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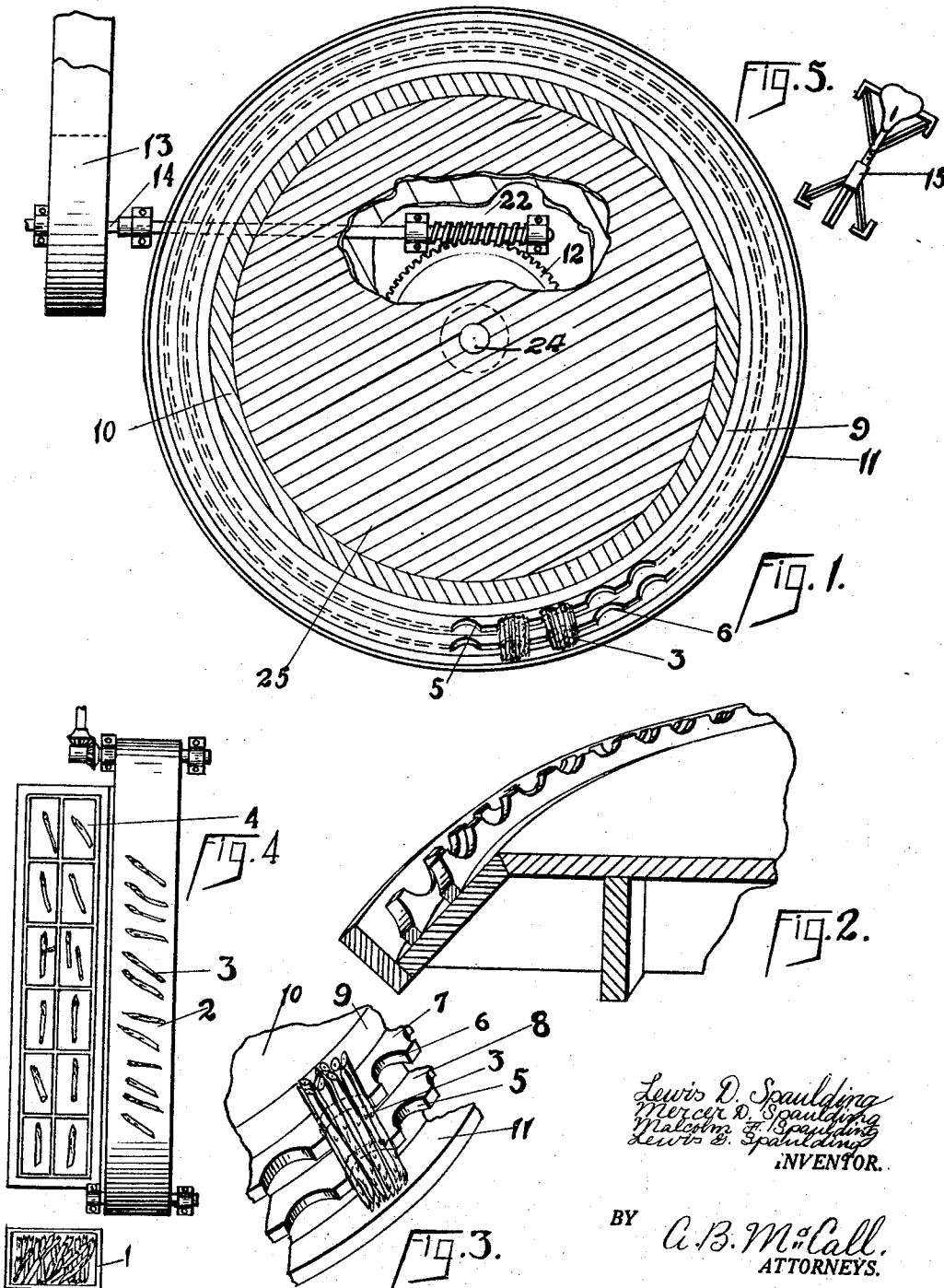
L. D. SPAULDING ET AL

