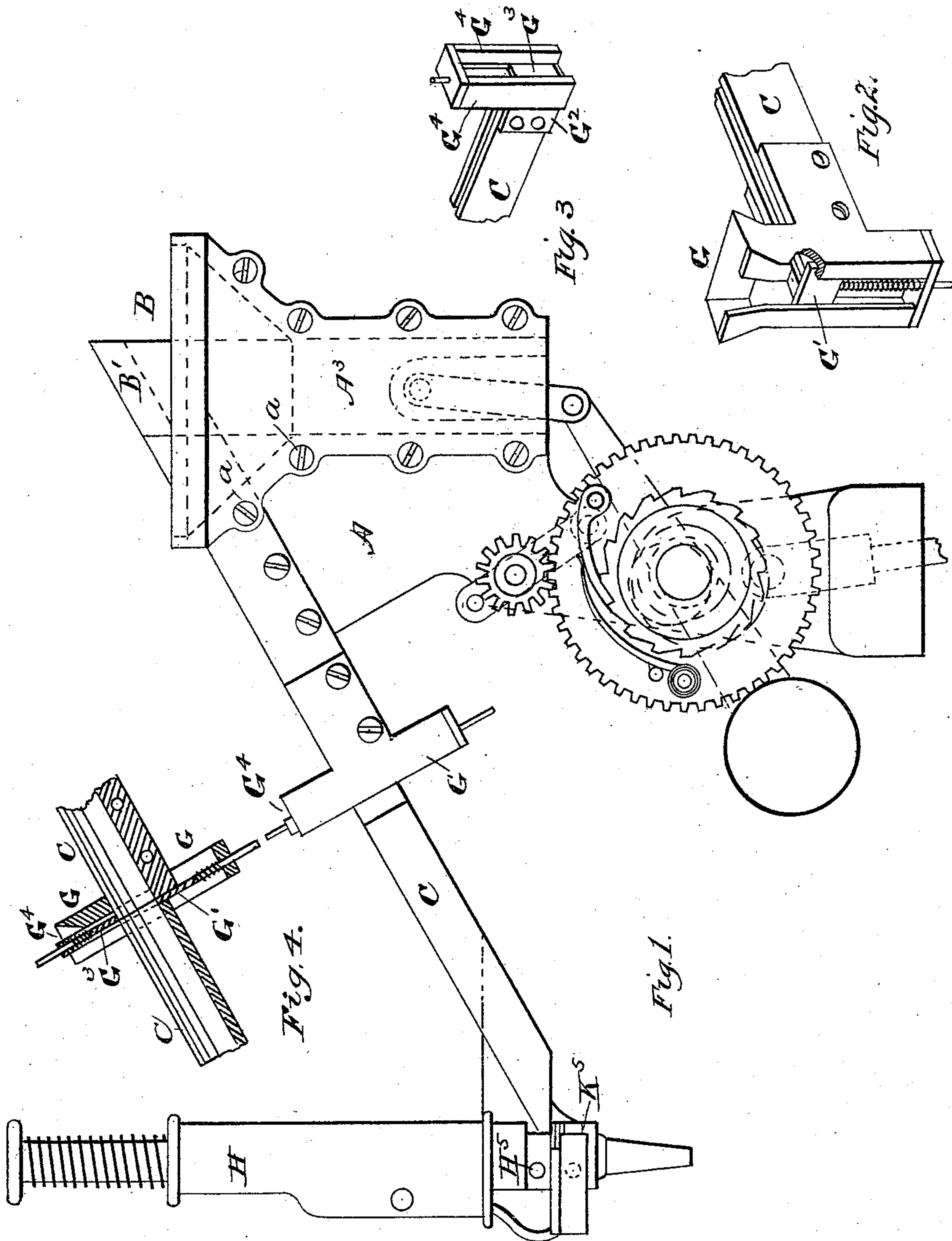


(No Model.)

J. E. CRISP & G. W. COPELAND.
TACK DRIVING MACHINE.

No. 455,174.

Patented June 30, 1891.



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TACK-DRIVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 455,174, dated June 30, 1891.

Original application filed November 4, 1890, Serial No. 370,291. Divided and this application filed January 30, 1891, Serial No. 379,687. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH E. CRISP, of Somerville, and GEORGE W. COPELAND, of Malden, both in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Tack-Driving Machines; and we do declare the following, with the accompanying drawings, to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to hand tack-driving machines designed to drive tacks placed loosely in a hopper, from which the tacks are automatically arranged in an inclined chute leading to feeding devices which successively present the tacks for the action of the driving mechanism. It is so constructed that the work may be presented to the nozzle of the driver, or the driving implement may be detached from its hopper and carried to the work.

