A. LATHAM.
TACK SUPPLYING MECHANISM.
APPLICATION FILED JUNE 21, 1915.

1,223,401.

Patented Apr. 24, 1917.

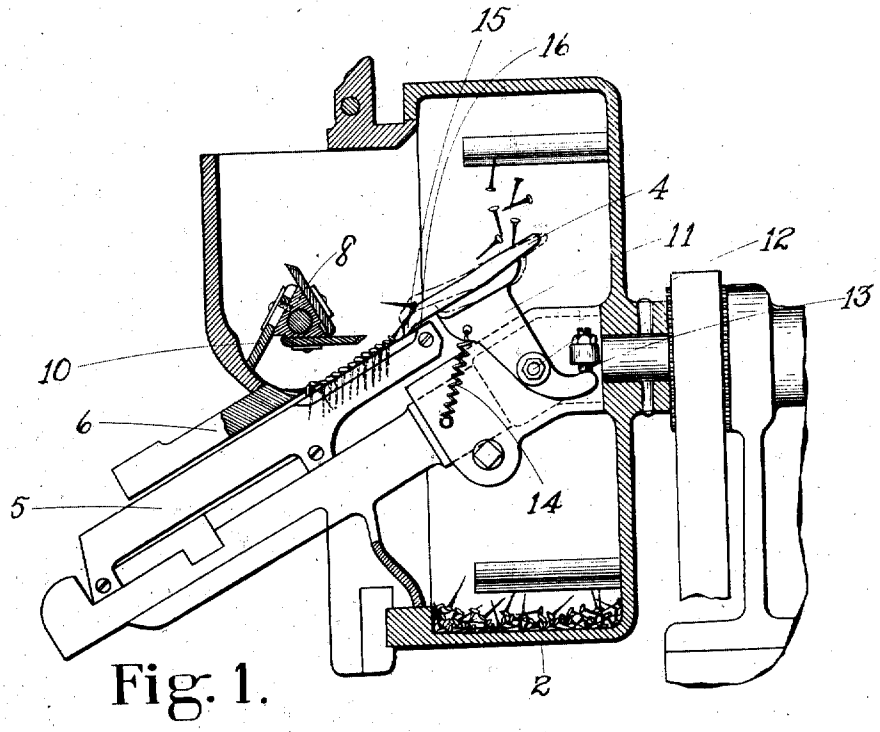


Fig. 1.

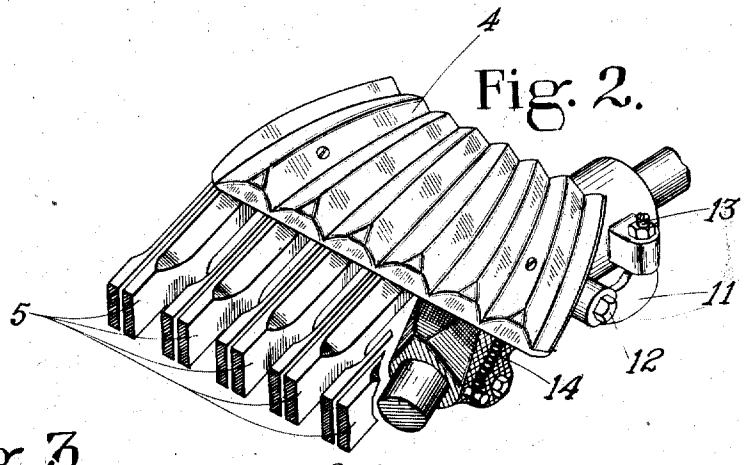
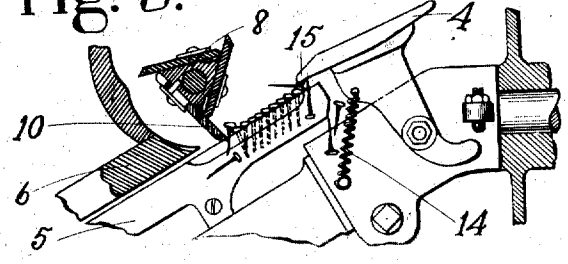


Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

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TACK-SUPPLYING MECHANISM.

1,223,401. Specification of Letters Patent. Patented Apr. 24, 1917.

Application filed June 21, 1915. Serial No. 35,323.

To all whom it may concern:

Be it known that I, ALBERT LATHAM, a citizen of the United States, residing at Beverly, in the county of Essex and State of Massachusetts, have invented certain Improvements in Tack-Supplying Mechanisms, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to tack supplying mechanisms and is herein shown as embodied in the tack supplying mechanism of a pulling-over machine similar to that shown in United States Letters Patent No. 1,029,387, granted June 11, 1912 upon application of Ronald F. McFeely.

The object of the invention is to enable the mechanism to clear itself automatically of tacks misplaced in certain relations, and a feature of the invention consists in the combination of a tack raceway and a delivery plate which overlaps the raceway end and is movable to permit the passage of misplaced tacks between it and the raceway.

The invention will be more fully understood from the following description with the aid of the accompanying drawings of an illustrative embodiment, and will be particularly pointed out at the end of the specification.

Figure 1 of the drawings is a vertical section through portions of the machine shown in Fig. 3 of said prior patent, and illustrates this invention in a form in which I have employed it;

Fig. 2 is a perspective view of the movably mounted distributer plate of the illustrated tack supplying mechanism; and

Fig. 3 shows the parts in action.

