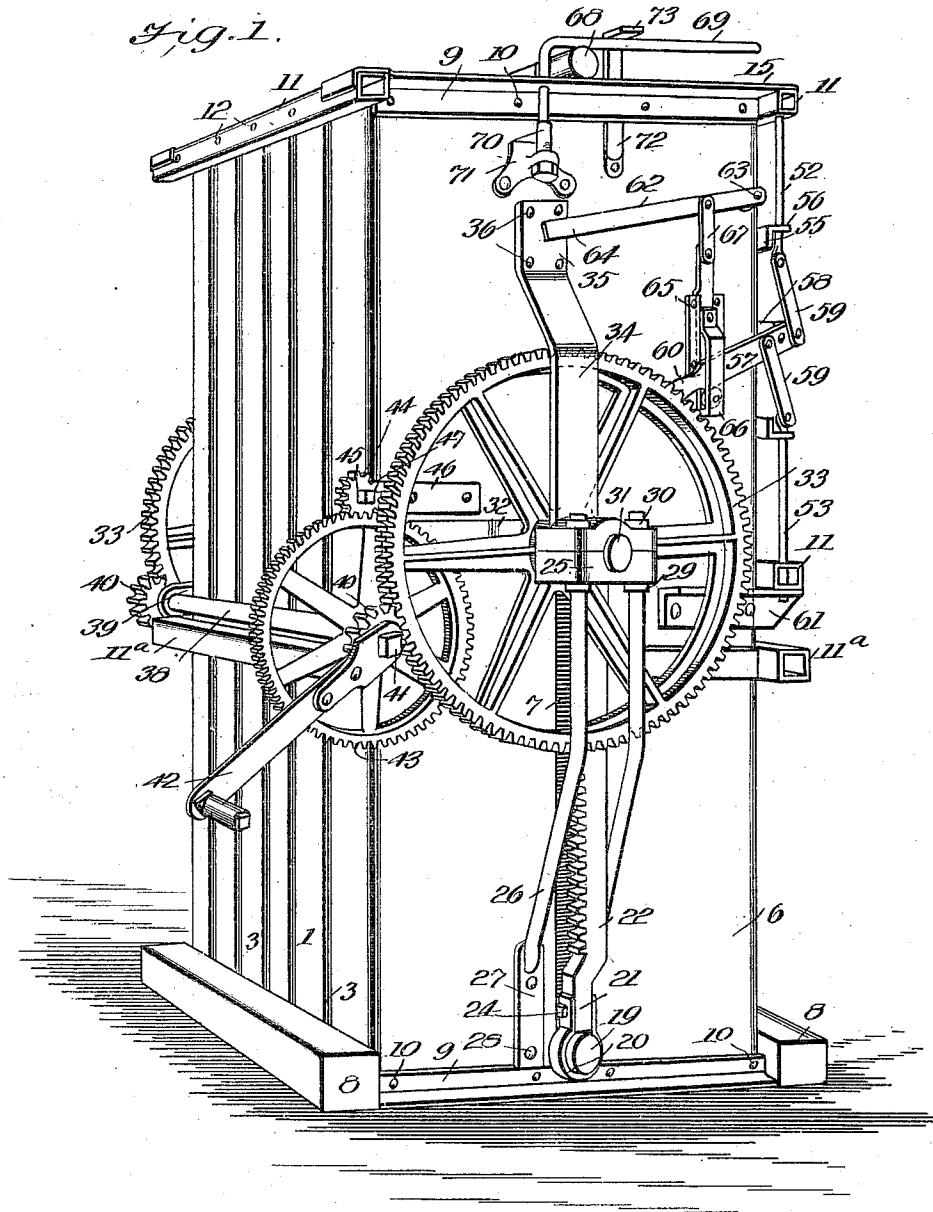


J. J. FAUCHER.
BROOM CORN PRESS.
APPLICATION FILED MAR. 1, 1910.

983,128.

Patented Jan. 31, 1911.

2 SHEETS—SHEET 1.



WITNESSES:
J. C. Barry
C. & Trainor

INVENTOR
JOSEPH J. FAUCHER
BY *Munn & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH J. FAUCHER, OF WICHITA, KANSAS.

BROOM-CORN PRESS.

983,128.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH J. FAUCHER, a citizen of the United States, and a resident of Wichita, in the county of Sedgwick, State of Kansas, have invented certain new and useful Improvements in Broom-Corn Presses, of which the following is a specification.

My invention is an improvement in broom corn presses, and consists in certain novel constructions and combinations of parts hereinafter described and claimed.

The object of the invention is to provide a press of the character specified which, while simple in construction and operation, will yet be efficient for the purpose, practically devoid of danger to the operator or press from careless handling, and which will enable the bale to be speedily compressed, tied and discharged.

