No. 875,998. PATENTED JAN. 7, 1908.

A. HOVEY.

TOBACCO SPEARING MACHINE.

APPLICATION FILED MAY 31, 1907.

2 SHEETS—SHEET 1.

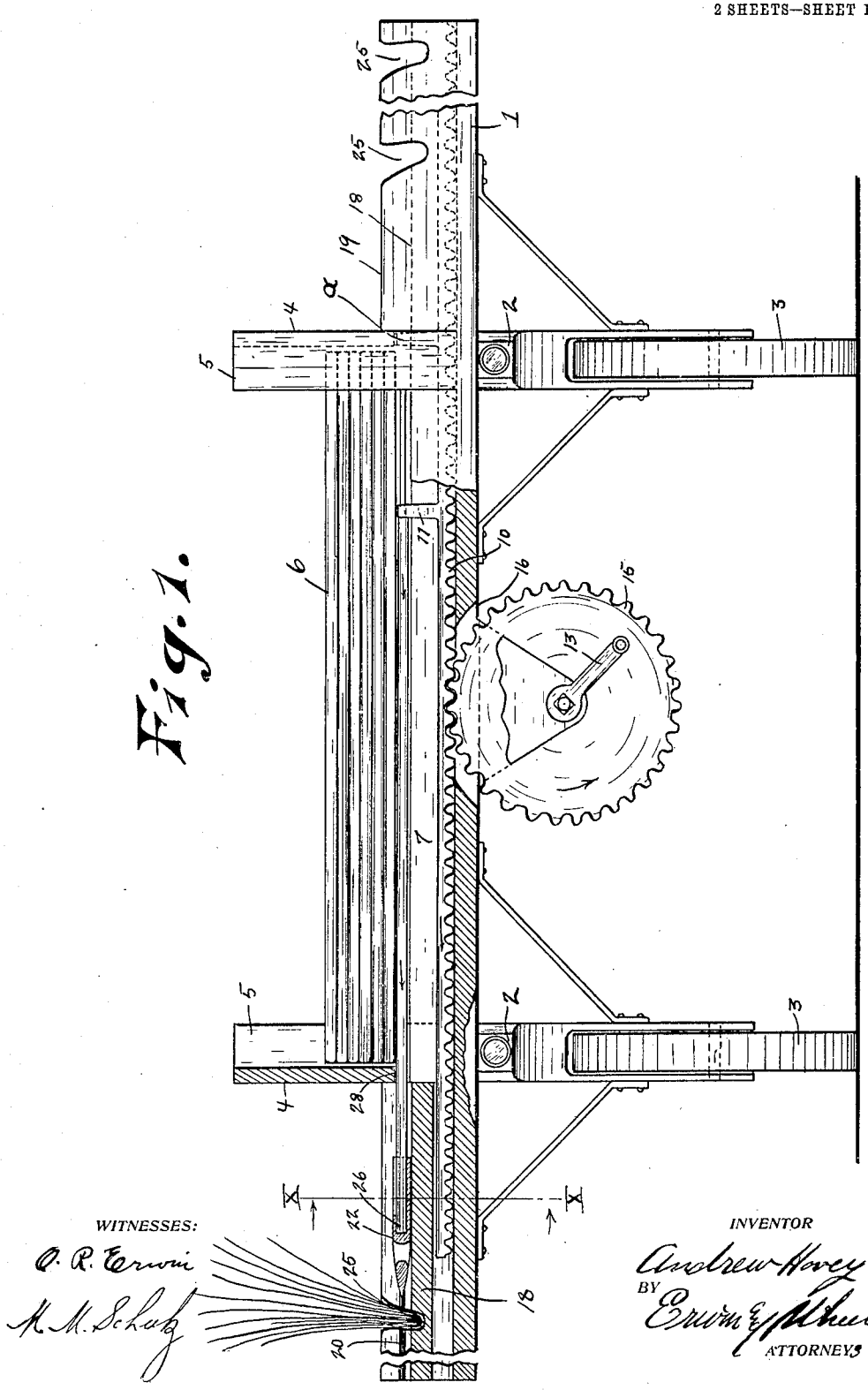


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 2.

