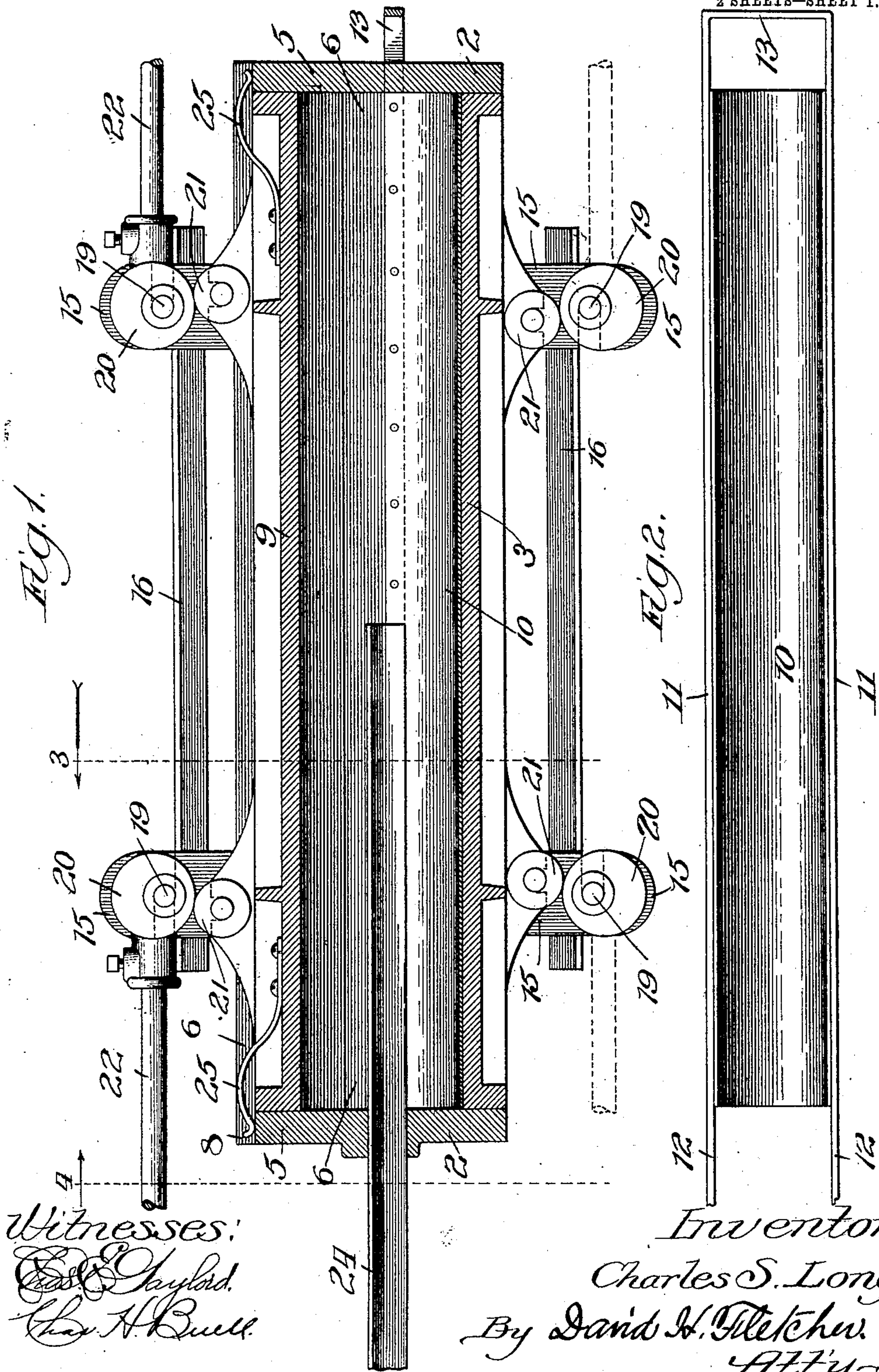


MACHINE FOR MOLDING BASES UPON FENCE POSTS.

912,249.

Patented Feb. 9, 1909.