1,797,379

ROTARY BUNCHING AND CONVEYER MACHINE

Filed June 4, 1928

2 Sheets-Sheet 1



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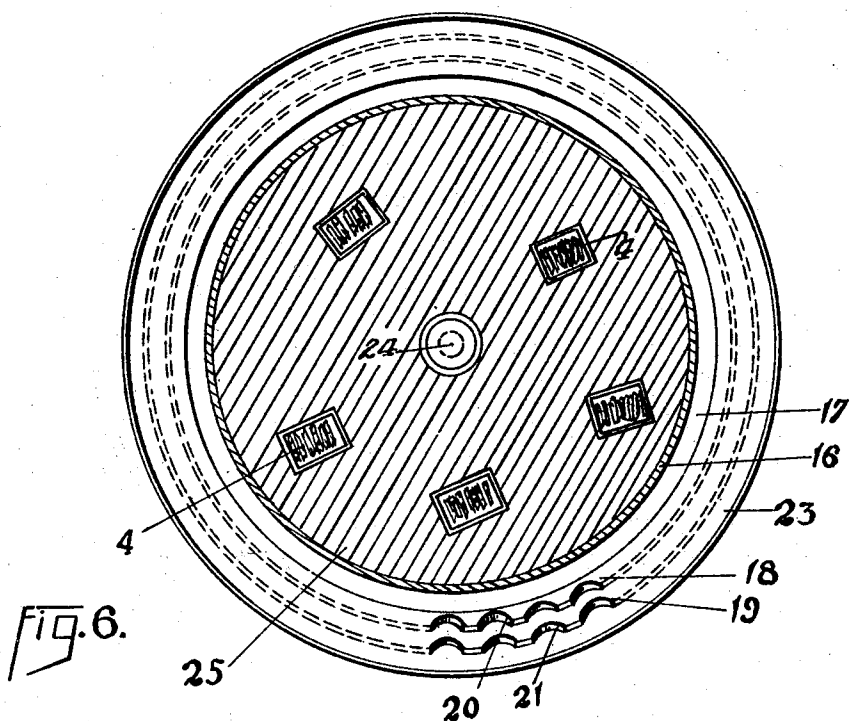
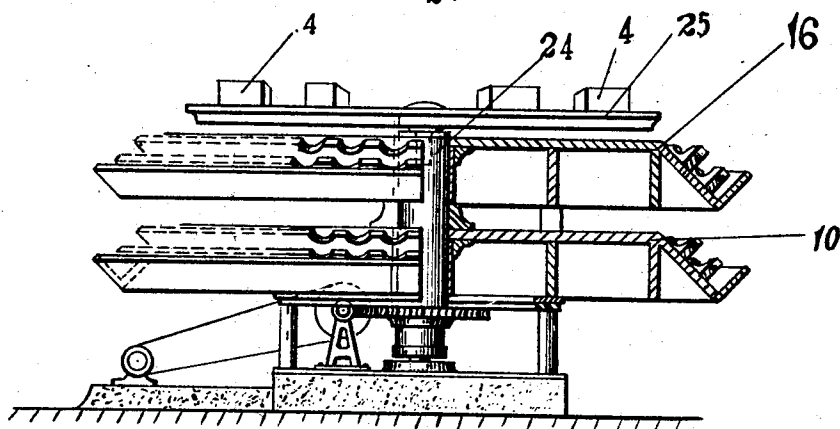
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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ROTARY BUNCHING AND CONVEYER MACHINE

Application filed June 4, 1928. Serial No. 282,618.

Our invention relates to machines adapted to expedite the assortment and packing of certain classes of vegetables and other commodities adapted to be handled for shipment in a similar manner; an object being in this device to provide a machine especially prepared for bunching and conveying asparagus when packing the same for shipment.

A further object of our device is to provide a rotary bunching and conveyer machine equipped for operation on one or more levels and a machine that will be easily operated, convenient to use and economic to manufacture.

A further object of our device is to provide a rotary bunching and conveyer machine equipped with a pivotally mounted rotatable shelf or table adapted to be optionally rotated by hand for carrying supplies of vegetables, especially asparagus and the like to points about the table where they may be from time to time needed during the bunching and conveying operation.

We attain the objects of our invention in the device described in the annexed specification, recited in the claims and illustrated in the accompanying drawings in which like reference numerals indicate like parts in the several figures.

