J. C. STERLING & C. A. BECKER.

CONCRETE FENCE POST MOLD.

APPLICATION FILED AUG. 29, 1913.

1,145,625.

Patented July 6, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

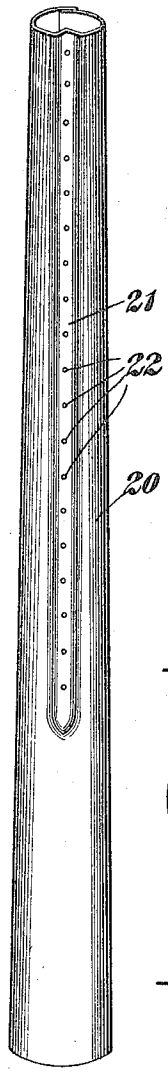


Fig. 3.

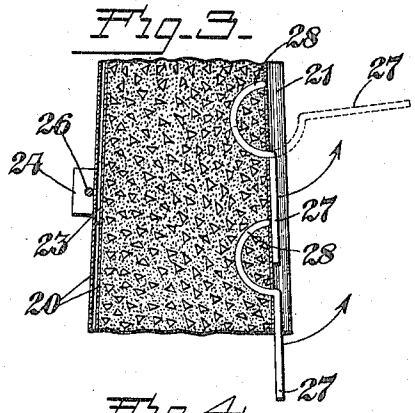


Fig. 4.

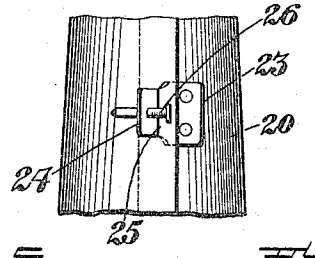


Fig. 2.

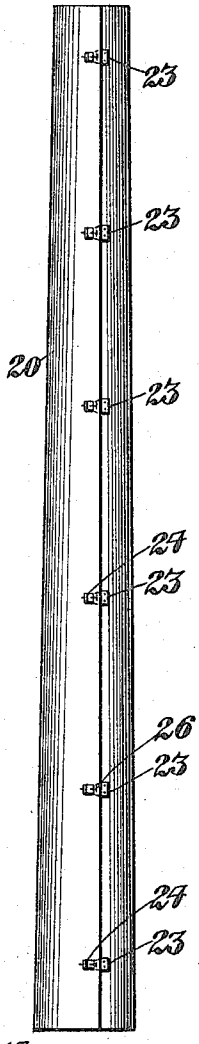


Fig. 5.

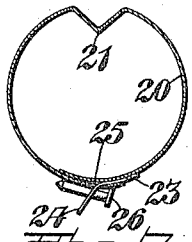


Fig. 6.

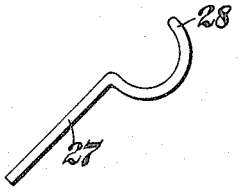


Fig. 7.

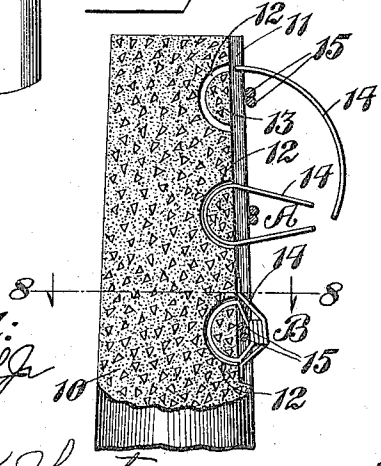
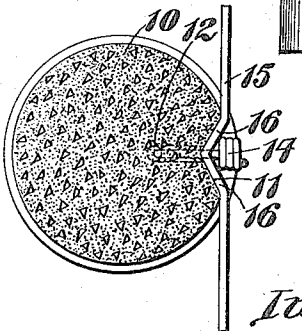


Fig. 8.



Witnesses:
Groebl Jr.
May K. Johnston

Inventors,
James C. Sterling;
and Charles A. Becker,
by John H. Bruninga.
Their Attorney.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

Fig. 9.

