E. E. McCORD.

MACHINE FOR MAKING FENCE POSTS.

APPLICATION FILED JUNE 24, 1912.

1,135,538.

Patented Apr. 13, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

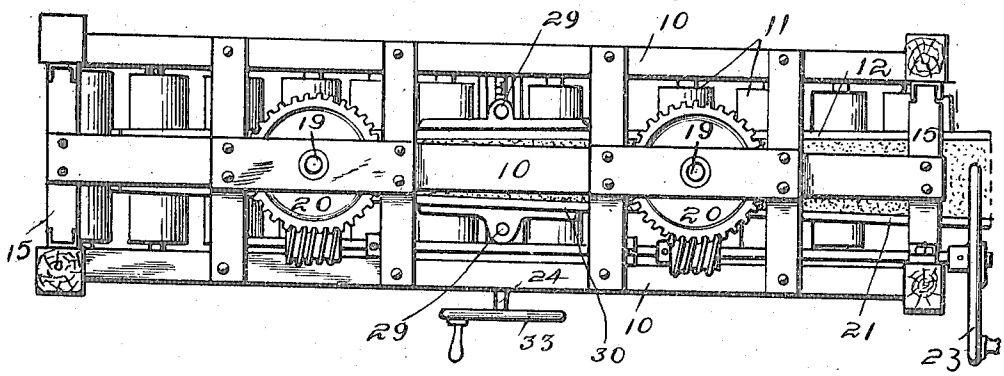
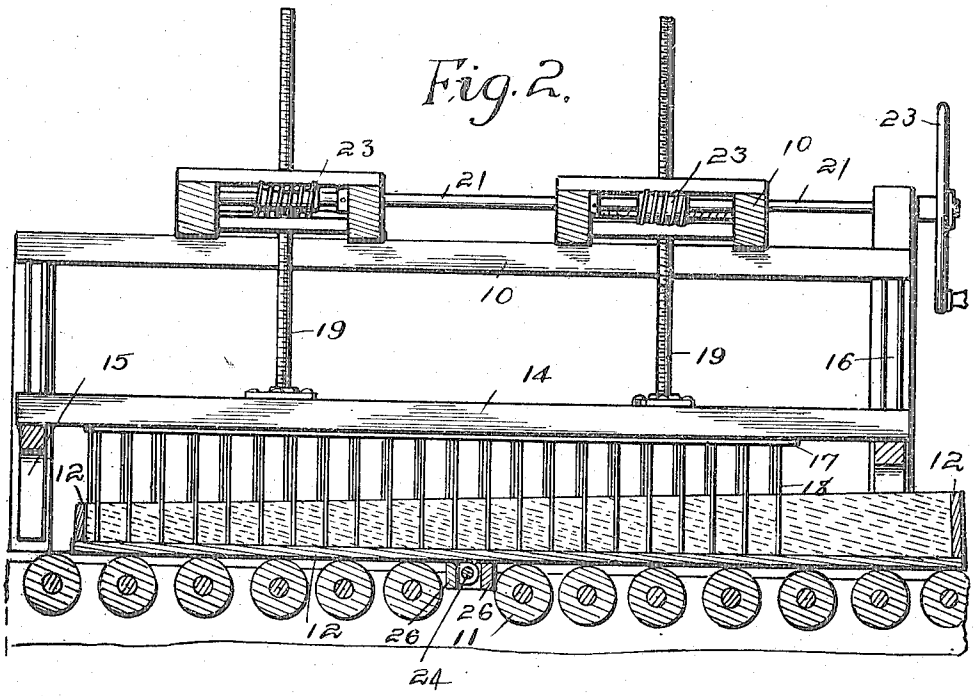


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 6

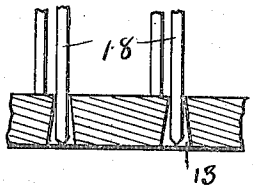


Fig. 7.

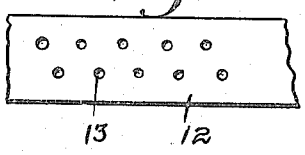


Fig. 3.

