J. A. MACKEY.

TACK LOADER.

APPLICATION FILED FEB. 23, 1917.

1,329,787. Patented Feb. 3, 1920.

Fig 1.

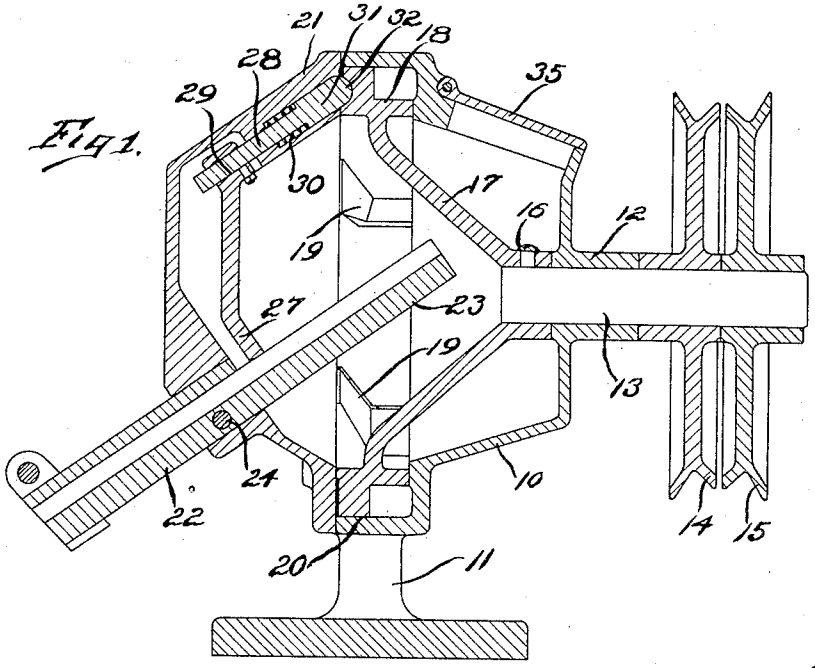
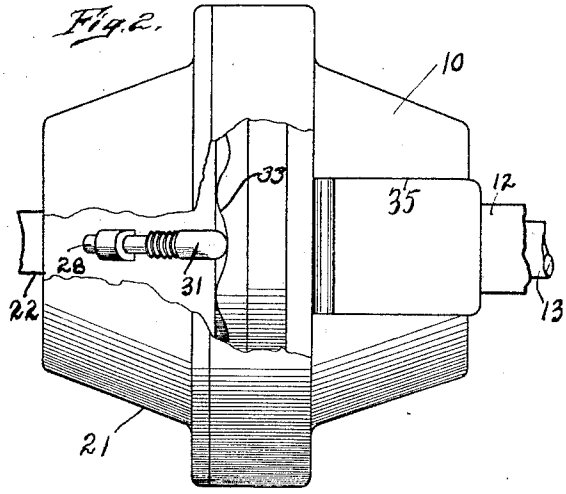


Fig. 2.



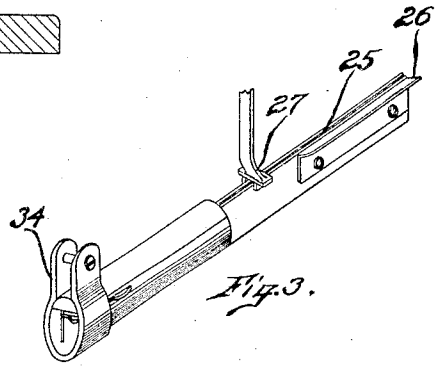


Fig. 3.

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UNITED STATES PATENT OFFICE.

JAY A. MACKEY, OF LYNN, MASSACHUSETTS, ASSIGNOR TO HAMEL SHOE MACHINERY COMPANY, OF LYNN, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

TACK-LOADER.

1,329,787. Specification of Letters Patent. Patented Feb. 3, 1920.

Application filed February 23, 1917. Serial No. 150,457.

To all whom it may concern:

Be it known that I, JAY A. MACKEY, a citizen of the United States, and resident of Lynn, county of Essex, Commonwealth of Massachusetts, have invented an Improvement in Tack-Loaders, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts in each of the several views.

This invention relates to apparatus for delivering tacks or like headed articles from a magazine or hopper to a chute or slideway in regular alinement, and while having other and more general fields of usefulness is well adapted and designed for use in "loading" the tack holders commonly employed in connection with shoe lasting operations. A prime object of the invention is to provide a mechanism of this kind that is exceptionally simple and inexpensive to produce, and at the same time highly efficient and reliable in action, and with no fragile or complicated parts likely to get out of order and cause trouble. To this end I provide a single rotary operating device adapted to scoop up the tacks and deliver them to the receiving end of the chute, and provide means whereby this same device is adapted to actuate a vibrating element adapted to agitate the tacks at the upper, receiving end of the chute, and cause them to aline themselves therein with the tack points dropping into the chute slot and the heads resting on the chute walls at the sides of the slot. The foregoing and other objects and advantages of the invention will more fully appear from the following detailed description, and the distinctive features of novelty will be pointed out in the appended claims.

