

(No Model.)

E. A. PORTER.
STAPLE DRIVING IMPLEMENT.

No. 481,970.

Patented Sept. 6, 1892.

Fig-1-

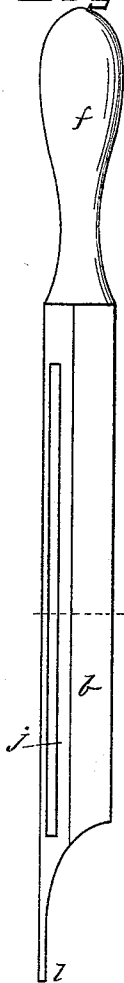


Fig-2-

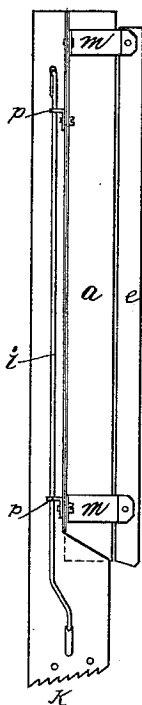


Fig-3-

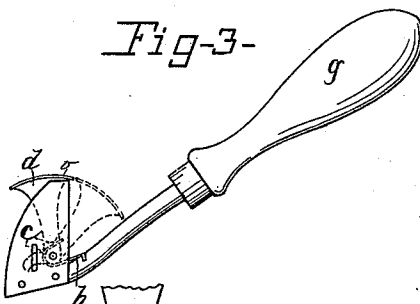


Fig-4-

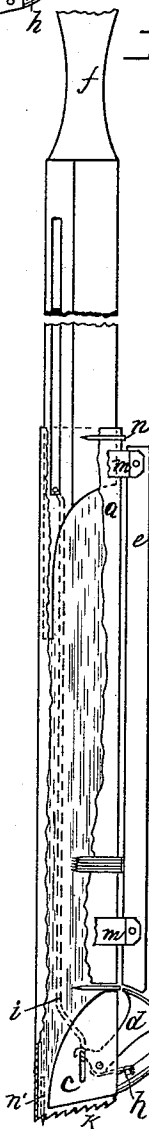


Fig-5-



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ERNEST A. PORTER, OF FLORENCE, MASSACHUSETTS.

STAPLE-DRIVING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 481,970, dated September 6, 1892.

Application filed May 16, 1891. Serial No. 393,059. (No model.)

To all whom it may concern:

Be it known that I, ERNEST A. PORTER, a citizen of the United States of America, residing at Florence, in the county of Hampshire and State of Massachusetts, have invented new and useful Improvements in Feeding and Driving Devices, of which the following is a specification, reference being had to the accompanying drawings and letters of reference marked thereon.

In the drawings like letters of reference indicate like parts.

Figure 1 is a side view of the plunger. Fig. 2 is a side view of the case; Fig. 3, a like view of the foot; Fig. 4, a side view of the complete device with a part of the shell broken away; and Fig. 5 is a sectional end view of the plunger.

In detail *a* indicates the shell; *b*, the plunger; *c*, the foot; *d*, a feed-lever; *e*, guide-rod; *f*, a handle upon the plunger; *g*, a handle upon the foot; *h*, feed-lever spring; *i*, feed-lever latch; *j*, a slot in the plunger; *k*, teeth on the lower end of the case or shell, and *l* plunger-point.

The plunger is preferably made of cast-iron, the body handle, and point being integral, and shaped in its body portion in cross-section substantially as shown in Fig. 5. The lower end of the plunger is curved or cut under, as shown in Fig. 1, to allow for the feeding mechanism, and the point or plunger-head *l* is shaped on its end to bear squarely upon the staple or other fastening to be driven. The upper end of the plunger is provided with a handle *f*.

The shell or case *a* is preferably made of sheet metal and conforms substantially to the exterior of the plunger-body, and when designed for driving staples the edge of the shell toward the operator is made sufficiently narrow to allow the staples to rest loosely astride it.

