No. 844,306. PATENTED FEB. 12, 1907.

G. FALK.

MACHINE FOR MAKING FENCE POSTS.

APPLICATION FILED AUG. 25, 1906.

2 SHEETS—SHEET 1.

Fig. 1

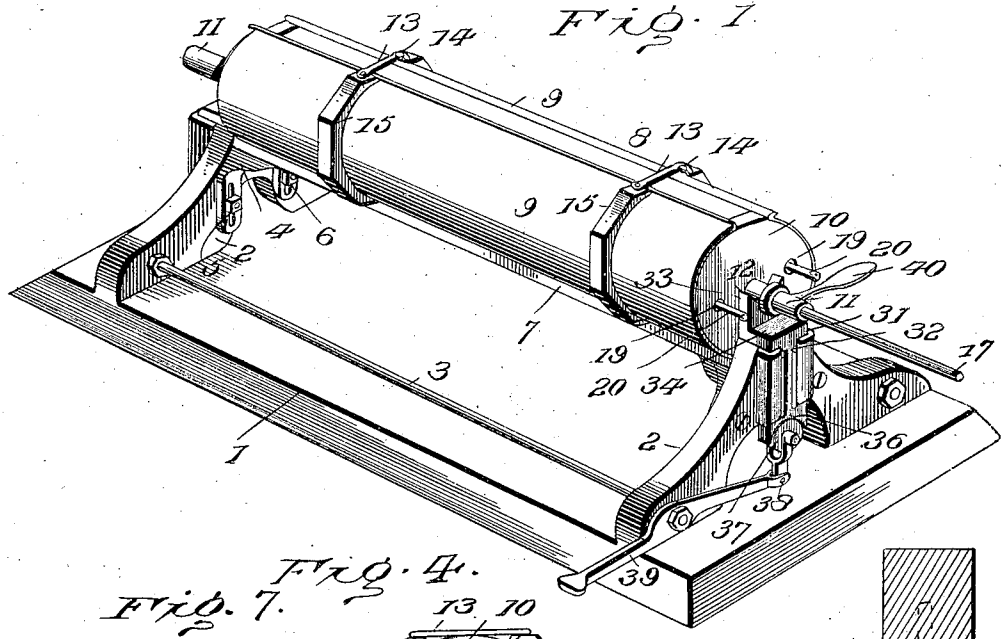



Fig. 4.

Fig. 7.

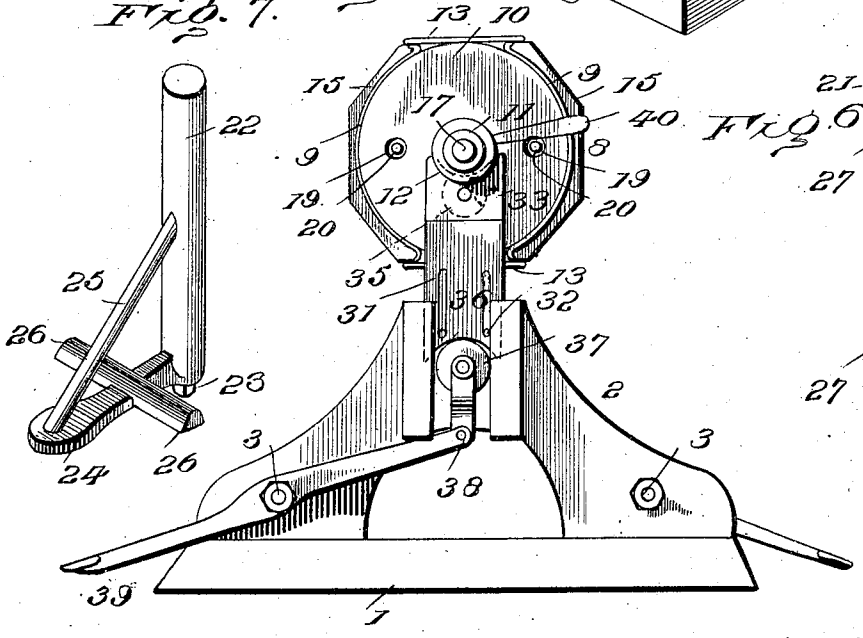
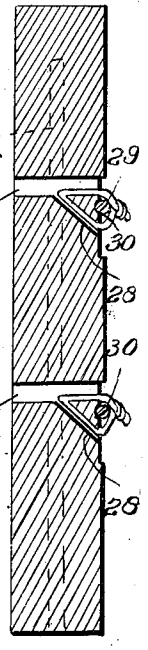



Fig. 6




Witnesses

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2 SHEETS—SHEET 2.

