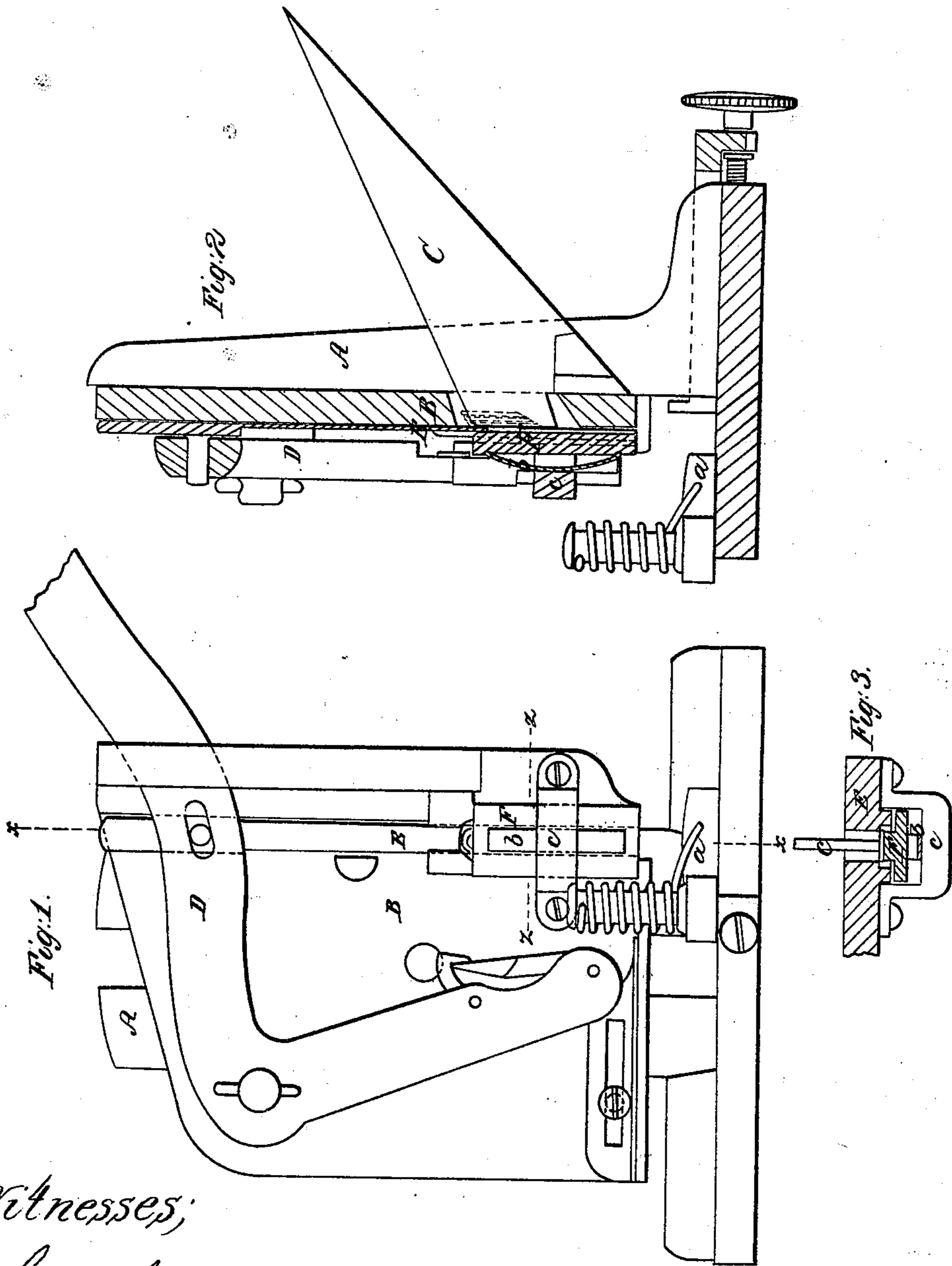


W. F. Dodge.

Blind Wiring Mach.

No. 88,145.

Patented Mar. 23, 1869.



Witnesses;
J. M. Coombs
Fred. Haynes

Inventor,
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United States Patent Office.

WILLIAM FOSTER DODGE, OF NEWARK, NEW JERSEY.

Letters Patent No. 88,145, dated March 23, 1869.

IMPROVEMENT IN BLIND-WIRING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM FOSTER DODGE, of Newark, in the county of Essex, and State of New Jersey, have invented a new and useful Improvement in Blind-Wiring or Staple-Driving Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a side elevation of a blind-wiring machine, having my improvement applied to it;

Figure 2, a sectional elevation, taken mainly as indicated by the line xx in fig. 1; and

Figure 3, a horizontal section of a portion of the machine, taken as denoted by the line zz in fig. 1.

