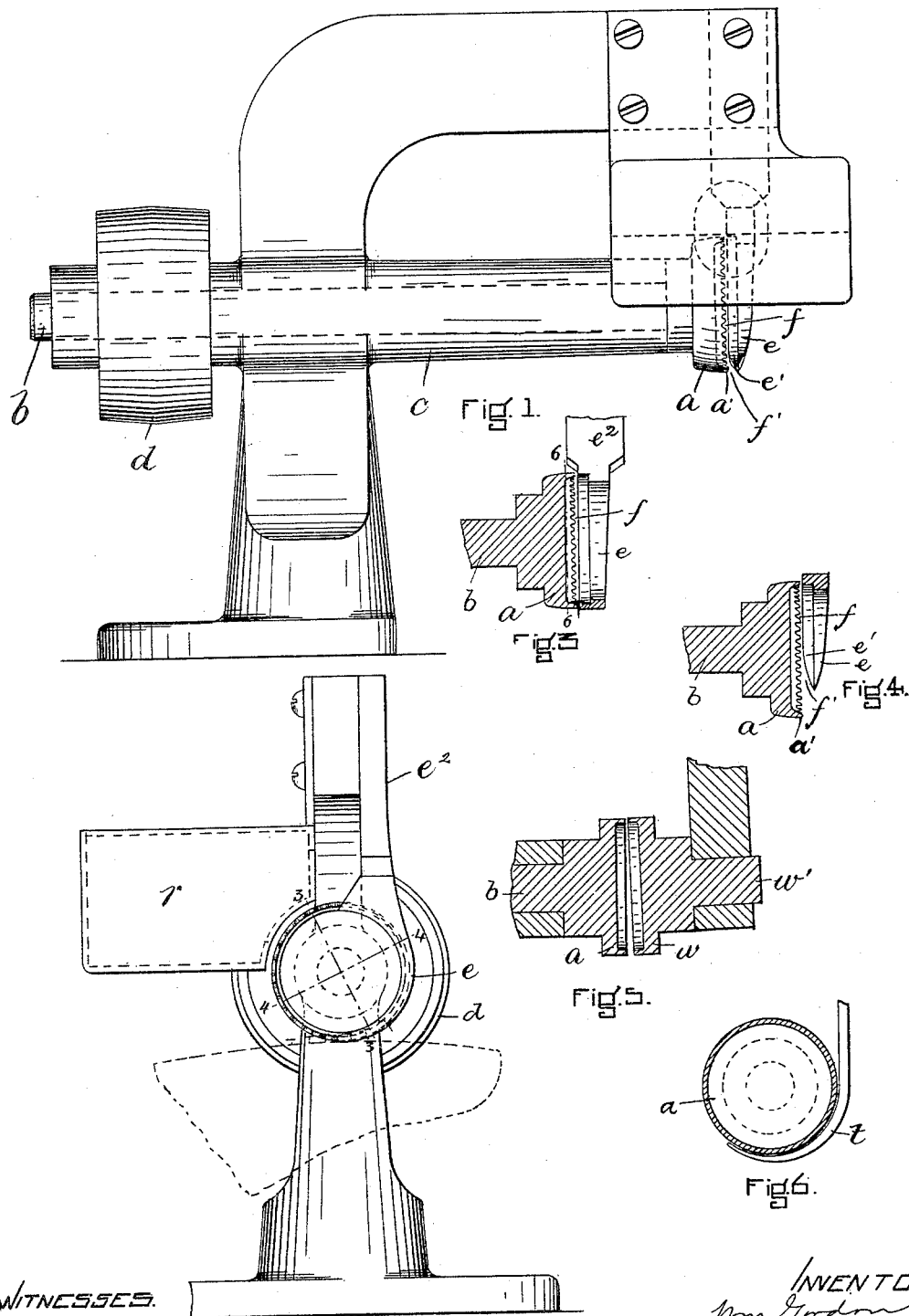


(No Model.)

W. GORDON & A. E. PERRY.
MACHINE FOR PULLING LASTING TACKS.

No. 459,202.

Patented Sept. 8, 1891.



WITNESSES.

Swing W. Hamlen.
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Fig. 2.

INVENTORS.

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UNITED STATES PATENT OFFICE.

WILLIAM GORDON, OF BOSTON, AND AUSTIN E. PERRY, OF WAKEFIELD,
MASSACHUSETTS; SAID PERRY ASSIGNOR TO SAID GORDON.

MACHINE FOR PULLING LASTING-TACKS.

SPECIFICATION forming part of Letters Patent No. 459,202, dated September 8, 1891.

Application filed January 8, 1891. Serial No. 377,146. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM GORDON, of Boston, in the county of Suffolk and State of Massachusetts, and AUSTIN E. PERRY, of Wakefield, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Pulling Lasting-Tacks, of which the following is a specification.