Fig. 2

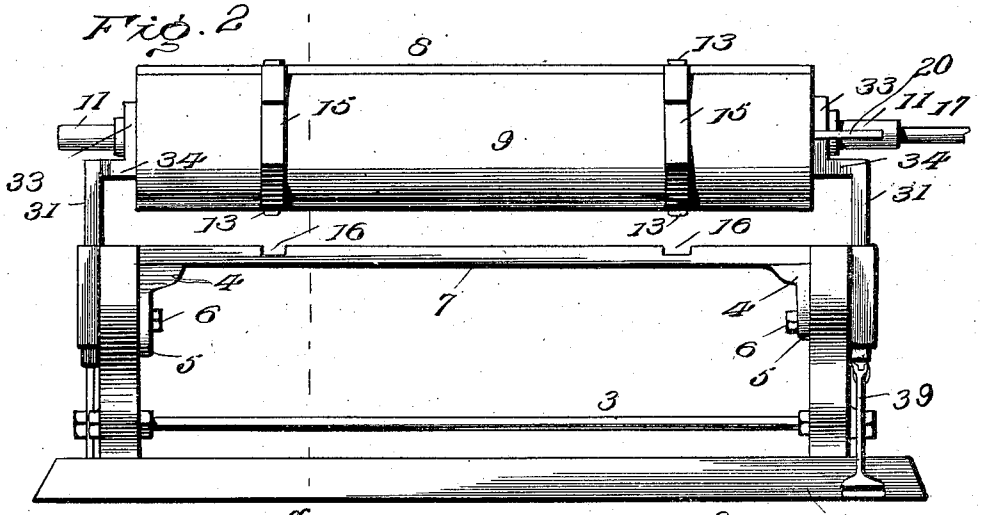



Fig. 3

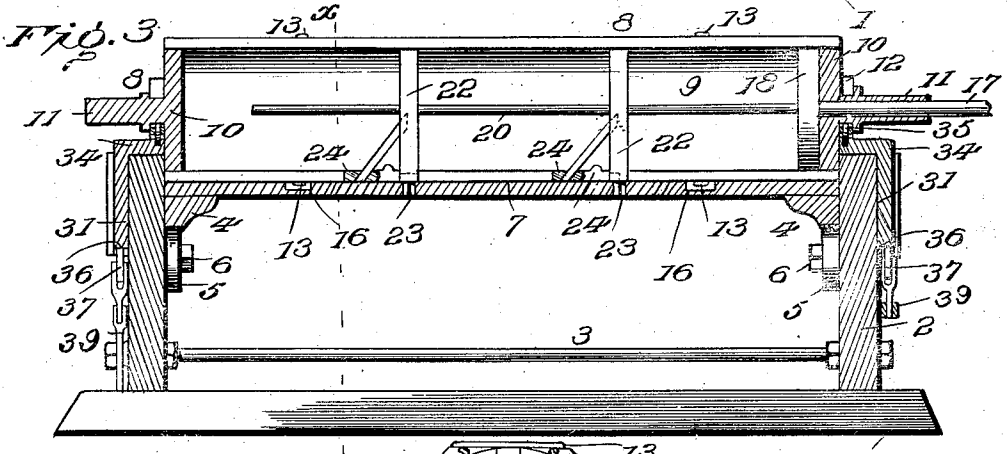
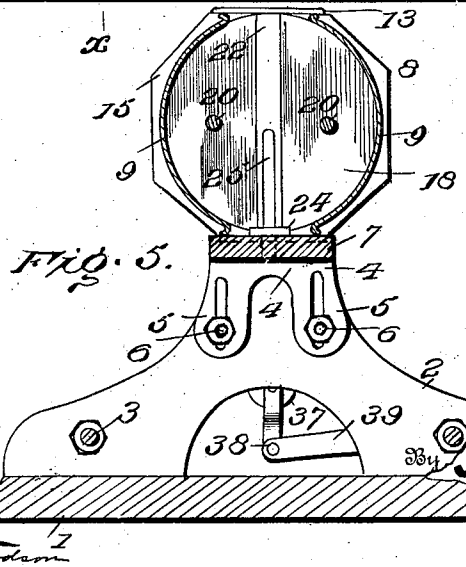



Fig. 5.




