Feb. 28, 1950 S. HATHAWAY ET AL 2,499,310

TOBACCO PRESS

Filed Feb. 17, 1948

FIG. 1

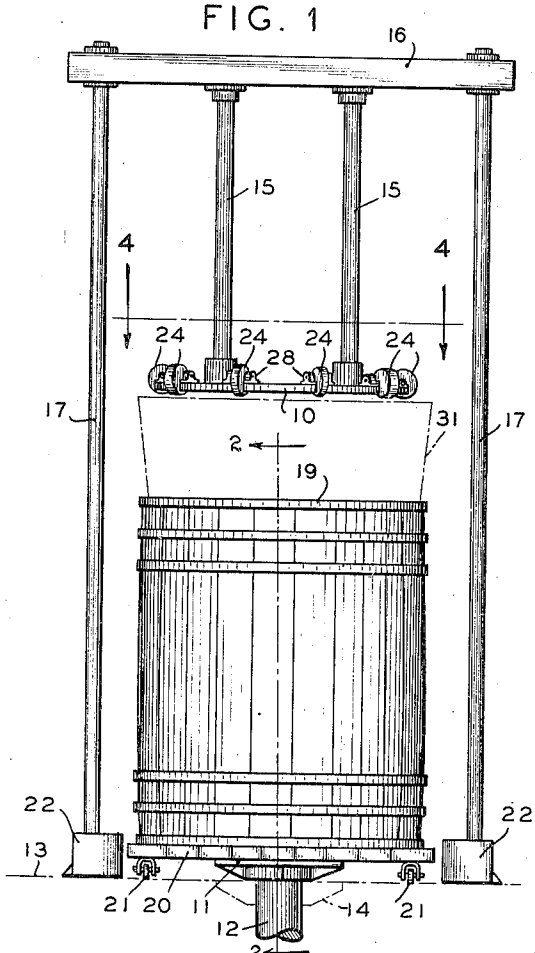


FIG. 2

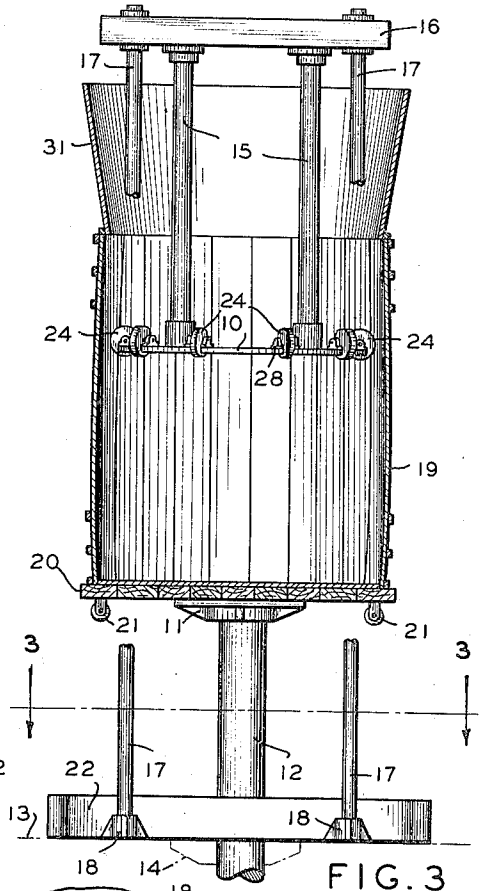


FIG. 3

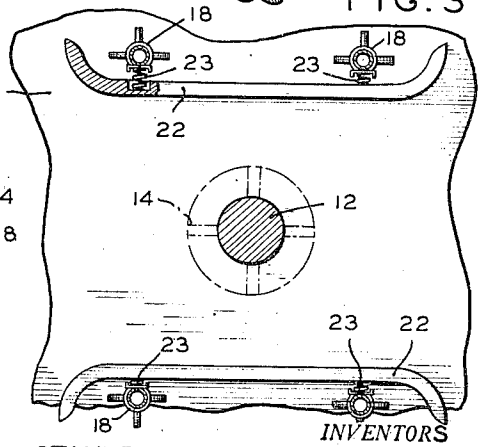
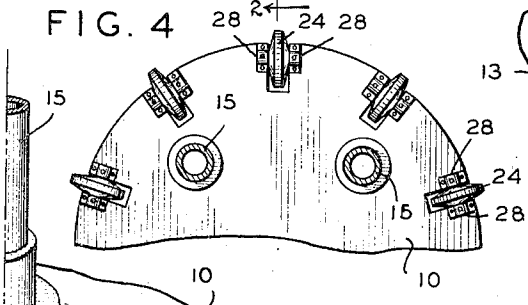