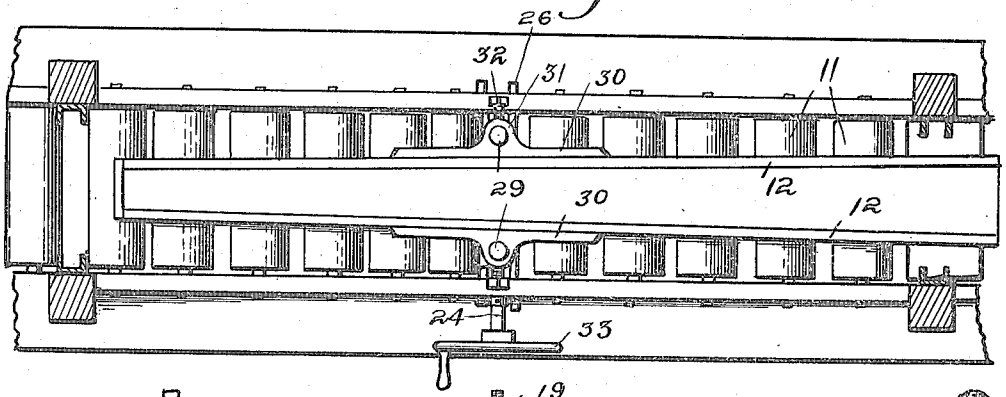
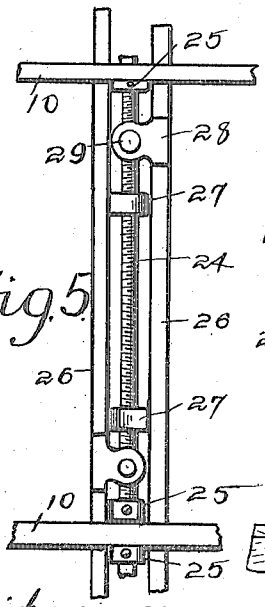


Fig. 5



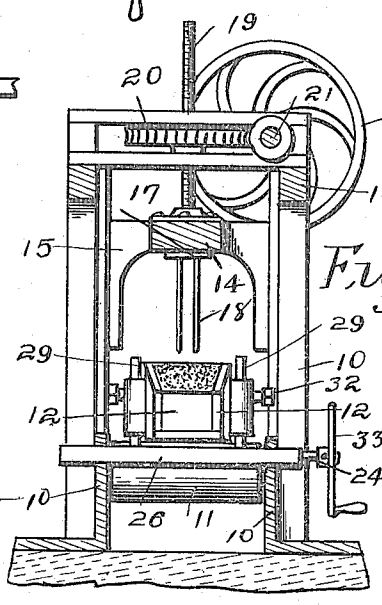
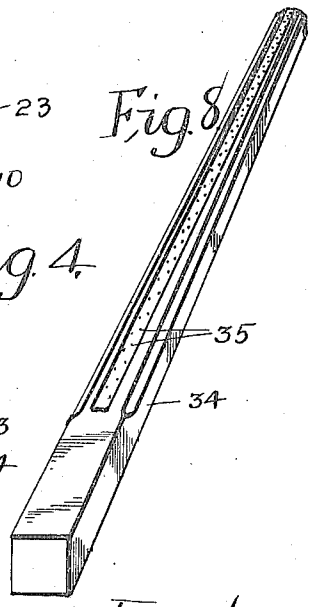


Fig. 4.

Fig. 8



Witnesses

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UNITED STATES PATENT OFFICE.

EDGAR E. McCORD, OF NEWTON, IOWA.

MACHINE FOR MAKING FENCE-POSTS.

1,135,538. Specification of Letters Patent. Patented Apr. 13, 1915.

Application filed June 24, 1912. Serial No. 705,633.

To all whom it may concern:

Be it known that I, EDGAR E. McCORD, a citizen of the United States, residing at Newton, in the county of Jasper and State of Iowa, have invented a certain new and useful Machine for Making Fence-Posts, of which the following is a specification.

The objects of my invention are to provide a machine of this class of simple, durable and inexpensive construction, whereby a large number of openings may be made in the post quickly and easily, and the pins for making the openings may be withdrawn to provide for removal from the mold containing the post.

A further object is to provide an improved construction of mechanism for forming a large number of openings to receive fastening devices in a post in which the post forming material is in wet or plastic condition.

The further object is to provide improved means of simple construction and capable of being quickly and easily operated, for centering a post mold relative to the pins for forming openings through the post.

My invention consists in certain details, in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a top or plan view of a device embodying my invention with a post mold and post in position therein. Fig. 2 shows a vertical, sectional view of same. Fig. 3 shows a horizontal, sectional view of same with the pins and the pin holding device removed. Fig. 4 shows an end elevation of the complete device embodying my invention. Fig. 5 shows an enlarged, detail plan view illustrating the means for centering the post mold. Fig. 6 shows an enlarged, detail sectional view illustrating part of the bottom of the post mold and some of the pins extended through the openings in the bottom. Fig. 7 shows a top or plan view of the bottom of the post mold to illustrate the arrangement of the pin openings and Fig. 8 shows a detail, perspective view of a completed post of the kind formed by my improved machine.