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# UNITED STATES PATENT OFFICE.

GEORGE FALK, OF LA CROSSE, WISCONSIN.

## MACHINE FOR MAKING FENCE-POSTS.

No. 844,306. Specification of Letters Patent. Patented Feb. 12, 1907.

Application filed August 25, 1906. Serial No. 332,020.

*To all whom it may concern:*

Be it known that I, GEORGE FALK, a citizen of the United States, residing at La Crosse, in the county of La Crosse and State of Wisconsin, have invented certain new and useful Improvements in Machines for Making Fence-Posts, of which the following is a specification.

The object of this invention is to provide a construction of mold particularly designed for manufacturing fence-posts of plastic or similar material, one which is simple in construction and operation and is especially adapted for use on the farm or in various other places to enable the manufacture of fence-posts on either a small or a large scale.

A machine embodying the invention consists, primarily, of a suitable support upon which the mold for making the molded article is movably mounted, being adapted to be readily elevated during the operation of molding and to be revolved to enable the operator to have access to the molded article from all sides to slick the same down and insure the formation of the article in such a manner as to obviate all likelihood of defective construction of the finished product.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of a molding-machine embodying the invention. Fig. 2 is a side elevation of the machine, showing the mold in elevated position with one of the sides removed, so as to permit the operator to slick down the plastic material being molded. Fig. 3 is a vertical longitudinal sectional view showing more clearly the arrangement of the core members in the mold. Fig. 4 is an end elevation, bringing out clearly the mechanism for elevating the mold. Fig. 5 is a vertical transverse section on the line *x x* of Fig. 3. Fig. 6 is a sectional view of a fence-post such as is molded in the machine comprising the invention, the attaching means for securing the fence-wire to the fence-post being also illustrated. Fig. 7 is a detail perspective view of the core device.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Specifically describing the invention, the numeral 1 indicates the base of the machine, at opposite ends of which are located upwardly-projecting supporting-standards 2. The standards 2 are connected together by tie-rods 3 to reinforce the same in an obvious manner, as well as to adjustably connect said standards together. Each of the standards 2 carries a vertically-adjustable rest 4, each rest being mounted upon the inner side of its standards and movable in suitable guides. Each rest 4 embodies downwardly-extending legs 5, which are vertically slotted to receive adjusting members 6, by which the rests are attached to the standards at the desired adjustment. Upon the rests 4 is supported the pallet 7, and the mold 8 is movably mounted above the pallet 7. Said mold is composed of the sides 9, which are preferably of curved form in cross-section in order that the molded article may have a rounded conformation when completed. It will of course be understood, however, that the sides 9 of the mold may be of any desired shape, depending upon the desired form or construction of the fence-post or other article which is to be molded in the machine. The mold 8 also includes opposite heads or ends 10, adapted to close said mold at the opposite extremities and arranged between its sides 9. The heads or end pieces 10 of the mold 8 are preferably of circular formation for reasons above noted, and each head 10 is formed with an offstanding journal 11, mounted in a bearing 12. The sides 9 of the mold do not entirely inclose the molded article in the actual operation of molding, as the longitudinal edge portions of the sides do not come together, but are spaced apart some distance when said sides are in operative positions.

The parts of the mold 9 are connected by means of hooks 13, which hooks are pivotally attached at one end to one of the sides 9 and are adapted to engage at the opposite ends with a pin 14, projecting from the other side of the mold. The hooks 13, when connecting the sides 9 of the mold, span the spaces between the longitudinal edge portions of said side, and said hooks are preferably directly secured to reinforcements 15, applied to the outer spaces of the sides 9 to increase the

rigidity of the latter, said sides being constructed, preferably, of sheet metal or similar material. When the mold 8 is in operative position, the same rests upon the pallet 7, which in turn is supported by the rests 4. Said pallet 7 closes the space between the lower spaced longitudinal edges of the mold sides 9, and the pallet is preferably formed with transverse grooves 16, in which the bodies of the lower hooks 13 are received when the mold is resting upon the pallet, thus permitting the upper surface of the pallet to be in contact with the lower longitudinal edges of the mold sides 9.

