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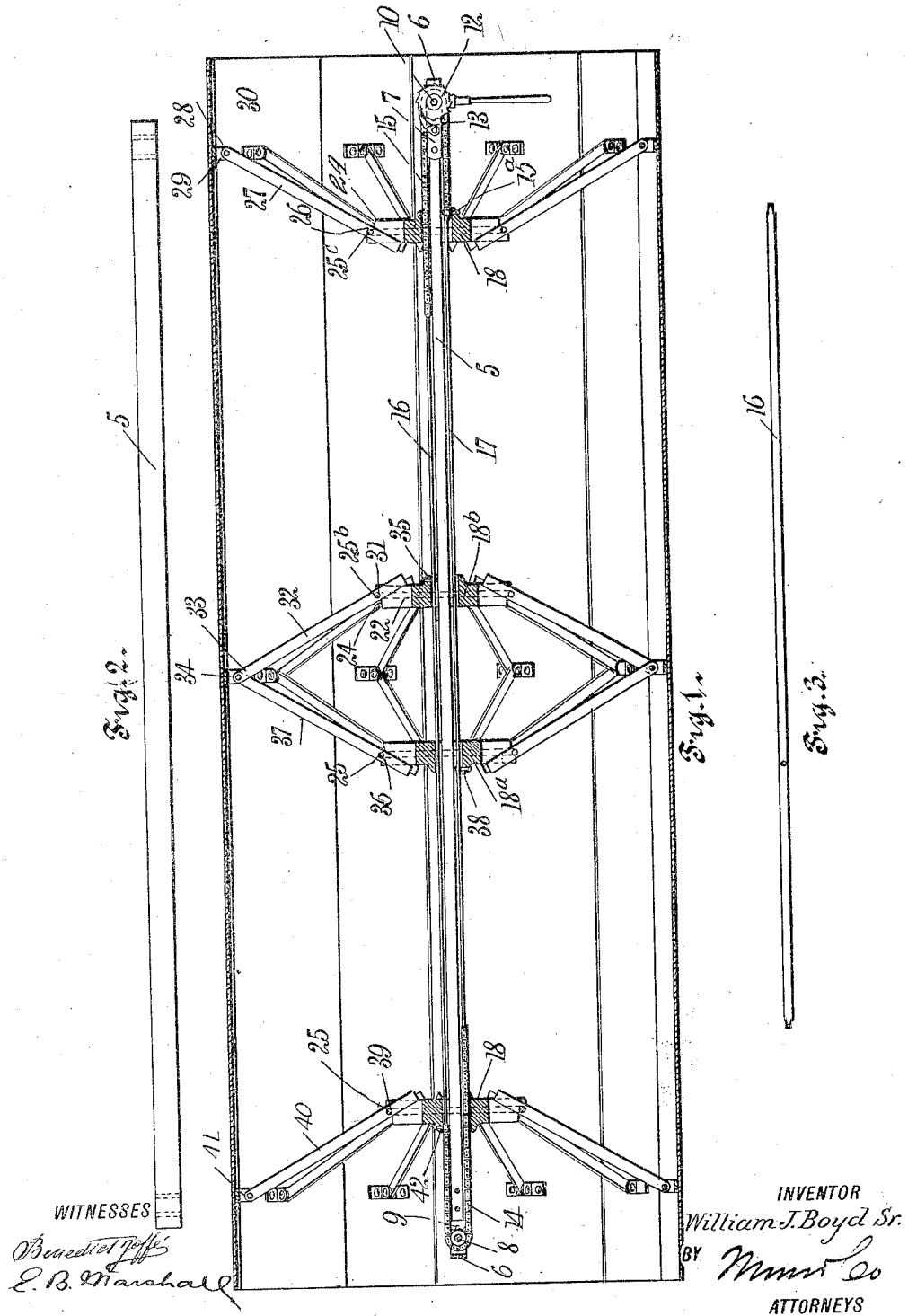
MOLD.

APPLICATION FILED MAR. 16, 1912.

1,048,665.

Patented Nov. 5, 1912.

2 SHEETS—SHEET 1.



1,043,665.

Patented Nov. 5, 1912.

