Jan. 15, 1946. J. GRIBNER 2,393,102

FERN PACKING MACHINE

Filed June 5, 1944 2 Sheets-Sheet 1

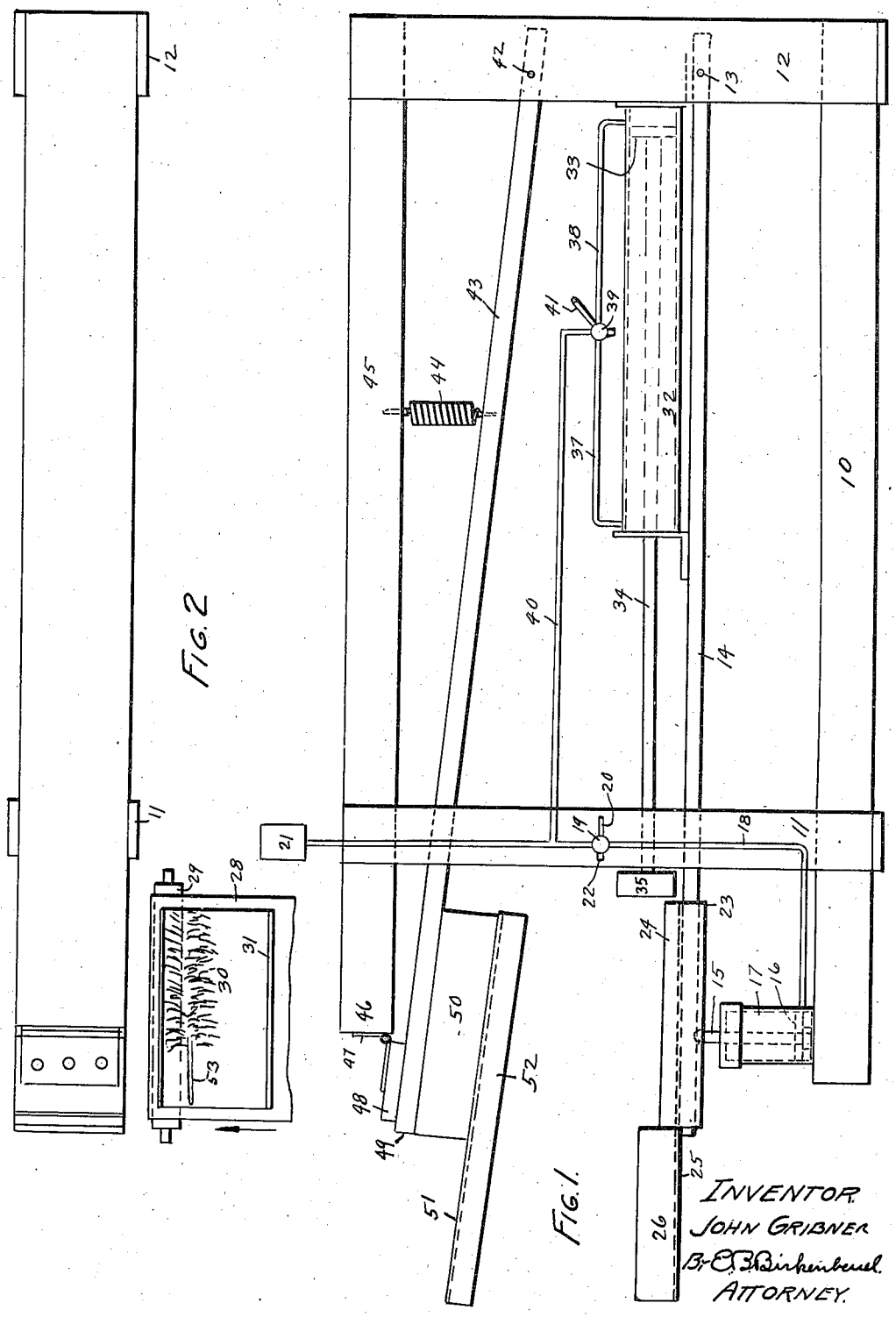


FIG. 2

FIG. 1.