One of the heads or end pieces 10 of the mold 8 has its journal 11 of tubular formation to receive the stem 17 of a plunger 18, which is mounted in the mold and which is adapted for use in tamping the plastic or other material after the latter has been placed in the mold. The plunger 18 is movable longitudinally within the mold 8 and is operable by the stem 17, which passes through the hollow journal 11, above mentioned, and which is adapted to be grasped by the operator in order to accomplish the desired result. The head or end piece 10, formed with the hollow journal 11, is provided with two openings 19, on opposite sides of the journal preferably, and core-rods 20 pass through these openings, said rods 20 being but a few inches shorter than the length of the mold. The core-rods 20 will form longitudinal air-spaces in the fence-post, (indicated at 21 in Fig. 6,) these air-spaces being preferably provided in order to interrupt the passage of frost, dampness, or the like in transverse passage through the body of the finished or completed article. Likelihood of breaking the post under actual conditions of service will be reduced to a minimum by the provision of the air-spaces 21.

A fence-post molded in the use of a machine comprising the invention is designed to have a tie or ties of wire applied thereto to secure the line-wires of a fence to said post. To form the post with suitable openings to receive the ties above mentioned, it is contemplated to employ one or a number of transverse core devices. Each core device above mentioned will consist of a body member 22, one end of which is preferably provided with a square extension 23, adapted to be received in a similarly-formed opening in the pallet 7, as shown in Fig. 3 of the drawings, said extension 23 positioning the whole core device in the mold 8 when the parts are in operative positions. At one end of the body member 22, adjacent to the extension 23, is formed a lateral extension 24, the outer extremity of which is provided with an opening receiving an end portion of a removable core-piece 25. When in position on the core device, the core-piece 25 has one end passing through the opening in the outer end of the lateral extension 24, the opposite end of the core-piece 25 being in contact with the body member 22, so that said core-piece is arranged diagonally with reference to the parts 22 and 24. The lateral extension 24 is formed with oppositely-extended arms 26. In actual use the core device just described will form a transverse opening 27 in the post and extending entirely therethrough. The core-piece 25 of the core device will form a second opening 28, extending at an angle to the opening 27. The tie-wire shown in Fig. 6 will pass into one end of the opening 27, back through the opening 28, and will be twisted together at its extremities to attach the line-wire 29 to the post, said line-wire being received in seats 30, formed by the lateral arms 26, which extend from the lateral extension 24 of the core device. The construction of the core device is of advantage, in that by removing the diagonal-arranged core-piece 25 the parts which coöperate with said core-piece may be disconnected from the fence-post without likelihood of mutilation of the latter. It is to be understood that the number of the core devices used in the construction of the fence-post or molded article will be dependent upon the number of fence-wires which are to be secured to the post.

One of the most important features of the present invention resides in the mechanism employed to raise the mold 8 bodily from the pallet 7 to enable said mold to be revolved at will by the operator, so that he may have access to the sides of the molded article by removing one of the sides 9 of the mold, whereby the molded article may be slicked down with a suitable trowel or tool adapted for the purpose to provide a smooth construction of the post or article when completed. The mechanism for the above-mentioned purpose consists mainly of vertically-movable supporting members 31, which are mounted upon the outer sides of the standards 2. One of the members 31 is carried by each standard 2 and is suitably attached thereto for vertical movement, being guided in such movement by pin-and-slot connections 32 with the standard. The bearings 12, which receive the journals 11 at opposite ends of the mold 8, are formed in vertical extensions 33, projecting from lateral portions extending from the upper ends of the members 31. Each of the bearings 12 has a roller at its bottom portion to reduce friction between the journal 11 and the bearing to a minimum. The supporting members 31, which are movable vertically to elevate the mold 8 when desired, are formed at the lower ends thereof with concaves or recesses 36, in which are received small rollers 37, each of

the rollers being pivotally connected, as at 38, with an end of a foot-lever 39. One of the foot-levers 39 is located at each end of the machine and is pivoted between its ends to an extending end portion of one of the tie-rods 3, by which the standards 2 are connected and reinforced. In other words, each of the tie-rods 3 constitutes a pivotal support at one end for the lever 39, mounted thereon.