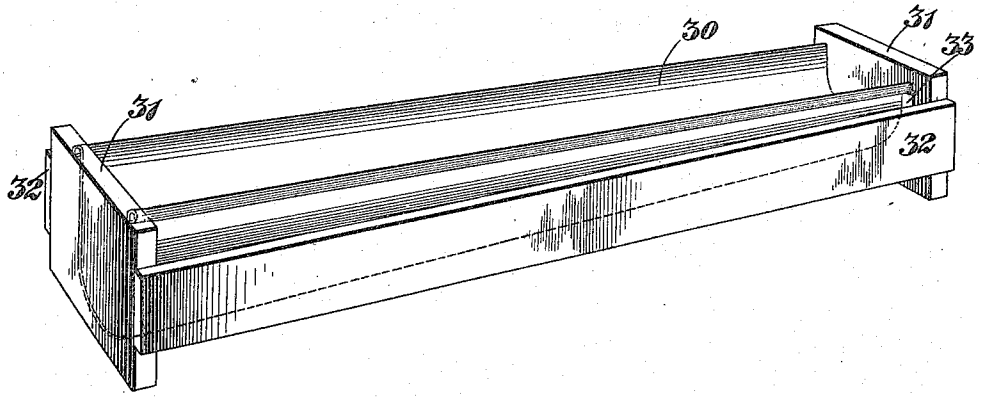


Fig. 10.

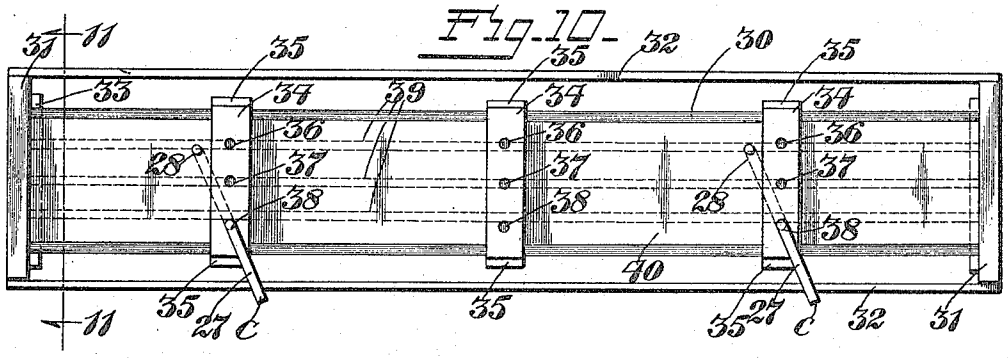


Fig. 11.

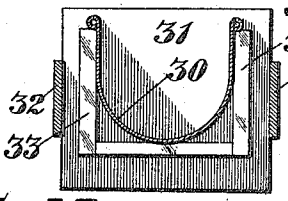


Fig. 14.

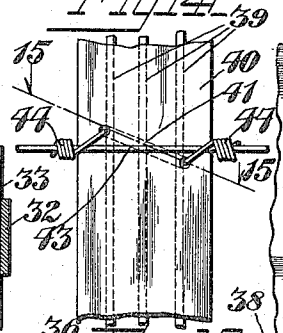


Fig. 12.

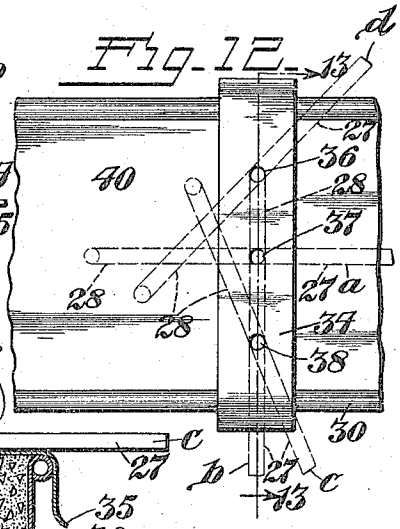
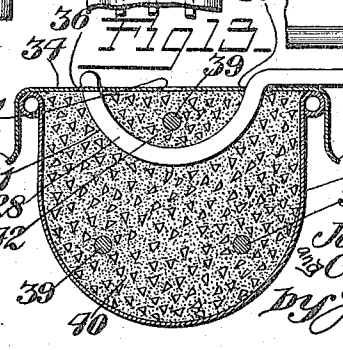


Fig. 15.