Similar letters of reference indicate corresponding parts.

In machines for driving the staples into blind-slats and rods, or other work, the operation of delivering the staples, one by one, from the machine, though apparently a simple one, is attendant with difficulties which it has been the object of various special constructions to avoid. Thus, springs or elastic fingers have been used, to hold each staple in succession, as it is fed from the rack, or conductor, to secure the proper action of the driver upon it; also a yielding mouth, for the same purpose, formed by giving to the rack, or to an additional piece arranged between the forward end of the rack and the main plate, an elastic character or action, superinduced by the motion of the driver as it plays between said main plate and yielding rack, or separate face-piece thereto.

My invention differs from all such constructions, by the employment, in combination with a fixed rack, or conductor, of a yielding staple-guide, arranged to rock, or play intermediately of its depth or length, and so that the driver, in forcing home the staple, plays between said guide and the forward end, or face of the rack, in contradistinction to between the main plate and front end of the rack. This construction relieves the rack from much strain and wear, and possesses several advantages, including, by reason of the rocking action of the guide, an easy slip or delivery for the staple, without, however, the possibility of it falling through in advance of the driver.

Referring to the accompanying drawing, in which many parts are shown common to other blind-wiring machines—

A is the standard, designed to be attached to a bed-frame of wood, and

B, the main plate, connected in an adjustable manner therewith, to suit different widths of slats and rods.

C is the sloping rack, or conductor, on which the wires or staples are straddled, and down which they slide in the operation of the machine. This rack is here made a fixture to the main plate B, and projects, at its forward end, through said plate.

D is the lever, which serves to operate the verti-

cally-sliding staple-driver E, and which lever may also be used to actuate the work-feeding devices, where the work, or work and its carrier, as in the case of blind-rods, require to be fed intermittently below the range, or action of the driver, when a spring-borne eccentric, or cam a , may be employed to hold the carrier and rod properly in position, but such feeding and holding-devices to the work form no part of my present improvement, and may be variously constructed and operated.

On the opposite side of the main plate B, to which is located the rack C, and directly facing the forward end of said rack, is arranged; in close proximity to it, a guide, F, preferably made of steel, and so borne or held at its back, by a spring, as to admit of its slightly rocking, or vibrating vertically in such manner as that, on the upper end of the guide being drawn or forced away from the front end of the rack, the lower end of said guide is operated in a reverse direction relatively to said rack. This is preferably accomplished by means of a semi-elliptical spring, b , acting at its ends against the back of the guide, and attached to or bearing at its centre against a strap, c , fastened by screws to the main plate B.

From this description it will be seen that while only one staple at a time can by any possibility pass between the rack C and guide F, the driver E, in its descent, strikes fair on the loop-end of the staple, without cutting or straining on the upper edge of the rack, and that, on said driver entering between the guide F and front of the rack C, to facilitate which, the adjacent faces of such parts are bevelled away at top, the guide F is rocked, or vibrated under an elastic pressure, or resistance, in such manner as to facilitate the descent of the staple, but not so that it can drop or run away from the driver, by reason of the closing-action, or motion given to the guide at its bottom-end, while its upper portion is being opened or forced away by the driver and staple, as illustrated in fig. 2. This prevents irregular dropping of the staple, and insures the driver closely following it, so that its proper entry in the wood is directed by the driver.

Of course, as the staple and driver pass down to and below the centre of oscillation of the guide, the latter opens below, but this is not until the driver has got a fair hold, as it were, on the staple, and followed it up, to make the action a positive one. The importance of this will readily be seen when it is considered that the guiding-surfaces, in course of time, become cut and worn by the staples.

Furthermore, in case of any fouling or excessive wear, the same would generally be remedied by mere removal of the guide F, and, if necessary, substitution of another, without displacement of the rack having the staples strung on it.

If requiring, however, to redress the front end of the rack, the same may be done, and, by slightly fil-

ing away, on its inner face, the projection which holds it to the main plate B, the device be properly located again relatively to the guide F.

No such facilities are afforded where the main plate itself is made one of the guiding-surfaces, nor does a rack, or additional piece in front of the rack, having a horizontal or uniform sliding action toward and away from the opposite guiding-surface, afford that protection, in case of wear, against the staple falling through in advance of the driver, that the rocking guide F does.

Friction, too, of the staple in passing, is diminished, and there is no risk of the staples sticking in being delivered, even though the legs be of unequal length or crooked.

What is here claimed, and desired to be secured by Letters Patent, is—

The yielding guide F, supported by the spring *b*, on a central bearing, *c*, so as to have a rocking or vibrating motion, in combination with the fixed rack C, substantially as shown and described, as an improvement on the patent of T. R. Crosby, dated December 13, 1859.

WM. FOSTER DODGE.

Witnesses:

FRED. HAYNES,
A. KINNIER.