Referring to the accompanying drawings, I have used the reference numeral 10 to indicate generally the frame of the device. At the base of the frame is a series of horizontally arranged rollers 11 designed to form a platform on which the post mold may be supported and upon which the post mold may be readily and easily moved longitudinally. In practice, it is intended that the platform consisting of the rollers 11, should be extended for a considerable distance and the post molds placed thereon and first filled with post making material, then tamped or pressed and finally moved to position under the device for forming the openings therein and then finally removed to a point away from the pins for forming the openings.

The post mold, which may be made of any ordinary construction, is indicated generally by the numeral 12, and is preferably open at its top and provided on its bottom with a series of perforations 13, arranged in two longitudinal rows, the perforations in one row being staggered with relation to those in the other row, furthermore these openings are preferably tapered toward the upper side of the bottom, as shown in Fig. 6, for the purpose of preventing material from becoming caught and wedged therein, when the pins are extended through the post and into said openings.

The means for forming the openings in the posts comprises a main supporting bar 14, having its ends fixed to the guides 15, which guides are slidingly mounted in the tracks 16 on the uprights of the frame 10. Secured to the under surface of the supporting bar 14, is the pin bar 17, preferably made of metal and having therein, a series of pins 18. These pins are preferably arranged in two longitudinal rows, the pins in one row being staggered with relation to the pins in the other row to enter the openings 13 in the bottom of the mold. These pins are long enough to extend completely through the mold and a post therein. It is desirable that both ends of the pin bar be raised and lowered at the same time and that the pin bar be kept in a horizontal position, and to provide for this I have fixed to the top of the supporting bar 14, two upright screw threaded rods 19, each of which has a cog-wheel 20 mounted thereon and being provided with an internal screwthread to co-act with the threads on the upright rods. These cog-wheels are rotatably supported and held against longitudinal movement by the frame.

Extended longitudinally of the machine frame is a rotatable shaft 21 provided with a hand wheel 22 and with two worm gears 23 arranged in mesh with the cog-wheels 20, so that by rotation of said hand wheel 22, both of the cog-wheels are rotated in unison with each other and the supporting bar 14 is thereby raised or lowered in accordance to the direction in which the hand wheel 22 is moved. One of the advantages of this arrangement is that the worm gears 23 co-act with the gear wheels 20 in such a manner that the supporting bar 14 will be held or locked in any position of its movement and can only be moved up or down when the hand wheel 22 is rotated, thus dispensing with any means for locking or securing the supporting bar 14 in an elevated position, while the post molds are being moved to and from position.

In order to center a post accurately, relative to the pin bar, and upon the roller platform, I have provided a centering device consisting of a rotatable rod 24 extending transversely of the machine frame and having its end portions screwthreaded in opposite directions as shown in Fig. 5. The shaft 24 is held against longitudinal movement by the collars 25, engaging a part of the frame 10.

Slidingly mounted in the frame 10 on opposite sides of the shaft 24, are two slide bars 26, each of which has a screwthreaded lug 27 through which the shaft 24 is extended. These lugs receive opposite ends of the shaft 24 and hence when said shaft is rotated in one direction the two lugs 27 are operated to approach each other and when rotated in the other direction, the two lugs 27 will move away from each other.

Each of the slide bars 26 is also provided with a socket 28 in which is an upright shaft 29 firmly fixed in position.

At the upper end of the upright shaft 29 is a metal plate 30 having a lug 31 to receive the shaft 29. A set screw 32 is extended through the lug to engage the shaft 29 and to thereby hold the plate 30 in any desired position relative to the shaft 29.

On one end of the shaft 24 is a hand wheel 33 by which the shaft may be readily rotated.

In use with this part of the device, and assuming that the plates 30 are widely separated, then the operator moves a post mold to position under the pin bar. He then rotates the hand wheel 33 and the post mold will be engaged by one or the other of said plates 30 and moved to position until both of the plates 30 engage the opposite sides of the mold, whereupon the mold will be accurately centered beneath the pin bar. In connection with the use of a machine of this kind, the post molds for making some kinds of posts, are of different sizes and some of them have more or less taper. Hence by the use of the adjustable plates 30, the plates may be made to engage the molds and to move them to centered positions and the post molds will always be moved to the longitudinal center of the roller platform, regardless of the size and width of the post molds. By this means, a very simple and inexpensive device is provided that will not only easily move the post molds to centered positions, but will firmly and securely hold them therein, when the pin bar is being operated.