2 SHEETS—SHEET 2.

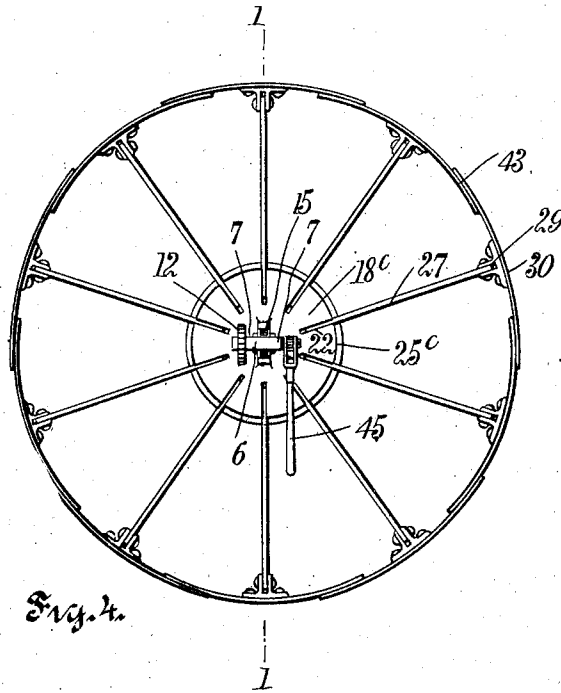


Fig. 4.

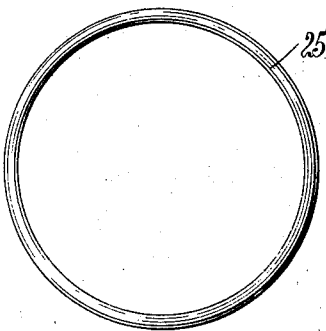


Fig. 8.

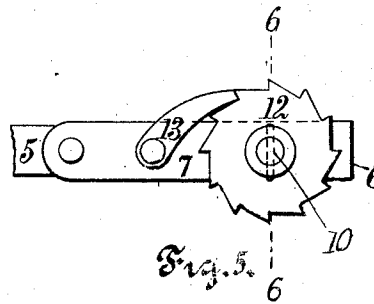


Fig. 5.

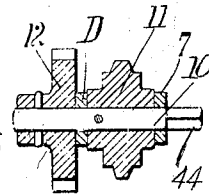


Fig. 6.

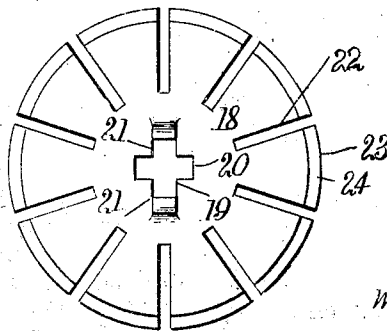


Fig. 7.

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MOLD.

1,043,665.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed March 16, 1912. Serial No. 684,148.

To all whom it may concern:

Be it known that I, WILLIAM J. BOYD, Sr., a citizen of the United States, and a resident of McLeansboro, in the county of Hamilton and State of Illinois, have invented a new and Improved Mold, of which the following is a full, clear, and exact description.

My invention relates to molds, and it has for its object to provide one having a frame with two sprocket wheels, one journaled at each end, with sprocket chains disposed around the sprocket wheels, and connected with fulcrum members mounted to slide on the frame, so that when one of the sprocket wheels is rotated the fulcrum members will be moved relatively to the frame, and the arms which are pivotally connected with the fulcrum members, and with the side members of the mold will be moved to push the side members of the mold into the desired position.

Additional objects of the invention will appear in the following complete specification, in which the preferred form of the invention is disclosed.

In the drawings similar characters of reference indicate corresponding parts in all the views, in which—

Figure 1 is a sectional view on the line 1—1 of Fig. 4; Fig. 2 is a view showing the frame member; Fig. 3 is a view showing one of the link members connecting the sprocket chains; Fig. 4 is an end view of Fig. 1; Fig. 5 is an enlarged view showing one end of the frame member with the bearing members secured thereto and the pawl and ratchet in position; Fig. 6 is a sectional view on the line 6—6 of Fig. 5; Fig. 7 is an enlarged view showing one of the fulcrum members; and Fig. 8 is an enlarged view showing one of the rings which are seated in the shoulders in the fulcrum members, and to which the arms are pivoted.