Referring to the figures:

Fig. 1 is a top view of the device of our invention showing in partial detail and with a cut-away structure and preferred mechanical operation of our machine. In this figure is shown a pivoted and independently rotatable table or shelf provided as a convenience for conveying supplies of materials to be bunched to any desired position about the table quickly.

Fig. 2 is a perspective showing a partial section and a portion of the peripheral arrangement of our machine.

Fig. 3 is a detail perspective of a portion of the annular peripheral construction of our machine showing in this sketch how asparagus for instance may be bunched in one of the pockets or recesses in the parallel ribs of the beveled outer edge of the machine.

Fig. 4 is a top view of an assorting table and conveyer belt adapted to be used for ex-

pediting the process of assorting asparagus and the like before the same is removed from the assorting boxes and bunched on the bunching machine shown in Fig. 1.

Fig. 5 is a representation of a tying machine adapted to be used for tying the bunches of asparagus or other commodities of similar shape before the same are packed in their shipping boxes.

Fig. 6 is a top view of a double bunching and conveyer machine showing a possible arrangement involving the details in which are found the merits of my machine.

Fig. 7 is a side elevation showing in partial section of our machine further details of construction thereof showing the particular merits of our invention as may be used either on a single or on a double deck machine. In this figure there is shown the independently rotatable table or shelf mounted above the top bunching table; but in cases where it may be desired this independent shelf may be mounted between the tables or bearings supporting the same about the center supporting post for the tables; and where only one bunching table is used this independent rotating shelf would be pivotally mounted above the one table.

Referring to the details of structure of our machine and the preferred method of operating the same we shall now attempt to point out some of the merits thereof which we have found to be practical to use, economical and easy to make, and a big saver of time and labor.

It will be evident to the experienced truck gardener that a great deal of time and money has been spent unnecessarily on crude, awkward, and primitive methods of assorting, bunching, and packing asparagus and other vegetables of similar character.

It is therefore our purpose to provide in this machine a means of systematizing the operations required for assorting, bunching and packing asparagus and the like when the same is being prepared for market.

In studying the merits of our machine it will be observed that we provide in connection with the normal use thereof, other machines and devices adapted to save time and

facilitate the assorting, tying and packing of asparagus and the like. With this arrangement for instance the unassorted asparagus in box —1— is laid out on a conveyor belt —2— along the side of which workmen stand to assort asparagus —3— and place the stalks thereof of different sizes in boxes —4— as the conveyor belt —2— moves along.

After a sufficient quantity has been assorted then the operator places bunches of the asparagus and the like in the respective pockets or recesses around the periphery of the bunching and conveyer machine shown in Fig. 1, Fig. 2, and Fig. 3.

A partial detail of this rotating table on which the asparagus is bunched is shown in Fig. 3, in which a group of asparagus stalks —3— are preferably placed with the tops down so as to lean at an angle against recesses —5— and —6— of ribs —7— and —8— mounted so as to be disposed at right angles to the beveled face —9— of the rotating table —10—.

Rotating table —10— turns in a horizontal plane pivotally supported at the center and may be mechanically operated by any one of a number of driving means but preferably by a worm gear —22— acting on a gear wheel —12— driven by a belt —13— turning shaft —14— and connected with a source of driving power, not shown.

When our device is in normal operation the bunching and conveyer table —10— rotates slowly so that when the operator takes asparagus, for instance, from boxes —4— when they have been assorted he places the asparagus on rotating table —10— in the pockets or recesses —5— and —6—, as shown in Fig. —3—, one after the other so that the same may be carried around to another side of the table where an operator manipulating a tying machine —15— may conveniently pick the bunches off of table —10— and tie them with tying machine —15— and lay them in a container from which they are taken and trimmed after which they are packed in shipping boxes.

An annular apron or stop member —11— is provided around the outer and lower periphery of beveled edge —9— of table —10— adapted to provide support for bunches —3— of asparagus and the like when the same is placed in recesses —5— and —6—.

It will be understood that a similar device of small size may be used for other purposes in bunching and conveying other commodities.

A device of this character may be even constructed with more than one deck in which one rotating table above the other may operate pivotally together as is shown in Figures —6— and —7— where it will be seen that additional conveniences may be provided in a rotary bunching and conveyer machine embodying our invention in which an

upper table —16— mounted to rotate on the same pivot support as table —10— and having a beveled surface —17— to which is secured peripheral ribs —18— and —19— corresponding with ribs —7— and —8— on table —10— and provided with a group of uniformly spaced recesses —20— and —21— corresponding with recesses —5— and —6— of table —10—.