Referring to the drawings:

Figure 1 is a central vertical section showing a machine constructed in accordance with my invention;

Fig. 2 is a partial plan view with a portion of the housing broken away; and

Fig. 3 is a perspective view of the chute removed.

The magazine housing 10 is shown as mounted upon a suitable base or pedestal 11 and provided at one side with a bearing flange 12 in which is fitted an operating shaft 13 having fitted thereon a driving pulley 14 and a loose pulley 15 as is usual. This shaft has fixed at its inner end as seen at 16 a conically projecting web portion 17 of a rotating scoop ring or wheel 18, the inner periphery of which is equipped with a series of scoop brackets or vanes 19 adapted to scoop up the tacks from the bottom portion of the magazine holder and drop them on the upper end of the chute that projects within the plane of the scoop ring 18 as presently explained. The scoop ring or wheel 18 is fitted and guided in a bearing flange of the housing 10 as indicated at 20 and to this bearing flange is secured the separable front portion 21 of the housing which is thus adapted to fit against the ring 18 and hold it in place. The front housing portion 21 has fitted therein the chute 22 which extends diagonally upward into the housing, projecting centrally through the opening of the ring 18 as indicated at 23, this chute being secured by any suitable means such as the pin 24. The upper portion of the chute 22 which extends into the housing has the top of the chute slot open as indicated at 25 and equipped with a flange plate 26 extending along at one side thereof and sloping diagonally downward so as to direct the tacks into the slot, it being understood that the ring 18 is turned in a clockwise direction referring to Fig. 3, so that the tacks will be dropped and deposited against the flange plate 26 as the scoop buckets 19 near and reach the upper limit of their travel. In accordance with my invention vibrating means is provided for agitating the tacks adjacent the receiving end of the chute so as to insure a rapid alinement thereof in the chute. For this purpose I provide a vibrating arm 27 extending down over the chute top just below the flange plate 26. For imparting relatively-rapid short-amplitude vibrations to this arm in a direction lengthwise of the chute, it is carried at its upper end by a pin or bolt 28 to which it is rigidly and adjustably fixed as indicated at 29, the bolt 28 being slidably fitted in the front housing portion 21 for movement in parallelism with the chute and having a coil spring 30 reacting against an enlarged head 31 of the bolt, holding the rounded end 32 thereof constantly against a face cam 33 of wavy outline formed on the front of the ring 18. Thus as the ring 18 is rotated, the arm 27 is caused to vibrate over the chute slot 25 just below the receiving end thereof

causing the tacks to aline themselves rapidly in the chute and slide downward to the delivery end thereof. The lower end of the chute may be provided with a suitable sleeve clamp 34, this constituting means for securing the usual removable tack holder (not shown) to the lower end of such chute to be filled thereby as required. The housing 10 may be formed with a receiving opening at its top closed by a suitable hinge cover 35. I do not desire to be limited to the precise structural details herein exhibited, since these may be varied without departing from the essential attributes of the invention, and I therefore desire the present embodiment to be considered as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description, to indicate the scope of the invention.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. Apparatus of the kind described, comprising a magazine, a gravity chute extending thereinto, a scoop member mounted for rotation to deliver tacks or the like to said chute, and a member mounted for sliding reciprocation lengthwise of said chute at the receiving end thereof and connected to be operated by said scoop member for agitating the tacks adjacent the receiving end of the chute.

2. Apparatus of the kind described comprising a tack holding magazine, a rotatable member mounted therein for lifting tacks and delivering them to a chute, an inclined chute extending into said magazine in receiving relation to said rotatable tack lifting member, and means mounted to reciprocate bodily straight lengthwise of the chute associated with said rotatable member and actuated thereby for rectilinear sliding movement to agitate the tacks adjacent the receiving end of said chute and cause them to aline themselves therein.

3. Apparatus of the kind described, comprising a tack holding magazine, a rotatable annular scoop device, a chute extending diagonally upward in said magazine in receiving relation to said scoop device, and vibrating means mounted for sliding movement lengthwise of said chute for agitating the tacks adjacent the receiving end thereof, said scoop device being equipped with a cam formation for operating said vibrating means.

4. Apparatus of the kind described, comprising a tack holding magazine, a rotatable annular scoop member mounted therein, a chute extending diagonally within said magazine and through said scoop member, and an arm mounted to vibrate lengthwise of, and over said chute adjacent the receiving end thereof, said annular scoop member having a face cam formed thereon, and said arm having means associated therewith for receiving vibration from said cam.

5. Apparatus of the kind described, comprising a tack magazine, a rotatable annular scoop mounted therein, a chute extending diagonally upward within said magazine and through said annular scoop, an arm mounted to vibrate in a direction parallel to said chute and over the same adjacent the receiving end thereof, said annular scoop having a face cam formation, and means for holding said arm pressed against said cam formation to receive vibration therefrom.

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

JAY A. MACKEY.