Fig. 13.



Attest:
O. J. Groebl Jr.
May K. Johnston

Inventors:
James C. Sterling
and Charles A. Becker.
By John N. Brunnga.
Their Attorney.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES C. STERLING, OF DE SOTO, AND CHARLES A. BECKER, OF ST. LOUIS, MISSOURI.

CONCRETE-FENCE-POST MOLD.

1,145,625. Specification of Letters Patent. Patented July 6, 1915.

Application filed August 29, 1913. Serial No. 787,372.

To all whom it may concern:

Be it known that we, JAMES C. STERLING and CHARLES A. BECKER, citizens of the United States, and residing at De Soto and St. Louis, Missouri, respectively, have invented certain new and useful Improvements in Concrete-Fence-Post Molds, of which the following is a specification.

This invention relates to molds, and more particularly to molds for concrete fence posts.

One of the objects of this invention is to provide a mold which will be simple in its construction, easy to manipulate, and cheap to manufacture.

Another object is to provide novel means for forming fastening or tie wire receiving channels in the post.

Further objects will appear from the detail description taken in connection with the accompanying drawings, in which:

Figure 1 is a front perspective view of the mold, Fig. 2 is a rear elevation of the mold, Fig. 3 is a vertical section of a portion of the mold and the post cast therein, and showing the method of forming the fastening receiving channels, Fig. 4 is an enlarged detail rear elevation of the mold showing the latches, Fig. 5 is a cross section of the mold, Fig. 6 is a detail of one of the cores for forming the fastening receiving channels, Fig. 7 is a vertical section through a part of the post, showing the reëntrant channels for receiving the fastening or tie wires, Fig. 8 is a section on the line 8—8 Fig. 7, Fig. 9 is a perspective view showing another form of mold. Fig. 10 is a plan view. Fig. 11 is a section on the line 11—11 Fig. 10. Fig. 12 is a detail plan view of a part of the mold showing the core for forming the reëntrant tie wire receiving channels. Fig. 13 is a section on the line 13—13 Fig. 12, Fig. 14 is a detail front elevation of a post formed with the mold shown in Figs. 9 to 13 inclusive, and Fig. 15 is a section on the line 15—15 Fig. 14.

Referring now to the accompanying drawings and more particularly to Figs. 7 and 8, which show one form of post, 10 designates the post which is preferably of tapered construction and has formed in one of its faces a substantially V-shaped groove 11 extending longitudinally of the post from its upper end to the point where the post enters the ground when in use. A plurality of channels 12 are formed in the post in a manner hereinafter to be described, and these channels are reëntrant and open from the bottom of the groove and extend vertically so as to form concrete bridges 13. These reëntrant channels are adapted to receive the fastenings or tie wires for securing the fence wires to the post. A form of fastening is shown at 14 in Fig. 7 and consists preferably of a wire which may be bent as shown so as to be readily insertible in the channel 12. In the operation of securing the fence wire 15 to the post, the fastening or tie wire 14 is inserted into the channel 12 so that its ends project from the openings of the channel as shown at A in Fig. 7. We have found in practice that a No. 14 wire is sufficiently flexible so that it can be readily inserted into the channel, since the walls of the channel when formed as hereinafter described will be sufficiently smooth to permit this. After the fastening or tie wire is inserted as shown at A, the ends can be grasped by a pair of pliers and twisted as shown at B in Fig. 7, the ends being turned back and into the channel as shown. In the process of twisting the fastening or tie wire, the fence wire 15 is forced into the groove 11 by the twisting action and by bearing against the wire so that this fence wire will be bent in as shown at 16 in Fig. 8.