By referring to the drawings it will be seen that the frame 5 extends longitudinally of the mold, a U-shaped bearing member 6 being disposed at each end of the frame member 5, the sides 7 of the U-shaped bearing member being disposed against and being secured to the sides of the frame member 5. A stud 8 is journaled in the bearing in one of the U-shaped bearing members 6, and disposed between the sides 7 of the said bearing members 6 there is mounted on the stud a sprocket wheel 9. A stud 10 is journaled in bearings in the other U-shaped bearing

member 6, and secured to the said stud 10 and disposed between the sides 7 of the said U-shaped bearing member there is a sprocket wheel 11, the said sprocket wheel 11 being mounted on and secured to the stud 10. This stud 10 projects beyond the side of the U-shaped bearing member 6, at each side, and at the outer side of one of the said sides 7 of the U-shaped bearing member 6 there is mounted on and secured to the stud 10 a ratchet wheel 12. A pawl 13 is pivoted at one of the sides 7 of the said U-shaped bearing member 6, the pawl 13 engaging the ratchet wheel 12 in the customary manner. A sprocket chain 14 is disposed around the sprocket wheel 9, and a sprocket chain 15 is disposed around the sprocket wheel 11, the terminals of these sprocket chains 14 and 15 being secured together by links 16 and 17. Mounted to slide on the frame member 5, there are four fulcrum members 18, 18^a, 18^b and 18^c, the fulcrum members having openings 19, with recesses 20 in which the frame member 5 extends. The fulcrum members 18 also have openings 21, which extend to the openings 19, in which the links 16 and 17 and the sprocket chains 14 and 15 may be disposed. In each of the fulcrum members there are a plurality of radially disposed slots 22, which extend through the periphery 23 of the fulcrum members. There is also in each of the fulcrum members 18 an annular shoulder 24, disposed at their peripheries, these shoulders 24 being each provided to receive one of the rings 25.

In the construction shown in the drawings I provide four of these fulcrum members which I designate as 18, 18^a, 18^b and 18^c. The fulcrum member 18^c has a shoulder 24, at the right side, with the ring 25^c disposed therein, and through the orifices 26 in the arms 27, these arms 27 being in this way pivotally connected with the fulcrum member 18^c. The arms 27 extend outwardly and to the right, with their outer terminals 28 pivoted to the lugs 29, which extend inwardly from the side members 30. This fulcrum member 18^c is secured to the sprocket chain 15, at the point 15^a where it is connected with the link 17. The fulcrum member 18^b has its shoulder 24 made on its left side, with the ring 25^b disposed in the shoulder, the ring 25^b extending through the orifices 31 in the links 32, these links 32 extending outwardly and to the left, where their outer terminals 33 are pivoted to the

lugs 34, which are secured to the inner sides of the side members 30. The fulcrum member 18^a is secured to the link 16, by a bolt at 35. The fulcrum member 18^a has its shoulder 24 made in its right side, and resting in this shoulder 24 there is the ring 25^a, which is disposed through the orifices 36 in the links 37, these links 37 extending outwardly and toward the right, where their outer terminals are pivoted to the lugs 34. This fulcrum member 18^a is secured to the link 17, by a bolt at the point 38. The fulcrum member 18 has its shoulder 24 made in its left side, and resting in this shoulder there is the usual ring 25, which is disposed through the orifices 39 in the links 40, the links 40 extending outwardly and to the left, with their outer terminals 41 secured to the inner sides of the side members 30. This fulcrum member 18 is secured to the sprocket chain 14, by a bolt 42, at the point where the said sprocket chain is secured to the link 16. The inner terminals of all these arms 27, 32, 37 and 40 are disposed in the radially disposed slots 22, of the fulcrum members.

As will be seen by referring to Fig. 4 of the drawings the side members 30 are curved, and have their sides 43 overlapping neighboring sides, and free to move relatively to the said neighboring sides. The stud 10 has an end 44, projecting beyond a side member 7 of one of the U-shaped bearing members 6, this end being angular in cross section, so that it may be engaged by a wrench or similar instrument 45.