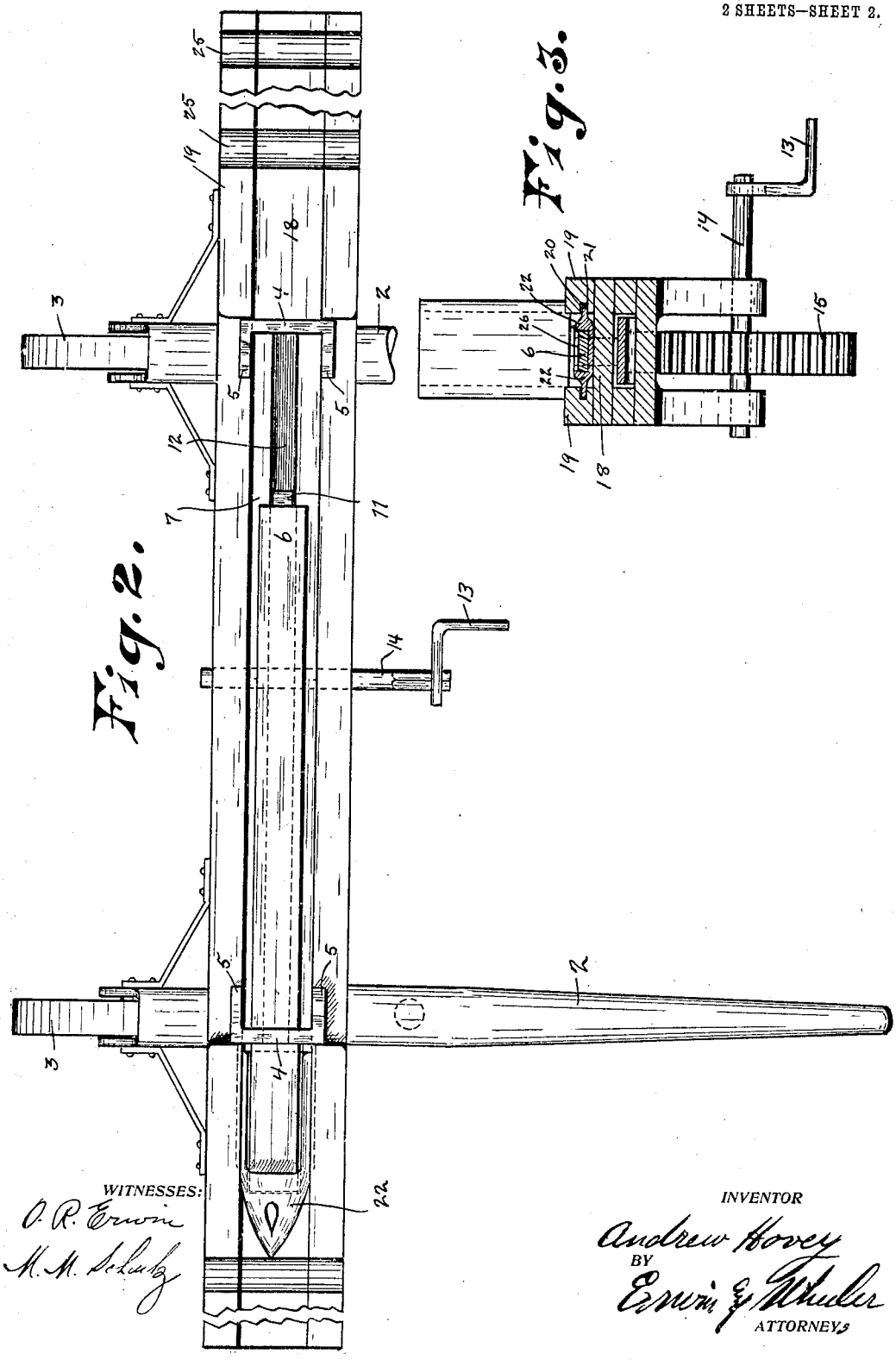


Fig. 3.

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ANDREW HOVEY, OF SUN PRAIRIE, WISCONSIN.

TOBACCO-SPEARING MACHINE.

No. 875,998. Specification of Letters Patent. Patented Jan. 7, 1908.

Application filed May 31, 1907. Serial No. 376,603.

To all whom it may concern:

Be it known that I, ANDREW HOVEY, a citizen of the United States, residing at Sun Prairie, county of Dane, and State of Wisconsin, have invented new and useful Improvements in Tobacco-Spearing Machines, of which the following is a specification.

My invention relates to improvements in tobacco spearing machines.

The object of my invention is to provide a form of device which may be propelled through a field by an attendant and operated to drive lath or leaf supporting bars through the plants as rapidly as the same can be placed in position by other attendants operating at the respective sides of the machine.

In the following description reference is had to the accompanying drawings, in which,

Figure 1 is a front elevation part in section, of a device embodying my invention. Fig. 2 is a plan view of the same with one of the supporting arms broken away. Fig. 3 is a sectional view drawn on line x—x of Fig. 1.