A further object of the invention is to provide a simple and efficient means for automatically releasing the door when the bale is compressed.

Referring to the drawings forming a part hereof: Figure 1 is a perspective view of the improvement from the side; Fig. 2 is a vertical section; Figs. 3 and 4 are sections on the lines 3—3 and 4—4, respectively of Fig. 2; and Fig. 5 is a perspective view of the door operating means.

The embodiment of the invention shown in the drawings consists of a case in which the corn is pressed, the said case being substantially rectangular in cross section. Opposite side walls 1 and 2 are provided with a plurality of spaced parallel vertical slots 3 for a purpose to be presently described, and each of the other side walls 5 and 6 is provided at its lower end with a central vertical slot 7 which extends from the bottom to approximately the vertical center of the side. The side walls 1 and 2 are braced at their bottoms by cross beams 8 and at their tops and centers by hollow bars 11 and 11^a, respectively, rectangular in cross section, and the bars 11 are secured to the sides by bolts 12. The side walls 5 and 6 are braced at their top and bottom by cross bars 9, which are secured to the walls by bolts or rivets 10. The case is provided with a top 14 which fits inside of the walls 1, 2, 5 and 6, and is hinged to the wall 1 by strap hinges 15 which extend entirely across the top and rest at their outer ends on the opposite top

cross bar 11. A follower 16 is movable vertically in the case, fitting between the side walls, and is provided transversely of its under face with a plurality of truss bars 17. Each of the truss bars is provided with a central transverse opening, through which passes a square shaft 18, whose ends 19 are rounded, and engaged by bearings 20 on the offset lower ends 21 of rack bars 22 which extend upwardly alongside the adjacent slot 7. The upper face of the follower is provided at spaced intervals with transverse slots 23, and the bearings 20 are secured to the rack bars by bolts 24.

A sectional bearing box 25 is supported near the top of each slot 7 by means of rods 26, which at their upper ends are passed through the sections of the box, and at their lower ends are secured to plates 27 bolted to the case by bolts 28. Each rod is provided with a collar 29 below the box, and a nut 30 is threaded onto the rod above the box to hold the sections in place. A plate 34 extends upwardly from the inner side of each bearing box, and the upper end of the plate is offset inwardly, as at 35, and secured to the case wall by bolts or rivets 36, thus supporting the box from above. A stub shaft 31 is journaled in each bearing box and in a bearing plate 32 secured to the adjacent side of the case, and a gear wheel 33 is secured to each shaft, the shafts being in alinement with each other. Each shaft is also provided with a pinion 37 meshing with the adjacent rack bar, and it will be evident that when the stub shafts are rotated the follower will be raised and lowered.

A counter shaft 38 is journaled in bearing arms 39 extending from the case above one of the cross bars 11^a, and a pinion 40 is secured to each end of the shaft and meshes with the adjacent gear wheel 33. The counter shaft is also provided with a square end 41 for receiving a crank 42, and with a gear wheel 43 meshing with a pinion 44 on a stub shaft 45 journaled in a bearing arm 46 on the case and having a square end 47 for receiving the crank 42. The follower is operated by turning the counter shaft 38, which through the pinion 40 and gear wheels 33 drives the stub shaft and moves the rack bars upward. When a high speed with lower power is desired, as, for instance, when lowering the follower, the crank is placed directly on the square end of the counter

shaft. When a low speed with high power is desired, the crank is placed on the stub shaft 45.

A door 48 is provided on the side wall 2, and hollow cross bars 11 are arranged transversely of the door at its top and bottom. The vertical slots 3 on this side of the case are arranged in the door and the door is hinged at one side to open outwardly. The hinge consists of a rod 49 which extends through the cross bars 11, and at its upper end through the strap of the hinge 15, and at its lower end through a bearing plate 50, and the ends of the rod are threaded and engaged by nuts 51 above the strap and below the bearing plate. The door is retained in closed position by a latch, consisting of two bolts 52 and 53 extending in opposite directions, and each passing through openings 54 in the adjacent bar 11. A U-shaped bracket 55 is secured to the door between the bolts, and the bracket is provided with a marginal lateral flange 56 having openings through which the inner ends of the bolts pass. A lever 57 is pivoted intermediate its ends to a central tongue 58 on the bracket, and links 59 connect the inner ends of the respective bolts to the lever on each side of its pivotal connection in such manner that when the free end 60 of the lever is swung upwardly, the bolts will be drawn inwardly and released from the hinge 15 and a bearing plate 61, with openings in which elements the bolts engage.