Briefly describing the general operation of the machine, the plastic material is placed within the mold 8 through the spaces between the upper longitudinal edge portions of the sides 9, when the parts are arranged substantially as shown in Fig. 1 of the drawings. The core device or devices, as well as the core-rods 20, will of course have been placed in proper operative position. The plunger 18 will be then operated to tamp the plastic material properly in the mold. As soon as the plastic material has set sufficiently, the operator may then depress the foot-levers 39, and thus elevate the mold 8 from the pallet 7. This done, the operator may grasp the handle 40, applied to one of the journals 11 of the mold, and the latter may be rotated so as to enable the operator to slick the post or molded article by use of a trowel or similar tool, which is shaped to conform to the shape of said molded article. The post may thus be provided with a hard smooth surface, which is especially desirable for reasons which will be obvious to those versed in the art to which the invention appertains. The connections between the mold parts are such that the mold may be readily taken apart to admit of removal of the molded article.

The construction of the machine is such that by substitution of certain parts by others molded articles of different sizes may be made on the machine, and this is of obvious advantage and importance in actual conditions of service.

Having thus described the invention, what is claimed as new is—

1. In a molding-machine, the combination of a support, a mold movably mounted thereon, means for elevating the mold, and means for rotating the mold when elevated and independently of its elevating movement.

2. In a molding-machine, the combination of a support, a mold normally mounted upon said support, means for effecting relative movement of the mold and the support whereby said parts will be separated from one another, and means for effecting independent bodily movement of the mold.

3. In a molding-machine, the combination of a support, rests carried thereby, a mold normally adapted to be supported on said rests, means for elevating the mold from the rests, means for rotating the mold independently of its elevating movement, and means for adjusting the positions of the rests aforesaid.

4. In a molding-machine, the combination of a support, vertically-movable supporting members mounted thereon, means for actuating said supporting members, a mold rotatably mounted on the supporting members, and independent means for rotating the mold.

5. In a molding-machine, the combination of a support, rests thereon, a pallet normally supported on said rests, a sectional mold normally supported on the pallet, and separate and independent means for elevating and rotating the mold.

6. In a molding-machine, the combination of a support, rests thereon, a pallet normally supported on said rests, a mold normally supported on the pallet, and separate and independent means for elevating and rotating the mold, said mold being composed of detachable side and end pieces.

7. In a molding-machine, the combination of a support, vertically-movable supporting members mounted thereon, means for actuating said members, a mold embodying end pieces provided with journals mounted in bearings on the vertically-movable supporting members, and means for rotating the mold.

8. In a molding-machine, the combination of a support, vertically-movable supporting members mounted thereon, levers for actuating said supporting members, a mold rotatably mounted on the supporting members, and independent means for effecting rotation of the mold.

9. In a molding-machine, the combination of a support including spaced standards, vertically-movable supporting members mounted on said standards and provided with bearings thereon, a mold rotatable in the bearings of the supporting members, levers operably connected with the supporting members to elevate the mold, and means for rotating the mold.

10. In a molding-machine, the combination of a mold embodying detachable sides, end pieces, a stem passing through one of the end pieces of the mold, a plunger connected with the stem and movable in the mold, and core-rods passing through the end piece through which the stem aforesaid passes.

11. In a molding-machine, a mold comprising detachable sides, a pallet, a core device detachably mounted upon the pallet, said core device consisting of a transverse body member, a lateral extension at one end portion of the body member, and a diagonally-arranged core-piece extended from the outer end of the lateral extension and in con-

tact with the body member of an end thereof, said core-piece being detachable from the core device.

12. In a molding-machine, the combination of a support, rests thereon, a pallet carried by said rest, a mold comprising spaced sides resting the pallet, means detachably connecting the sides of the mold, core devices at intervals in the length of the pallet and projecting upwardly into the space between the sides of the mold, and means for elevating the mold from the pallet.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE FALK. [L. S.]

Witnesses:

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HUGO HICKISCH.