Like parts are identified by the same reference characters throughout the several views.

A bed plate 1 is mounted upon a pair of supporting bars 2 which serve as handles, these bars being provided with wheels 3 whereby the device may be propelled through the field. Standards 4, provided with inwardly projecting side flanges 5, are adapted to support the lath 6 in a pile resting upon a slotted table 7. The bottom lath in the pile is pushed out by means of a sliding rack bar 10 mounted upon the bed plate 1 and provided with an upwardly projecting follower post 11, which extends through the slot 12 in the lath supporting table sufficiently to engage the lower lath of the pile. The rack bar 10 is mounted in a suitable guide way on the bed 1 with its teeth on the underside and it is operated from a manually actuated crank 13 through the shaft 14 and a gear wheel 15, the latter being arranged to project upwardly through a central aperture 16 in the bed 1 with its teeth meshing with the teeth of the rack bar.

The pile of lath is centrally located on the machine, and each end of the bed projecting laterally from the pile is provided with guide ways, each having a base 18 and side walls 19. The side walls 19 are provided with grooves 20, (see Fig. 3) which are adapted to receive projections or flanges 21 on a spear head 22, whereby the spear head, when pushed outwardly, is guided along the way to its outer end.

Recesses 25 are formed at suitable intervals in the ways, extending downwardly through the side walls and into the base 18. These recesses are adapted to receive the tobacco plants, which are preferably inserted therein near the base of the plant with the leaves projecting outwardly at one side of the way, one plant being thus inserted in each recess. When in this position it is obvious that when the spear head is moved along the way, it will necessarily perforate the plants in the successive recesses.

The spear heads are provided with lath receiving sockets 26 into which one of the lath is received when the lath is pushed outwardly from the pile. The standards 4 are provided with suitable apertures near the table 7, adapted to permit the bottom lath to move outwardly into the way on either side. When the rack bar is at its extreme right hand position, the follower post 11 occupies the position indicated in dotted lines at a in Fig. 1. The gear wheel 15 is then rotated to move the rack bar to the left, the follower post 11 pushes the lath in the direction indicated by the arrows in Fig. 1, and as the lath moves outwardly through the opening in the lefthand standard, it enters the socket 26 in the spear head, the latter thus serving to guide the lath through the plants or stalks which have been inserted in the recesses 25. When the follower post 11 reaches its extreme left hand position in the opening 28 of the left hand standard 4, the remaining lath are permitted to drop upon the table 7, whereupon the gear wheel 15 is actuated in the opposite direction and the bottom lath remaining in the pile is pushed outwardly to the right, the same being received by the spear head in the right hand way and guided through the plants which have been adjusted to the recesses 25 therein. The attendant for the left hand way in the meantime removes the left hand spear head and lifts the lath from that guide way, with the bunches of leaves thereon, reinserts the spear head in the way and moves it inwardly to a point near the standard and then inserts fresh bunches of leaves or plants in the various recesses 25. The follower post 11 having in the meantime again reached the position a and having completed the insertion of the second lath through the plants in the right hand guide way, the rack bar and post 11

may again be actuated to the left to push the third lath through the plants on that side.

Ordinarily six or eight recesses 25 are provided for each of the guide ways, but any suitable number may be employed, depending of course on the length of the lath. When the supply of plants in the vicinity of the machine is exhausted, the attendant having charge of the spearing operation lifts the handles 2 and propels the machine into proximity to an additional supply of plants. The laths are by the operation of my machine, not only inserted through the plants, but the plants are spaced at equal distances from each other on the various laths, the distances being sufficient to permit the leaves to readily dry.

In the foregoing description I have used the term lath as referring to the bars piled upon the table 7, this term being used merely because lath are ordinarily employed. It will be understood that any suitable form of bar may be used which is adapted to support the leaves and it will also be understood that if the bars are provided with pointed ends the use of the spear head would be unnecessary. I therefore do not limit the scope of my invention to include the spear head as a necessary element. It will also be understood that various means for actuating the follower post may be employed and that it is not material whether the follower extends through a slot in a bar supporting table or is otherwise disposed so as to move along the pile and push out the bottom bar.

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

1. In a machine of the described class, the combination of a support for a pile of bars, each adapted to support material such as tobacco plants, of a guide way extending outwardly from one of the piles, and means for successively discharging the bars from the pile, along said guide way,—said guide way being provided with recesses adapted to receive the plants in a position crossing the paths of the bars.