In using the invention the side members 30 may be moved outwardly or inwardly relatively to each other by turning the stud 10 by means of the wrench 45, which engages the end 44 of the said stud. When this stud is turned, it rotates the sprocket wheel 11 relatively to the bearing member 6, and the frame member 5, and as the sprocket wheel 11 rotates it moves the sprocket chain 14. As the sprocket chains 14 and 15, and the links 16 and 17 move, they will carry with them the fulcrum members 18, 18^a, 18^b and 18^c. These fulcrum members are so secured to the sprocket chains and links, that when the link 16 moves to the left, in Fig. 1 of the drawings, it will carry to the left the fulcrum member 18^b, and the fulcrum member 18, while the link 17 will carry to the right the fulcrum member 18^a and the fulcrum member 18^c. It will be seen that in this way the links 27, 32, 37 and 40 will be moved together, and with them the side members 30, these side members 30 being moved in the manner described so that they will always be spaced at equal distances from the frame member 5, whether the side members are disposed to form a large or a small mold or core.

It will be understood that when the fulcrum members are moved to take the pressure off the arms, the rings 25 may be slipped out of engagement with the shoulders 24 and that these rings 25 may be either cut or may be bent so that the side member 30 may be conveniently disengaged from the mold.

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

1. In a mold a central frame, a fulcrum member mounted to slide on the frame and having radially extending slots, and a shoulder on one of its faces, side members, arms articulated to the side members and having inner terminals with orifices disposed in the slots, and a ring disposed in the orifices and against the shoulder.

2. In a mold a frame, two sprocket wheels spaced apart and journaled in bearings, fulcrum members mounted to slide on the frame, side members, arms articulated to the side members and to the fulcrum members, sprocket chains disposed around the sprocket wheels, means connected to the sprocket chains at one side of the sprocket wheels and secured to certain of the fulcrum members, and means connected to the sprocket chains at the other side of the sprocket wheels, and secured to the remaining fulcrum members.

3. In a mold a frame, two sprocket wheels spaced apart and journaled in bearings in the frame, two fulcrum members mounted to slide on the frame, side members, arms having terminals articulated to the side members, the arms extending inwardly in one direction, with their other terminals pivoted to one of the fulcrum members, additional arms having terminals articulated to the side members, the additional arms extending inwardly and in the opposite direction, with their inner terminals articulated to the other fulcrum members, sprocket chains disposed around the sprocket wheels, means connected to the sprocket chains at one side of the sprocket wheels, and secured to one of the fulcrum members, and means connected with the sprocket chains at the other side of the sprocket wheels and secured to the other sprocket members.

4. In a mold a frame, two sprocket wheels spaced apart and journaled in bearings, fulcrum members mounted to slide on the frame, side members, arms articulated to the side members and to the fulcrum members, sprocket chains disposed around the sprocket wheels, means connected to the sprocket chains at one side of the sprocket wheels and secured to certain of the fulcrum members, means connected to the sprocket chains at the other side of the sprocket wheels, and secured to the remaining fulcrum members, and a pawl and

ratchet connection between the frame and one of the sprocket wheels.

5. In a mold, a frame member, U-shaped bearing members having sides disposed at each side of the frame member and secured thereto, studs journaled in the bearing members, wheels disposed between the sides of the bearing members, and mounted on the studs, one of the wheels being secured to one of the studs, a ratchet wheel secured to the last-mentioned stud, a pawl engaging the ratchet wheel, and pivoted relatively to the frame member, fulcrum members mounted to slide on the frame member, side members, arms pivotally connected to the fulcrum members and to the side members, and means disposed over the wheels and secured to the fulcrum members for operating the latter.
6. In a mold, a frame member, U-shaped bearing members having sides and disposed at the side of the frame member, and being secured thereto, studs journaled in the bear-

ing members, sprocket wheels disposed between the sides of the bearing members and mounted on the studs, one of the sprocket wheels being secured to the stud on which it is mounted, a ratchet wheel secured to the last-mentioned stud, a pawl engaging the ratchet wheel, and pivoted relatively to the frame member, a fulcrum member having slots, side members, arms having outer terminals pivoted to the side member, and inner terminals disposed in the slots and pivoted to the fulcrum member, and means disposed over the sprocket wheels and secured to the fulcrum member for operating the latter.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM J. BOYD, Sr.

Witnesses:

HALLIE BOYD,

WILLIAM J. BOYD, Jr.