10 This invention has for its object to provide simple and effective means for withdrawing lasting-tacks from the lasted uppers of boots and shoes after the lasting operation; and it consists in the improvements which we will
15 now proceed to describe and claim.

In the accompanying drawings, Figure 1 represents a side view of a tack-pulling machine embodying our invention. Fig. 2 represents an end elevation of the same. Fig. 3 represents a section on line 3 3, Fig. 2. Fig. 20 4 represents a section on line 4 4, Fig. 2. Fig. 5 represents a sectional view of a modification. Fig. 6 represents a section on line 6 6, Fig. 3.

The same letters of reference indicate the
25 same parts in all the figures.

In carrying out our invention we provide a wheel *a*, having at one side a thin laterally-projecting flange *a'*, which is preferably notched or serrated, as shown in Figs. 1, 2, 3,
30 and 4. Said wheel is affixed to one end of a shaft *b*, which is journaled in a fixed bearing *c* on a supporting frame or standard, and may be rotated in any suitable way, as by a driving-belt running on a pulley *d* on said shaft.

35 *e* represents a jaw which is formed and arranged to co-operate with the flange of the wheel *a* in pulling lasting-tacks. Said jaw, as shown in Figs. 1, 2, 3, and 4, is a curved arm formed on a shank *e'*, which is affixed to
40 the supporting-frame. Said arm is curved to conform to the periphery of the wheel, and its inner side is reduced to form a thin flange *e''*, a portion of which is substantially parallel with the flange *a'*, said flanges *a'* and *e''* being
45 separated by a narrow way *f* of sufficient width to permit the passage of the shank of a lasting-tack between the flanges, said way being narrower than the width of the head of a lasting-tack. The edge of the flange *e'* is
50 curved at its forward end, as best shown in

Fig. 4, to form a converging mouth or entrance at *f'* to the way *f*. The flanges *a'e'* are made so thin that they can pass under the head of a lasting-tack in the bottom portion or edge of a lasted upper, and thus engage the shank
55 of the tack and pull the same from the upper. In practice the wheel *a* is rapidly rotated, and the operator, holding the lasted boot or shoe bottom up, moves the same along under the wheel in such manner as to cause the heads
60 of the tacks to enter the mouth *f'* and way *f*. When the heads of the tacks have entered said way, the flanges forming the sides of the way co-operate in pulling the tacks from the boot or shoe in a manner that will be readily
65 understood. The extracted tacks are carried around the periphery of the wheel until they reach the end of the fixed jaw or arm *e*, when they are thrown out centrifugally into a receptacle *r*, attached to the supporting-frame, said receptacle having a mouth or opening
70 arranged to receive the tacks.

In Fig. 5 we have shown a modification in which the jaw that co-operates with the flanged wheel *a* is a flanged wheel *w*, the axis *w'* of
75 which is somewhat oblique to that of the wheel *a*, so that the flanges of the two wheels are not parallel, but are close together at one side of their axes and more widely separated at the opposite side. Said flanges co-operate
80 in grasping and pulling the tacks at the point where their flanges are nearest each other. The wheel *w* may be either positively rotated or may rotate loosely or may be fixed. We
85 prefer to provide a rest *t* at the rear and under side of the wheel *a* to support the upper more firmly than it could be supported by the moving surface of the periphery of the wheel. (See Fig. 6.)

We claim—

1. In a tack-pulling machine, the combination, with a wheel adapted to be rotated and provided with a lateral flange, of a curved jaw arranged to form one side of a narrow way, the other side of which is formed by said
95 flange, said way being adapted to receive the shank of a tack, as set forth.

2. In a tack-pulling machine, the combination of a wheel adapted to be rotated and provided at one side with a lateral annular flange,
100

and a fixed arm having a curved jaw located beside the flange of the wheel, said jaw being curved or inclined at one end to form a mouth for the way between the flange of the wheel and the jaw, as set forth.

3. In a tack-pulling machine, the combination of a wheel adapted to be rotated and provided at one side with a lateral flange having teeth or serrations, and a fixed arm having a curved jaw located beside the flange of the wheel, as set forth.

4. In a tack-pulling machine, the combination, with a wheel adapted to be rotated and provided with a lateral flange, of the curved jaw arranged to form one side of a narrow way, the other side of which is formed by said flange, said way being adapted to receive the

shank of a tack, and a receptacle arranged at one end of said way to receive tacks therefrom, as set forth.

5. In a tack-pulling machine, the combination, with the wheel *a* and fixed jaw *e*, of the rest *t*, arranged to support the work, as set forth.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, this 1st day of January, A. D. 1891.

WILLIAM GORDON.
AUSTIN E. PERRY.

Witnesses:

C. F. BROWN,
EWING W. HAMLEN.