2. In a machine of the described class, the combination of a support for a pile of bars, each adapted to support material such as tobacco plants, of guide ways extending outwardly from the respective ends of the pile and provided with recesses adapted to receive the plants, and a reciprocating device adapted to discharge the bars from the bottom of the pile along said guide ways.

3. In a machine of the described class, the combination of a support for a pile of bars, each adapted to support material such as tobacco plants, of guide ways extending outwardly from the respective ends of the pile and provided with recesses adapted to receive the plants, and a reciprocating device adapted to discharge the bars from the bottom of the pile along said guide ways,—said device comprising a rack bar having a follower post adapted to engage the lowermost bar,—and a hand actuated gear wheel in mesh with the teeth on the rack bar.

4. In a machine of the described class, the combination of a slotted table, standards mounted upon the table and provided with inwardly extending projections, wings adapted to support a pile of bars on the table, a reciprocating device underneath the table provided with a projection extending through the slot therein, to a distance above the table substantially equal to the thickness of one of the bars, a way for the bars extending outwardly from the pile,—said standard having an opening adapted to permit the discharge of the lowermost bar past the standard into said way, and said way being adapted to support material such as tobacco plants, in the paths of the bars.

5. In a machine of the described class, the combination of a slotted table, standards mounted upon said table and provided with inwardly extending projections, and adapted to support a pile of bars on said table, a guide way extending outwardly from the table past the standards, and adapted to permit the discharge of the bottom bars from the pile, means for supporting material such as tobacco plants, at intervals upon the ways in the path of the outwardly moving bars, and a bar actuating member provided with a projection extending through the slot and adapted to push the lowermost bar from the pile.

6. In a machine of the described class, the combination of a slotted table, means for supporting a pile of bars thereon, ways extending outwardly from the respective ends of said table, a projection extending through said slot and adapted to engage the bottom bar in the pile, and means for reciprocating said projection along said slot from one of the piles to the other, and sufficiently beyond the pile to permit the remaining bars to drop to the table on completion of the stroke in either direction, said ways being arranged to receive said bars, and adapted to support material at suitable intervals in the path thereof.

7. In a machine of the described class, the combination of a slotted table, means for supporting a pile of bars thereon, ways extending outwardly from the respective ends of said table, a projection extending through said slot and adapted to engage the bottom bar in the pile, and means for reciprocating said projection along said slot from one end of the pile to the other, and sufficiently beyond the pile to permit the remaining bars to drop to the table on completion of the stroke in either direction, said ways being arranged to receive said bars, and adapted to support material at suitable intervals in the path

thereof,—together with pointed spearing members movable along said ways and each adapted to receive the ends of an outwardly moving bar.

8. In a machine of the described class, the combination of a slotted table, means for supporting a pile of bars thereon, ways extending outwardly from the respective ends of said table, a projection extending through said slot and adapted to engage the bottom bar in the pile, and means for reciprocating said projection along said slot from one end of the pile to the other, and sufficiently beyond the pile to permit the remaining bars to drop to the table on completion of the stroke in either direction, said ways being arranged to receive said bars, and adapted to support materials at suitable intervals in the path thereof, together with pointed spearing members movable along said ways and each adapted to receive the ends of an outwardly moving bar, said spearing members having projections loosely engaged in guide channels in the ways.

9. In a machine of the described class, the combination of a support for a pile of bars, ways extending outwardly therefrom, means for pushing successive bars alternately into the respective ways, and means for retaining material, such as tobacco plants, on the ways in the paths of the bars.

10. In a machine of the described class, the combination of a support for a pile of bars, ways extending outwardly therefrom, means for pushing successive bars alternately into the respective ways, and means for retaining material such as tobacco plants, on the ways in the paths of the bars, together with a spearing member adapted to be engaged by the bars and pushed through the leaves in advance thereof.

11. In a machine of the described class, the combination of a support for a pile of bars, ways extending outwardly therefrom, means for pushing successive bars alternately into the respective ways, and means for retaining material such as tobacco plants, on the ways in the paths of the bars, said support being mounted upon the wheels and provided with handles suitable for manual propulsion.

12. In a machine of the described class, the combination of a support for a pile of bars, ways extending outwardly therefrom, means for pushing successive bars alternately into the respective ways, and means for retaining material such as tobacco plants, on the ways in the paths of the bars, together with a spearing member adapted to be engaged by the bars and pushed through the plants in advance thereof, said ways being adapted to guide the spearing member and bars through the material.

In testimony whereof I affix my signature in the presence of two witnesses.

ANDREW HOVEY.

Witnesses:
O. R. Erwin,
A. A. Daihle.