In the machine illustrated in these drawings there is a rocking hopper 2 into which loose tacks are deposited in bulk and by the movements of which hopper the tacks are lifted to a point above an inclined plate 4 upon which they are dropped and over which they slide down to the channel grooves of inclined raceways 5 in which more or less of the tacks become suspended by their heads and then gravitate downwardly toward the discharge ends of the raceways. Raceway covers 6 are held in place over the lower portions of the raceways and have grooves in their lower faces to give passage for the heads of the downwardly moving tacks, the surface walls of the grooves being located at a proper distance above the raceways to prevent the tacks from lifting or riding upwardly upon one another and consequently becoming cramped or entangled together after being properly in place under the covers. In order to keep the tacks from clogging at the hopper ends of said covers and in the channel grooves above the covers a clearer mechanism is employed comprising a rotary carrier 8 in which tack clearers 10 are mounted to slide endwise by gravity as the carrier is turned and to ride over the ends of the raceway covers and then up a short distance along the uncovered portions of the race- the cleaners and proper delivery of tacks in the hopper ends of the raceways. The rotary movement of the carrier lifts the clearers from the raceways whereupon the tacks in the lines are allowed to gravitate loosely down the raceways and those which are properly suspended pass under the covers. When the lines of tacks are pushed upwardly along the hopper ends of the raceways the tacks nearest to the distributing plate are pushed under the overlapping lower edge of the plate. The upper ends of the raceways are left open so that any tacks crowded up to the end can pass out and fall back into the hopper. Tacks lying upon one another sometimes get wedged under the lower edge of the distributing plate and clog the raceways so as to prevent proper movement of a line of tacks upwardly by the clearers and proper delivery of tacks from the plate to the raceway. The distributing plate is therefore, in accordance with the illustrated embodiment of this invention, movably mounted by an arm 11 which extends downwardly and backwardly and is pivoted to a fixed support 12, the tail end of the arm 11 resting upwardly against an adjustable stop screw 13 which holds the lower edge of the plate spaced the proper distance above the hopper ends of the raceways. A spring 14 holds the plate down but allows it to be raised by the action of a clearer upon the tacks in case the clearer crowds under it tacks that are lying upon one another. The successive movements of the clearer force the misplaced tacks up-

wardly and finally out through the upper end of the raceway so that the mechanism frees itself automatically of such tacks. The distributing plate is formed on its lower face to present a narrow edge 15 to the raceway so that tacks piled upon one another will pass back of said edge by traveling only a short distance. When they get back of said edge there is space enough provided, by reason of the lower face of the plate being cut away at 16 as shown in Fig. 1, so that disarranged tacks will not hold the plate up.

Having explained the nature of the invention and fully described one embodiment of it, I claim as new and desire to secure by Letters Patent of the United States:—

1. In a tack supplying mechanism, an inclined raceway, a plate overlapping the upper end of the raceway and adapted to deliver tacks to the raceway, and a tack clearer operating to move the line of tacks upwardly in the raceway and then allow them to slide down the raceway, said plate being movable away from the overlapped end of the raceway to allow the tacks in the upper portion of the line to pass between it and the top face of the raceway in response to the action of the clearer.

2. In a tack supplying mechanism, an inclined raceway, a plate adapted to deliver tacks to the raceway, said plate overlapping the upper end of the raceway and being pivotally mounted, and means for yieldingly holding the plate in adjusted relation of proximity to the overlapped portion of the raceway.

3. In a tack supplying mechanism, an inclined raceway, a plate adapted to deliver tacks to the raceway, and a tack clearer operating to move the line of tacks upwardly in the raceway and then allow them to slide down the raceway, said plate overlapping the upper end of the raceway and being cut away on its lower face where it overlaps the raceway to present a narrow edge which is located in proximity to the raceway and under which tacks in the line of tacks may be moved by the clearer.

4. In a tack supplying mechanism, the combination with a tack hopper and tack raceways, of a tack distributing plate overlapping the raceways and pivotally supported below the raceways, a spring arranged to tip the plate toward the raceways, and an adjustable stop to limit such movement.

5. In a tack supplying mechanism, a hopper, a raceway, and a plate to receive tacks from the hopper and deliver them to the raceway, said plate overlapping the upper end of the raceway and movable during the operation of the machine from and toward the top face of the raceway to prevent clogging of tacks in the raceway under the overlapping portion of said plate.

6. In a tack supplying mechanism, a hopper, a raceway, and a plate to receive tacks from the hopper and deliver them to the raceway, said plate being pivotally supported below the raceway for movement from and toward the upper end portion of the raceway.

7. In a tack supplying mechanism, a hopper, an inclined raceway, a plate to receive tacks from the hopper and deliver them to the raceway, and a tack clearer operating upwardly along the raceway to move the tacks in the raceway, said receiving plate being arranged for movement for the purpose described by force imparted by the clearer.

8. In a tack supplying mechanism, a hopper, a raceway, and a plate to receive tacks from the hopper and deliver them to the raceway, said plate overlapping the upper end of the raceway, and said plate and raceway being relatively movable during the operation of the machine without attention from the operator to separate the plate and the overlapped top face of the raceway.

In testimony whereof I have signed my name to this specification.

ALBERT LATHAM.

Correction in Letters Patent No. 1,223,401.

It is hereby certified that in Letters Patent No. 1,223,401, granted April 24, 1917, upon the application of Albert Latham, of Beverly, Massachusetts, for an improvement in "Tack-Supplying Mechanisms," an error appears in the printed specification requiring correction as follows: Page 1, strike out line 73 and insert the words *way to push upwardly the lines of tacks;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 31st day of July, A. D., 1917.

[SEAL.]

Cl. 1–6

F. W. H. CLAY,
Acting Commissioner of Patents.