Referring to Figs. 1 to 6 inclusive, 20 designates the mold which is preferably of sheet metal and is in its preferred form of cylindrical construction having its diameter greater at the bottom than at the top. The wall of the mold is bent in or deflected for a part of its length so as to form an inwardly extending V-shaped rib or projection 21. A plurality of holes 22 are formed in the bottom of the rib 21, and these holes are spaced uniformly and at a distance apart equal to the distance between the openings of a reëntrant channel in the post, for a purpose hereinafter to be described. The free ends of the mold overlap as shown in the drawing, and one end is provided with strap iron strips 23 riveted thereto and bent at an angle to form tongues 24. The other free end of the mold is provided with slots 25 adapted to receive the tongues 24. The tongues are perforated to receive pins or nails 26 to latch or secure the free ends of the mold together. The core for forming the reëntrant channels 12 is shown in Fig. 6 and also in Fig. 3, and comprises a handle 27 having a hook 28 formed there-

on. The core is constructed of wire preferably somewhat larger than the fastening or tie wires, and the hook 28 should be curved on the arc of a circle. The core is preferably made of steel wire hardened and tempered so as to retain its form, and the hook portion is made smooth so as to form a smooth channel.

The method of making the concrete post will now be described.

The mold latched or fastened together as shown in Figs. 1 to 5 inclusive is preferably set vertically, and the concrete poured in. After the concrete has been poured, the cores are inserted through the holes 22 and positioned as shown in Fig. 3. Prior to inserting them the cores are greased by being dipped in oil so that they will not stick and may be readily withdrawn. The cores may of course be inserted before the concrete is poured. After the concrete has set and hardened sufficiently to permit removal of the mold, the cores are removed. This may be accomplished by simply swinging the cores in the direction of the arrows Fig. 3, for since the hooks 28 of the cores are arc bent on the arc of a circle, the cores may be readily slipped out of the concrete by an endwise sliding movement. It is necessary however that these hooks be formed on the arc of a circle, for otherwise they will bind and cannot be removed. After the cores have been removed the pins 26 are withdrawn, and since the concrete has placed the mold under strain, the mold will automatically expand upon removal of the pins so that it can be removed from the cast post. It will be noted that the tongues 24 are inclined at a comparatively sharp angle; this will permit free expansion of the mold to permit removal thereof. It will of course be understood that the expansion need only be comparatively slight in order to permit removal of the mold from the post, and therefore the tongues need never be entirely removed from their slots. The resultant post after removal of the cores and mold will be constructed as shown in Figs. 7 to 8 inclusive.

By spacing the holes 22 in the mold uniformly and at a distance equal to the distance between the opening of the reëntrant channel 12, the post may have its channels located to suit any wire fence no matter how close or far apart the strands may be or how unevenly they may be spaced, since a core may be placed in any pair of adjacent holes 22; the adjustment is therefore very fine. In practice the cores are placed in the mold wherever a wire crosses. There is no objection to the presence of a number of holes along the mold, since these holes are too small to permit any appreciable amount of concrete to flow therethrough, nor will they weaken the mold materially.

Referring now to Figs. 9 to 13 inclusive, 30 designates a mold of U-shaped construction having its edges turned or beaded over. This mold preferably increases in depth from one end to the other as shown in Fig. 9 and is preferably of uniform width, although it may taper in both directions. The mold which is open ended is supported by a frame comprising end pieces 31 connected by braces 32 and having cleats 33 nailed or screwed to its inside faces to form supports for the ends of the mold. It will be understood that the end pieces 31 may be made long so as to form a frame for supporting a plurality of molds as is common in concrete post mold constructions. A series of core supports 34 formed of sheet or strap metal, and having their ends 35 bent over to take over the sides of the mold, are each provided with perforations 36, 37 and 38 adapted to receive a core 27—28 of substantially the same construction as shown in Fig. 6. This core is arranged to be placed in any of the positions indicated at *a*, *b*, *c*, and *d*. In Fig. 13 the core is shown in position *c*. The core support 34 is adapted to be placed in any desired position along the mold. In the operation of using this device the mold 30 is filled with concrete in the usual way with the reinforcements 39 placed in position as shown in Fig. 13, and the surface troweled. The core supports 34 are then placed in the different positions along the mold where the fence wires are to cross, and the cores placed in position in the supports (after being greased as pointed out in connection with the other constructions). In placing a core in position, the end of the hook 28 is passed through a hole in the core support and into the concrete until the handle 27 rests on the support 34 as shown in Fig. 13, when the end of the hook 28 will project slightly above the surface of the concrete. If the cores extend crosswise of or diagonally across the mold as shown in *b*, *c*, and *d* the hook 28 will pass beneath the reinforcement as shown in Fig. 13. This will cause the reinforcement to be located in the concrete bridge 42. After the concrete has set the cores are removed as described in the construction shown in Figs. 1 to 8 inclusive, and the mold is then removed from its frame and the mold removed from the post.