FIG. 4



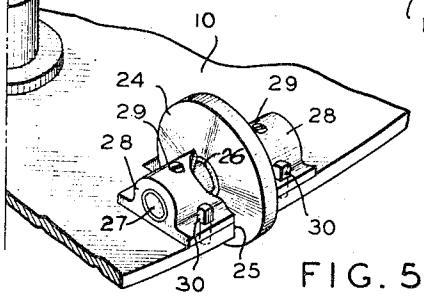


FIG. 5

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TOBACCO PRESS

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5 Claims. (Cl. 100—57)

1

This invention relates to tobacco presses and more particularly to presses and auxiliary equipment for filling hogsheads with tobacco or other substance.

Tobacco is shipped in hogsheads, and it is desirable that the relatively loose tobacco be substantially compressed in order that the hogshead may be filled for shipment or the like, and to accomplish this purpose, it has been customary to press down the tobacco in a hogshead being filled by a press hydraulically or otherwise operated.

Hogsheads for tobacco are approximately 46" in diameter and 48" in height and when filled or substantially filled with tobacco are quite heavy, requiring substantial force to move them. In order to facilitate handling, the hogshead is placed on a small truck or dolly and is moved or conveyed to a position over or above the upper end of a piston which is hydraulically actuated to raise the truck or dolly and hogshead of tobacco supported thereon until the tobacco within the hogshead comes in contact with a stationary cooperating head further movement serving to compress the tobacco. Manual labor has been employed for moving the trucks or dollies with the hogshead thereon to a position to be engaged by the head of the piston in order that the stationary head might enter the hogshead. Also manual labor has been employed for operating controls for supplying the hydraulic fluid to the piston for raising and lowering the same.

Considerable skill has been required on the part of the operators in properly centering the hogsheads and when they were improperly centered, destruction or severe damage to the hogsheads have occurred as well as occasional injury to personnel.

It is an object of the invention to provide an improved press for use in compressing tobacco or other substance within a hogshead or other receptacle in order to reduce the amount of labor and attention necessary to be given to the press during its operation, or in other words, to render the device more fully automatic.

A further object of the invention is to accomplish the above-mentioned results without substantial increase in cost but with ability for guiding the movement of the hogshead or receptacle as it is placed upon the press and moved relative to the stationary head thereof for compressing the tobacco or other material.

Further objects and advantages of the invention will be apparent from the following specification taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is a front elevation illustrating diagrammatically a portion of a press in accordance with the present invention;

Fig. 2, a vertical section on the line 2—2 of

2

Fig. 1, showing only the hogshead and charger in section;

Fig. 3, a horizontal section on the line 3—3 of Fig. 2;

Fig. 4, a fragmentary detail of a portion of the head of the press viewed on the line 4—4 of Fig. 1; and

Fig. 5, a further detail of a portion of the press head with its associated roller assembly.

The press of the present invention comprises a stationary head 10 and a movable head 11 supported by a piston 12 operating in a cylinder of conventional construction, not shown. When in operative position the upper surface of the head 11 is normally flush with the floor 13, the head being housed in a socket 14 in the floor. By the application of hydraulic fluid, also not shown, the piston 12 with the head 11 may be caused to move vertically toward the head 10.

The stationary head 10 is supported by vertical posts or supports 15, of which there are preferably four in number, and the upper ends of these posts are attached to one or more roof members 16 mounted upon a plurality of uprights or supporting posts 17 having enlarged feet 18 which rest upon the floor 13. Thus in order to compress an object such object need only be placed between the heads 10 and 11 and the piston elevated.

The uprights or supports 17 are spaced apart sufficiently to permit a hogshead 19 containing tobacco or other compressible material, to be moved between the same. The hogshead may preferably be supported upon a truck or dolly 20 of conventional construction having rollers 21 which facilitate the movement of the dolly over the floor 13.

In order to assist in positioning the dolly with its hogshead thereon between the uprights 17 in the proper manner to telescope over the head of the piston so that the contents may be compressed, a pair of guides 22 may be employed. These guides may be yieldably fastened to the uprights 17 by means of relatively heavy cushioning springs 23.

Thus, when the dolly 20 is rolled into position over the head of the piston 11 and the guide 22 is encountered the movement of the hogshead will be influenced to cause it to move into the proper position over the head of the piston, the resiliency of the springs serving to assist in this operation.