A vertical guide-rod *e* is mounted upon the shell a sufficient distance therefrom to form a feed-slot between the casing and the inner edge of the guide-rod and permit the free passage of the central portion of the staples between it and the shell, which rod is held in position by pieces *m*, which when a narrow guide-rod is employed are formed to allow the free passage of the staple-legs between

them and the shell. The staples are fed into the device at the top, as shown at *n* in Fig. 4, and are fed by gravity to a position to be operated upon by the feed-lever *d*, which feed-lever is pivotally mounted in the foot *c*, as shown in Figs. 3 and 4, and is preferably provided at its free end with a rib *o*, extending from each side of the body portion *d*, thus giving a broader surface. The free end of the feed-lever sweeps under the end of the guide-rod and moves between the top of the foot *c* and below the end of the feedway, and the space between the outlet to the feedway and the top of the foot is just sufficient to allow one staple to escape, so that when the feed-lever moves forward it comes in contact with one staple only, and, forcing the same inward away from the feedway, the points fall by gravity and are carried forward by the feed-lever until they drop to the position shown in dotted lines at *n'* in Fig. 4.

A spring *h*, mounted within the foot *c* and bearing upon the feed-lever *d*, serves to normally maintain the feed-lever in the position shown in Fig. 3.

A latch-rod *i* is mounted in support *p* upon the shell and extends from a position near the top of the case, where its returned end slides within the slot *j*, and its opposite returned end projects inwardly through the case and engages a projection *r* upon the feed-lever *d*, so that when the plunger is raised the returned end of the latch *i* engages the lower end wall of the slot *j*, and is thus carried upwardly, and carrying with it the lower end of the latch, which engages the projection *r* and causes the feed-lever *d* to turn upon its pivot, the head or free end being carried outward, and allowing one staple to drop into position to be fed. When the plunger begins its downward motion, the latch-rod *i* is immediately released and the spring *h* operates to force the free end of the feed-lever *d* inwardly, thus carrying with it one staple, which staple, being thus fed, immediately drops to position and is operated upon by the plunger-head and may be driven home with a single blow. Thus it will be seen that with each upward and downward motion of the plunger a staple will be fed and driven. The lower end of the shell is preferably provided with teeth *k*, so that the device may be used as a carpet-

stretcher as well as a tack or a staple driver, the same being held in position by the grasping of the handle *g*, while the plunger is operated with the other hand.

5 It will readily be seen that if tacks or fastening devices of other shapes than staples, as especially illustrated, be employed a change in the form of the feeding-way and the feed-lever only would be required and
10 that the operation of the device would be the same as herein described.

Having therefore described my invention, what I claim, and desire to secure by Letters Patent, is—

15 1. In a hand tacking-machine, the combination of a casing, a vertical guide-rod secured adjacent to the casing to form a feedway between the casing and the inner edge of the guide-rod, a reciprocative plunger fitted
20 in the casing and provided with a lengthwise slot, a foot-piece secured in the lower end of the casing, a feed-lever fulcrumed in the foot-piece with its free end arranged to sweep the lower end of the guide-rod and feedway, a

spring to move the feed-lever inward, and a 25 latch-rod having its upper end engaging in the slot of the plunger and its lower end secured to the feed-lever, substantially as and for the purpose specified.

2. In a hand tacking-machine, the combination of an outer casing having teeth on its 30 base, a guide-rod secured to the casing to form a feedway between the casing and the inner edge of the guide-rod, a reciprocative plunger formed with a slot *j*, arranged in the case, a 35 foot *c*, mounted in the base of the casing and provided with a handle *g*, a feed-lever fulcrumed in the foot to sweep with its free end the lower end of the guide-rod and feedway, a spring to throw the feed-lever inward, and 40 a latch-rod *i*, engaging in the slot of the plunger and the toe of the feed-lever, substantially as and for the purpose specified.

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Witnesses

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