The invention consists in making the tack-chute in two separate parts, one fixed to the tack-arranging mechanism, (which is permanently located,) so that it is being charged while the other part is fixed to the tack feeding and driving mechanism and moving from place to place in use.

It also consists in providing the abutting ends of the chute with automatically-operating gates which open when the chute is joined, and which allow the tacks to flow from the fixed into the movable part thereof when said parts are joined together.

It also consists in making the coupling used to join the two parts of the chute a rest, into which the operator places the feeding and driving mechanism when not in use, and takes the machine from that rest supplied with tacks enough for one period of use.

This application being a division of application No. 370,291, filed November 4, 1890, the tack-arranging and tack-driving mechanism require no special mention herein and in the drawings.

Figure 1 is a side elevation of the tack elevating and arranging mechanism, also showing the driving mechanism in its rest. Fig. 2

shows in perspective the male sliding coupling used to connect the two parts of the chute. Fig. 3 shows in perspective the female coupling and rest that is permanently attached to the chute of the hopper. Fig. 4 is a male and female coupling with parts of the tack-chute in section.

The casting A supports the various parts of the tack receiving and arranging mechanism. This casting may be fixed at any desired height upon a proper support and wherever desired. The fixed part of the chute C is attached to the casting A at the proper inclination for the tacks to run down, and it is made long enough to fill the removable part of the chute attached to the tack-driver. To the lower part of the fixed part of the chute C is fixed the female part of the coupling G, Fig. 2, which is provided with the spring-operated gate G', for closing that part of the chute when the two parts are separated. The top of this coupling is belled or inclined out to assist the entrance of the part G². The male part of this coupling G² is fixed to the outer end of that part of the chute C leading to the tack-feeding mechanism, and it is also provided with the spring-operated gate G³, for closing its abutting end when the parts are separated, Fig. 3. The guiding and supporting ribs G⁴ of the male part of this coupling are fitted to slide free in the grooves in the female part for their reception, and the placing together of these two parts by the operator to the position shown by Fig. 4 causes the two parts of the chute to abut and align with the gates G' and G³ open.

The gates G' and G³ are fitted to slide free in grooves cut in their respective parts of the couplings, and they are opened by contacting with the opposite parts of the chute, as shown by Fig. 4, and their springs close them as the parts of the chute are separated.

The chute C and the coupling G are made strong enough to support the tack-driving mechanism, as shown by Fig. 1, and form a rest to which the removable part is always returned after use, and where the deficiency of tacks in the movable part of the chute is automatically supplied by the act of placing the tack-driving mechanism in said rest.

It will be seen that when the chute is joined tacks may be driven from the nozzle of the driver so long as the supply in the tack-receiving hopper lasts. It will also be seen that
 5 any desired number of tacks, governed by the length of the movable part of the chute, can be driven at any place within easy range of the fixed part of the chute without any substantial loss of time and while the process of
 10 arranging other tacks in the fixed part of the chute is going on.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

15 1. In a tack-driving machine of the class described, an inclined tack-chute composed of two parts lineally connected by male and female couplings fixed to the abutting ends thereof, and provided with sliding gates which
 20 are opened and closed by connecting and disconnecting the parts, substantially as shown, and for the purpose set forth.

2. In a tack-driving machine, an inclined chute composed of two parts provided at their
 25 connecting ends with spring-operated sliding gates reversely arranged and automatically operated to open the gates to form a continuous roadway when the parts are connected and to automatically close the gates when
 30 they are separated, substantially as shown and described.

3. In a tack-driving machine of the class described, an inclined tack-chute composed of two parts provided with sliding couplings,
 35 the female part of which is provided with a bell-shaped entrance to facilitate the entrance of the male part therein, substantially as shown and described.

4. In a tack-driving machine of the class described, the combination, with the body of
 40 a tack-driving machine, of a chute fixed thereto and having one part of a coupling fixed to the outer free end of said chute, which serves to hold the tack-driver in a rest formed of the opposite part of said coupling when
 45 not in use, and the opposite part of said coupling, in combination with the fixed part of said chute, all operating as shown and described.

5. In a hand tacking and loading machine, 50 the combination of a suitable tack-driver, a tack loader and loading mechanism, a tack-chute composed of two parts, one carried by the driver and the other fixed to the loader, and means for connecting and disconnecting
 55 the same, whereby the fixed part may be loaded when the tack-driving mechanism is detached for use and that part of the chute attached to the driver be recharged by the act of connecting the parts, and the fixed part
 60 of the chute forms a rest or support for the tack-driver when not in use, substantially as described.

6. In a hand tacking and loading machine, the combination of a suitable tack-driver, a
 65 tack loader and loading mechanism, with a tack-chute composed of two parts, one part fixed to the tack-driving device and the other part fixed to the loading mechanism, and means for connecting and disconnecting the
 70 same, for the purposes set forth.

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