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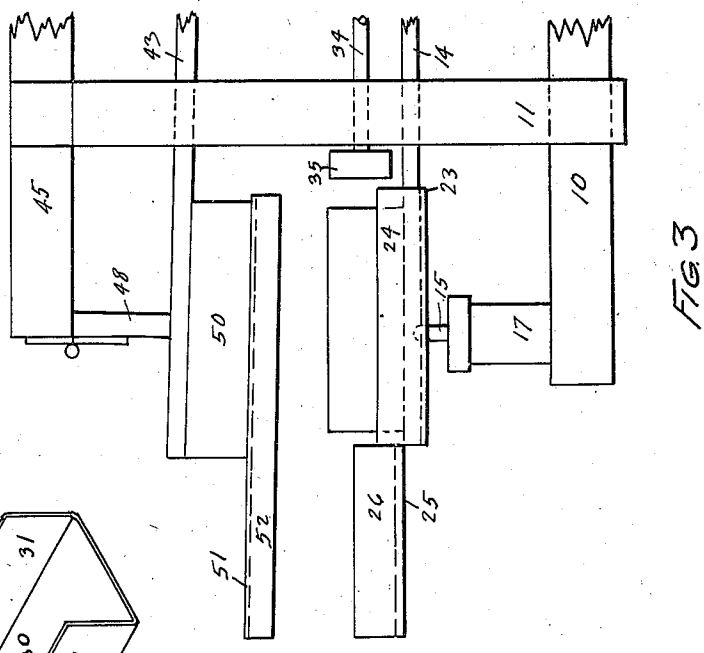


FIG. 3

FIG. 6

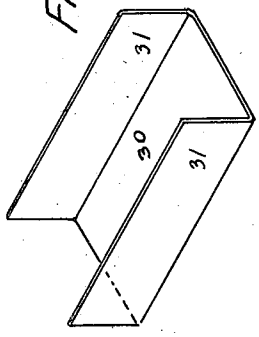
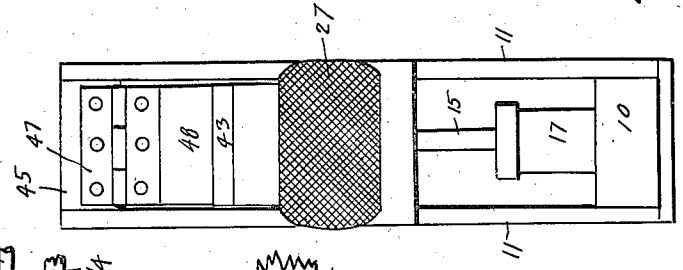


FIG. 5



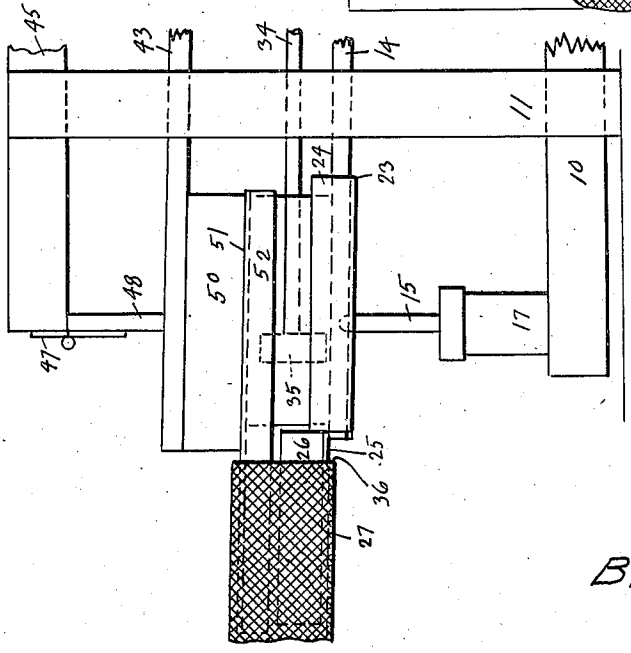


FIG. 4

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2,393,102

FERN PACKING MACHINE

John Gribner, Banks, Oreg.

Application June 5, 1944, Serial No. 538,732

2 Claims. (Cl. 226—18)

This invention relates generally to the florists' art and particularly to a fern packing machine.

The main object of this invention is to provide an apparatus by means of which ferns may be economically packed in bags instead of the usual bales and boxes as is the common practice.

The second object is to effect a saving in packing material by substituting an inexpensive bag for lumber, nails, and wire ordinarily required.

I accomplish these and other objects in the manner set forth in the following specification as illustrated in the accompanying drawings, in which:

Fig. 1 is a side elevation of my invention showing the packing jaws separated to the fullest extent and with the conveyor removed.

Fig. 2 is a plan of Fig. 1 showing the conveyor with the packing tray thereon.

Fig. 3 is a fragmentary side elevation showing the upper packing jaw lowered with the packing tray in position on the lower jaw.

Fig. 4 is a view similar to Fig. 3, but showing the lower packing jaw raised and the upper packing jaw lowered with a bag in the filling position and with the packer moving the ferns into the bag.

Fig. 5 is an end elevation of Fig. 4.

Fig. 6 is a prospective view of a packing tray.

Similar numerals refer to similar parts throughout the several views.