Figs. 14 and 15 show a form of a post made with this mold. In making this post the core is placed in position *c*, Figs. 12 and 13. The post body 40 will have formed therein a reëntrant channel 41 extending diagonally across the post and forming a concrete bridge 42. This reëntrant channel is so placed that the fence wire 43 will pass between the ends of the channel 41. The fastening tie wire 44 is then passed through the channel and the ends wrapped around

the fence wire 43, or twisted together as shown in Figs. 7 and 8. It will be noted that the reëntrant channel forms not only a concrete bridge of great strength, but this bridge is further reinforced by the reinforcing wire 39.

It is obvious that various changes may be made in the details of construction without departing from the spirit of this invention and it is therefore to be understood that this invention is not to be limited to the specific construction shown and described.

This application is a continuation of our application Serial No. 646,399, filed August 28, 1911, as to subject-matter which is common to the two applications.

Having thus described the invention what is claimed is:

1. A concrete post mold comprising a body mold, and a coöperating removable core adapted to form a continuous unbroken reëntrant fastener receiving channel in the concrete body of the post.

2. A concrete post mold comprising a body mold, and a coöperating removable core adapted to form a continuous unbroken reëntrant U-shaped fastener receiving channel in the concrete body of the post.

3. A concrete post mold comprising a body mold, and a coöperating core adapted to form a continuous unbroken reëntrant fastener receiving channel in the concrete body of the post, said core being removable from the concrete body by an endwise sliding movement.

4. A concrete post mold comprising a body mold, a coöperating removable core adapted to form a continuous unbroken reëntrant fastener receiving channel in the concrete body of the post, and means for positioning said core in a plurality of adjusted positions with respect to said mold.

5. A concrete post mold comprising a body mold, a coöperating removable core adapted to form a continuous unbroken reëntrant fastener receiving channel in the concrete body of the post, and means for positioning said core in a plurality of adjusted positions adjustable longitudinally of said mold.

6. A concrete post mold having a curved removable core adapted to form a continuous reëntrant fastener receiving channel in the concrete body of the post.

7. A concrete post mold having a removable core curved on the arc of a circle and adapted to form a continuous reëntrant fastener receiving channel in the concrete body of the post.

8. A concrete post mold having a removable core comprising a handle, and a hook on said handle curved on the arc of a circle and adapted to form a continuous reëntrant fastener receiving channel in the concrete body of the post.

9. A concrete post mold comprising a body mold, means for forming a longitudinal groove along the post, and coöperating removable cores adapted to form continuous unbroken reëntrant fastener receiving channels in the concrete body of the post and opening from the groove therein.

10. A concrete post mold having a curved removable core adapted to form a continuous unbroken reëntrant fastener receiving channel in the concrete body of the post, and a member having a plurality of holes therein spaced longitudinally of the post to receive the ends of the core.

11. A concrete post mold having a curved removable core adapted to form a continuous reëntrant fastener receiving channel in the concrete body of the post, and a member having a plurality of holes therein spaced longitudinally of the post to receive the ends of the core, said holes being spaced uniformly, whereby adjacent holes are adapted to receive the ends of said core.

In testimony whereof we have hereunto affixed our signatures in the presence of these witnesses.

JAMES C. STERLING.

Witnesses:
OSCAR EDWARDS,
J. T. HENDRIX.

CHARLES A. BECKER.

Witnesses:
J. H. BRUNINGE,
O. J. GOEBLE, Jr.