It will also be noted that upper table —16— has an annular apron —23— used for the same purpose as apron —11— on table —10—.

Pivot support —24— supporting table —10— may also support table —16—. An independently rotatable shelf —25— is shown in Figures 6 and 7 to be mounted so as to be optionally rotated when carrying bunches of asparagus and the like for distribution at suitable points about the bunching and conveying tables. Where a second or top table —16— may not be needed then the independently rotatable shelf —25— would be pivotally mounted down near the surface of table —10—.

Certain minor changes may be made in the details of structure of our device and still stay within the spirit and scope of our invention. For instance we do not wish to be limited to any particular type of materials in making this device.

Having thus described the nature of our device what we claim is:

1. A rotary bunching and conveying machine comprising a pivotally mounted horizontally rotating table provided with a plurality of annular peripheral pockets angularly disposed with respect to the horizontal plane of the table.

2. A rotary bunching and conveying machine comprising a plurality of spaced pivotally mounted concentric tables simultaneously rotatable about a common axis, each provided with a plurality of annular peripheral bunching pockets disposed at an angle with the plane of the table on a beveled peripheral plane.

3. As a new article of manufacture a rotary table adapted to be mechanically and pivotally turned in a horizontal plane and provided with a plurality of peripheral bunching pockets arranged in spaced relation and angularly disposed with respect to the plane of the table; said table provided with an annular apron disposed beneath said pockets to provide a holding member for the racks.

4. As a new article of manufacture a rotary bunching and conveying table pivotally mounted for horizontal rotation by mechanical means; said table provided with a peripheral bevel disposed at a substantial angle with the plane of the table, a pair of parallel annular ribs disposed at right angles to the plane of the bevel and each provided

with a plurality of uniformly spaced and uniformly aligned approximately semi-circular grooves; and an annular apron disposed about the lower edge of said bevel parallel with said ribs and adapted to provide stop means for holding vegetables within said grooves of the ribs.

In witness whereof, we hereunto set our hands and seals this 22nd day of May, 1928.

LEWIS D. SPAULDING.

MERCER D. SPAULDING.

MALCOLM F. SPAULDING.

LEWIS G. SPAULDING.

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5. A rotary bunching and conveying table adapted to be mechanically rotated in a horizontal plane and provided with an annular peripheral bevel plane disposed at an angle with the plane of the table; said angular plane provided with a pair of parallel spaced ribs having a plurality of uniformly spaced pockets and an annular shelf stop member disposed below said pockets at approximate right angles to the plane of said bevel; said pockets of the ribs aligned for receiving and bunching asparagus and the like and adapted to convey the bunches to a predetermined position about the table for tying the bunches.

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6. As a new article of manufacture a rotary machine comprising a plurality of tables rotatably mounted and supported for a horizontal rotation about a common axis; said tables each provided with an annular beveled plane having annular ribs uniformly spaced and disposed at right angles to the plane of the bevel; said ribs provided with a plurality of approximately semi-circular grooves uniformly spaced; and an annular peripheral shelf member disposed below said grooves and approximately at right angles to said beveled plane of the table.

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7. A rotary bunching and conveying machine provided with tables simultaneously rotatable about a common axis; each table having an annular peripheral bevel; said bevel provided with annular peripheral ribs having a plurality of approximately semi-circular recesses and an annular peripheral shelf member below said ribs providing stop means for vegetables adapted to be bunched in said recesses of the ribs and rotatably conveyed by the table to a position about the table for tying the bunches.

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8. A rotary bunching and conveying machine adapted to be mechanically rotated in a horizontal plane and including a pivoted and mechanically rotatable table provided with an annular peripheral angular plane disposed at an angle with the plane of the table; said angular peripheral plane provided with parallel spaced ribs having a plurality of spaced and aligned pockets for receiving and forming bunches of asparagus and the like and conveying the same to predetermined positions about the table for tying; said machine provided with an independent manually rotatable shelf member for carrying supplies of asparagus and the like to desired positions about the bunching table.

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