In Fig. 8, I have illustrated a post comprising a body portion 34, having therein, a series of openings 35, of the kind formed by my improved pin bar.

In order to limit the longitudinal movement of the post mold within the machine so that the pins will accurately register with the openings in the bottom of the mold, I have provided a transverse sliding stop 35^a mounted in channel bars 35^b above and below the sliding stop. These channel bars extend out beyond the bars of the machine to support the slide stop at one side of the path of movement of the post mold, and the stop is preferably provided with a handle 35^c.

In practical use, the post molds are first placed upon the roller platform and are then filled with concrete material in moist condition. Then after each mold is filled and pressed, it is moved to position under the pin bar. The operator first employs the hand wheel 33 to center the post mold and to firmly hold it in position. He then employs the hand wheel 22 and forces the pin bar downwardly until the pins have passed through the post and through the bottom of the post mold and he then reverses the movement of the hand wheel 22 and moves the hand wheel to its elevated position. He then moves the hand wheel 33 in the opposite direction and the post mold is free to be moved longitudinally over the roller platform, away from the pin bar. Obviously this complete operation may be performed very quickly and easily and a large number of holes may be formed in the post for the purpose of receiving wire attaching means.

One of the advantages of my invention is that it is of extremely simple and inexpensive construction and that it may be operated by hand.

I claim as my invention:

1. In a fence post machine, the combination of a platform comprising rollers designed to receive and support a post mold and mold, a pin bar, a series of pins therein, guide members, means for raising and lowering the pin bar between said guide members, a stop device for limiting the forward movement of the post mold to center it longitudinally beneath the pin bar, and a post mold centering device designed to engage a post mold on the roller platform

and to move it transversely to a position centered below the pin bar.

2. In a fence post machine, the combination of a platform, comprising rollers, designed to receive and support a post mold and mold, a pin bar, a series of pins therein, means for raising and lowering the pin bar, a stop device for limiting the forward movement of the post mold to center it longitudinally beneath the pin bar, and a post mold centering device, designed to engage a post mold on the roller platform and transversely to move it to a position centered below the pin bar.

3. In a fence post machine, the combination of a supporting platform, comprising transversely arranged rollers, designed to receive and support a post mold and mold, a pin bar, a series of pins fixed to the pin bar and extending downwardly therefrom, a stop device for limiting the forward movement of the post mold to center it longitudinally beneath the pin bar, a post mold centering device designed to engage the post mold on the roller platform and to move it transversely to a position centered beneath the pin bar, two upright screw threaded shafts connected with the pin bar, two cog wheels internally screw threaded mounted on said shaft, means for supporting said cog wheels against upward and downward movement, a shaft arranged horizontally, two worm gears thereon in mesh with said cog wheels, and means for rotating the latter shaft.

4. In a fence post machine, the combination of a platform, comprising rollers, designed to receive and support a post mold and mold, a pin bar, a series of pins therein, means for raising and lowering the pin bar, a stop device for limiting the forward movement of the post mold to center it longitudinally beneath the pin bar, a post mold centering device, designed to engage the post mold on the roller platform and to move it transversely to a position centered below the pin bar, the said post mold centering means comprising a transverse shaft, having its end portions provided with oppositely arranged screw threads, two slide bars on opposite sides of said shaft, a lug on each slide bar, having a screw threaded opening through which the shaft is extended, said lugs being arranged at the opposite ends of the shaft, and a post mold engaging device on each slide bar.

5. In a fence post machine, the combination of a supporting platform, comprising transversely arranged rollers, designed to receive and support a post mold and mold, a pin bar, a series of pins fixed to the pin bar and extending downwardly therefrom, a stop device for limiting the forward movement of the post mold to center it longitudinally beneath the pin bar, a post mold centering device designed to engage the post mold on the roller platform and to move it transversely to a position centered beneath the pin bar, two upright screw threaded shafts connected with the pin bar, two cog wheels internally screw threaded mounted on said shaft, means for supporting said cog wheels against upward and downward movement, a shaft arranged horizontally, two worm gears thereon in mesh with said cog wheels, means for rotating the latter shaft, the said post mold centering means comprising a transverse shaft having its end portion provided with oppositely arranged screw threads, two slide bars on opposite sides of said shaft, a lug on each slide bar having a screw threaded opening through which the shaft is extended, said lugs being arranged at the opposite ends of the shaft, and a post mold engaging device on each slide bar.

Des Moines, Iowa, June 14, 1912.

EDGAR E. McCORD.

Witnesses:

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FRED A. JONES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."