The head 10 is slightly smaller in diameter than the open end of the hogshead 19 and in order to cause the hogshead to shift laterally so that the head may enter the same, guide rollers 24 are employed. These guide rollers are mounted in radial slots 25 of the head 10, the rollers being of sturdy construction with their central portions of a thickness substantially twice that of

their peripheries and being provided with openings 26 receiving a supporting shaft 27 held in bearings 28 by means of set screws 29, each end of each bearing having a bolt 30 securing the bearing to the head 10. Thus the rollers 24 are spaced around the periphery of the head 10 in a manner such that no part of the hogshead can engage the head near the periphery of the head without engaging one or more of the rollers, whereby the hogshead will be guided into proper position for compression of the contents of the same.

In view of the compressibility of the tobacco or other substance, it is difficult to put enough tobacco on the top of the hogshead to fill the same when the tobacco is compressed. Accordingly a charger or filling extension 31 of tapered or circular construction is employed. The lower smaller end portion of this charger is approximately 45" in external diameter while the end portion of the hogshead is substantially 46" in internal diameter. Consequently the small end portion of the charger will enter the end portion of the hogshead. The upper end of the charger is slightly larger in diameter than the lower end providing a flared construction which easily permits the tobacco to be reduced in horizontal area, as well as vertically. The lower end of the charger of course is of sufficient size to permit the stationary head with its rollers to readily pass therethrough.

It will be readily apparent that with the structure described a press is provided requiring minimum attention both to control and to operate and yet it is of a character to be practical and useful in the compression of tobacco or other products.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is shown in the drawing and described in the specification but only as indicated in the appended claims.

What is claimed is:

1. Apparatus for compressing tobacco comprising a lower vertically reciprocable head adapted when in its lowermost position to have its upper surface disposed substantially in alignment with a supporting surface, an upper circular stationary head disposed in axial alignment with said reciprocable head, framework supporting said stationary head, said stationary head having spaced slots disposed radially around its circumference, a bearing member mounted on said stationary head at each side of each slot, a stub shaft extending across each slot and having its extremities disposed in said bearing members, a roller disposed on said stub shaft, in each of said slots, and having a hub portion of axial dimension substantially greater than its rim portion and adapted to be engaged by a hogshead telescoped over said stationary head, and resiliently mounted guides associated with said movable head for influencing the movement of a vehicle with a hogshead thereon into a position between said heads.

2. Apparatus for compressing tobacco comprising a lower vertically reciprocable head adapted when in its lowermost position to have its upper surface disposed substantially in alignment with a supporting surface, an upper circular stationary head disposed in axial alignment with said reciprocable head, framework supporting said stationary head, said stationary head having spaced slots disposed radially around its circumference, a bearing member mounted on said stationary head at each side of each slot, a stub shaft extending across each slot and having its extremities disposed in said bearing members, and a roller disposed on said stub shaft, in each of said slots, and having a hub portion of axial dimension substantially greater than its rim portion and adapted to be engaged by a hogshead telescoped over said stationary head.

3. Apparatus for compressing tobacco comprising a lower vertically reciprocable head adapted when in its lowermost position to have its upper surface disposed substantially in alignment with a supporting surface, an upper circular stationary head disposed in axial alignment with said reciprocable head, and having spaced slots disposed around its circumference, a bearing member disposed at each side of each slot, a stub shaft extending across each slot and having its extremities disposed in said bearing members, and a roller disposed in each of said slots on said stub shaft and having a hub portion of axial dimension substantially greater than its rim portion and adapted to be engaged by a hogshead disposed over said stationary head.

4. Apparatus for use in the compressing of tobacco comprising, in combination with a supporting surface, a reciprocable head, a cooperating stationary head, framework supporting said stationary head, guides for a tobacco hogshead associated with said heads, yieldable means mounting said guides, the stationary head having radial slots spaced about its periphery, and rollers mounted in said slots and having their peripheries extending outwardly beyond and downwardly below said stationary head, said rollers being spaced in a manner such that the hogshead will be caused to engage said rollers if the hogshead is slightly off center and properly center the same during the operation of the press.

5. Apparatus for compressing tobacco comprising a vertically reciprocable lower head and a stationary upper head, framework supporting said stationary head, yieldable means for guiding a vehicle with a hogshead of tobacco into position over said lower head, and roller means spaced around the circumference of said upper head with the peripheries of said roller means projecting outwardly beyond and downwardly below said upper head, said roller means being spaced so that the hogshead will be caused to engage said roller means if the hogshead is substantially in proper position.

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