A lever 62 is pivoted to the side wall 6 above the lever 57 by one end, as at 63, and the free end 64 of the lever is in position for engagement by the upper end of the adjacent rack bar 22 when the follower is in its uppermost position. A guideway 65 is secured to the side wall 6 and a stirrup 66 is slidable in the guideway, and the free end 60 of the lever 57 passes through the stirrup. A link 67 is pivoted by one end to the upper end of the stirrup and by the other to the lever 62, so that when the said lever is moved upwardly the stirrup will be lifted and will lift the free end of the lever 57 and cause it to withdraw the bolts to permit the door to be swung open.

The top is held closed when the follower is moving upward to press the corn by means of a cross bar 68 arranged transversely at approximately the center of the top and held in place at each end by the angular portion 69 of a rod 70 mounted to swing in a bearing bracket 71 on the side wall. The rods swing inwardly and outwardly, and a plate 72 is secured to the side wall and is provided with an angular portion 73 which overlies the portion 69 of the rod when it is above the cross bar.

In operation, the follower being at the bottom of the case, the top and door are opened and the case is filled with the corn

to be pressed. When sufficient corn has been placed in the case the door and top are closed and locked by the mechanism just described, and the counter shaft is rotated by either of the methods mentioned. As the follower moves upward the corn is compressed, and when the compression is completed the door is unlocked by the mechanism just described. After pressing the bale is secured by wires or other suitable means, the wires having been laid across the follower before the corn was inserted, the ends of the wires extending through the slots 3. The wires may also be inserted after compression by passing them through the slots 3 and along the slots 23 in the upper face of the follower. After the wires are secured in place, the bale is removed and the operation is repeated. It will be evident that power may be applied to either the counter shaft or to the stub shaft.

In order to cover the slots 7 during the operation of the press, a plate 73 is secured to each end of the follower and fits over the slot on the inside of the casing, the inner faces of the side walls 5 and 6 being grooved, as shown at 74 in Fig. 3, so that the inner faces of the plates are flush with the inner faces of the side walls. At the point where the follower stops in its pressing movement a plate 75 is secured over the groove by screws 76. The plates 73 are long enough so that their upper ends are never disengaged from beneath the plates 75, even when the follower is in its lowermost position (Fig. 2). As shown in Fig. 2, in dotted lines, the highest point the follower attains is just above the bottom of the door 48 so that the bale may be easily withdrawn from the case.

While the improved press is especially designed and adapted for pressing broom corn, it is obvious that it may be used for pressing any similar material, such as cotton, hay or the like, and the procedure would be practically the same. With the top and door open, it may be speedily filled, a feature of importance, since it increases the amount of work possible in a given length of time.

The upper end of each of the rack bars, as shown in Fig. 2, is supported against the pinion 37, by means of a roller 76 journaled in the arms 77 of a yoke, whose body portion 78 is provided with a pin 80, slidable in a bearing 79 on the case, and the roller is normally passed toward the rack by a spring 80^a which encircles the pin, between the body portion and the bearing.

I claim:

1. A press of the character specified, comprising a case substantially rectangular in cross section and provided in opposite side walls with a central vertical slot, a follower in the casing, a shaft arranged transversely

of the follower and extending at its ends through the slots, a bar secured to each end of the shaft, means engaging the bars to lift the follower, a door at the upper end of the casing in one of the side walls for permitting the withdrawal of the bale, a bolt slidable on the door, a bearing plate on the case having an opening through which the bolt is adapted to extend to lock the door, a lever pivoted to the case and having one end connected to the bolt, a second lever pivoted to the casing and having one end in position for engagement by a bar at the end of its upward movement, and a stirrup at the other end of the lever through which the first named lever extends.

2. In a press of the character specified, a case, a door in a wall of the case, a follower in the case, means for moving the follower longitudinally, a pair of alined bolts for locking the door, a lever pivoted to the door, a connection between the lever and the bolts for simultaneously moving the bolts in opposite directions, a stirrup through which the lever extends, a lever pivoted on the case and having one end in position for

engagement by the follower operating means at the end of the movement of the follower in one direction, the other end being connected with the stirrup.

3. In a press of the character specified, a case, a door in a wall of the case, a follower movable longitudinally of the case, a bolt slidable on the door for locking said door, a lever for moving the bolt, a second lever having one end in position for engagement by the follower near the end of its movement in one direction, and a stirrup on the other end through which the first named lever extends.

4. In a baling press, a case having an open top, a cover for the top, a bar arranged transversely of the cover, a rod journaled on the case on a vertical axis and provided with an angular portion adapted to over-lie the ends of the bar to hold the door in place, and a catch for engagement by the angular portion.

JOSEPH J. FAUCHER.

Witnesses:

C. E. TRAINOR,
 SOLON C. KEMON.