Referring in detail to the drawings, there is shown a base 10 having two upright standards 11 at the front thereof and two upright standards 12 at the rear end thereof. Hinged between the standards 12 on the pin 13 is the lower beam 14 which has a limited movement between the members 11. The beam 14 is supported by the rod 15 of the piston 16 which is disposed in the cylinder 17. Air or water is admitted to the cylinder 17 through the pipe 18 under the control of the 2-way valve 19, which is operated by a lever 20 and serves to either admit a fluid under pressure from the tank 21 to the cylinder 17, or wasted through the exhaust port 22.

On the end of the beam 14, supported by the rod 15, is mounted the lower packing jaw 23, whose sides 24 extend upwardly above the top of the beam 14 and then downwardly along the outer sides of the beam 14. The ends 25 of the jaw 23 is provided with upturned sides 26 which are free to slip into a burlap bag 27.

It is desirable to provide a conveyor 28 on the rolls 29, on which conveyor are disposed the packing trays 30, having upturned sides 31 which are adapted to rest between the sides 24 and the jaw 23 as shown in Figs. 3 and 4.

The purpose of the tray 30 is to receive a quantity of fern bundles, the ends of which are preferably opposed after the tray 30 has been lined with waxed paper (not shown), the ends of which are left long enough to permit it to be folded over the top of the filled tray 30.

Mounted on the beam 14 is an elongated cylinder 32, whose piston 33 is provided with a rod 34 which has mounted on the end thereof a packer 35. The packer 35 is capable of moving beyond the mouth 36 of the bag 27.

Fluid under pressure is admitted to either end of the cylinder 32 through the pipes 37 and 38 under the control of the 2-way valve 39, to which valve fluid is supplied by the pipe 40 which connects with the pipe 18. The valve 39 is provided with a handle 41 by means of which the packer 35 can be controlled.

Above the beam 14 and hinged between the standards 12 on a pin 42 is the upper beam 43 which is urged in an upper direction by a spring 44 disposed between the beam 43 and the head beam 45, which is rigidly secured across the upper ends of the standards 11 and 12 and has secured to its projecting end 46 by means of a hinge 47, a block 48 which may be swung to the position shown in Fig. 1 or may drop to a vertical position as shown in Figs. 3, 4 and 5.

On the underside of the upper beam 43 at the end 49 is secured a block 50, to the under side of which is secured the channel shaped packing jaw 51 whose downturned sides 52 are slightly less in width than the space between the sides 31 of the tray 30, and are the same width as the sides 26 of the lower packing jaw.

The operation of the device is as follows:

The ferns 53, having been packed into the tray 30, are moved to the point shown in Fig. 2 by the conveyor 28. The apparatus is now in the position shown in Fig. 1. The tray 30 is now moving onto the lower jaw 23 and the upper beam 43 is moved downwardly by merely pulling against the spring 44, causing the block 48 to drop downwardly and latch the beam 43 in a lowered position, bringing the parts into the position shown in Fig. 3. Air or water is then admitted to the cylinder 17 causing the lower jaw 23 to be raised to the position shown in Fig. 4, after which a bag 27 is slipped over the ends of the jaws 23 and 51. Pressure is then admitted to the end of the cylinder 32 nearest the standards 12 by operating the lever 41, causing the packer 35 to move toward the bag 27, moving the ferns 53 out of the trays

30 into the bag 27, and when they reach the bottom of the bag 27, naturally cause the bag to be pushed off of the ends of the packing jaws 23 and 51, after which the bag can be sewed or tied, as desired.

While I have thus illustrated and described my invention, it is not my intention to limit it to the precise form shown herein, but I do intend to cover all such forms and modifications thereof as fall fairly within the appended claims.

I claim:

1. A fern packer consisting of a pair of elongated beams hinged at one end thereof and having packing jaws disposed between the opposite ends thereof; a packing tray removably placed between said jaws, a plunger movable through the length of said packing tray adapted to eject ferns therefrom into the opposite end of the packing jaws, and means for latching the upper jaw into a lowered position and means for raising the lower jaw into a fern compressing position.

2. An apparatus of the class described, consisting of two pairs of spaced upright standards, a lower beam hinged between one set of standards and movable between the other pair of standards, said lower beam having a lower packing jaw mounted on the movable end thereof, said packing jaw being channel shaped on its upper side, means for moving said lower jaw upwardly, a channel shaped packing tray removably disposed within said lower packing jaw, an upper beam disposed directly over said lower beam and hinged to the same standards, said upper beam having an upper packing jaw attached thereto adapted to move between the sides of said channel shaped packing tray, means for urging said upper beam in an upward direction and a latch for holding said upper beam in a lowered position.

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