2 SHEETS—SHEET 1.



Witnesses:
 East Gaylord.
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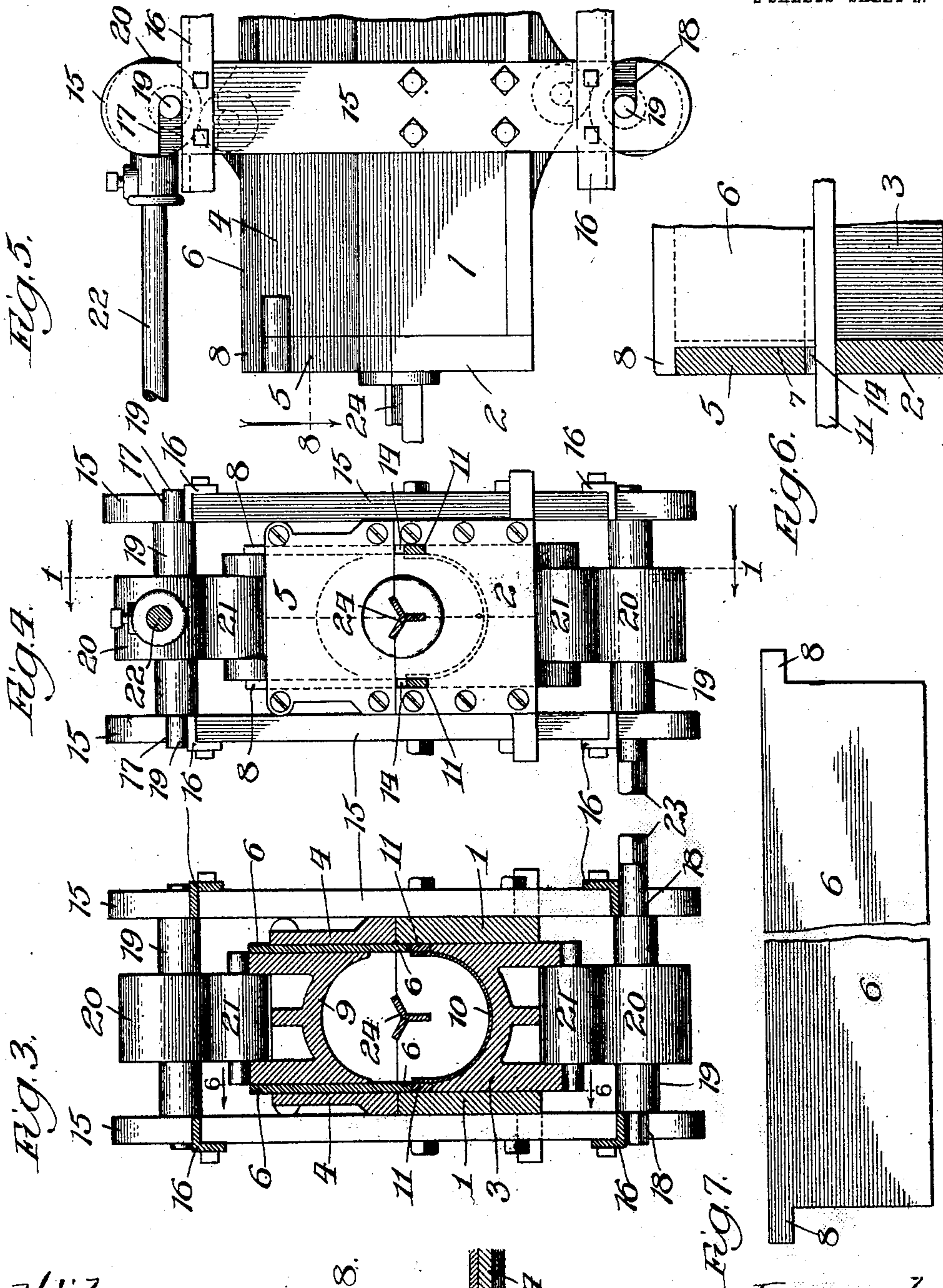
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APPLICATION FILED FEB. 8, 1907. RENEWED APR. 20, 1908.

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Fig. 8.

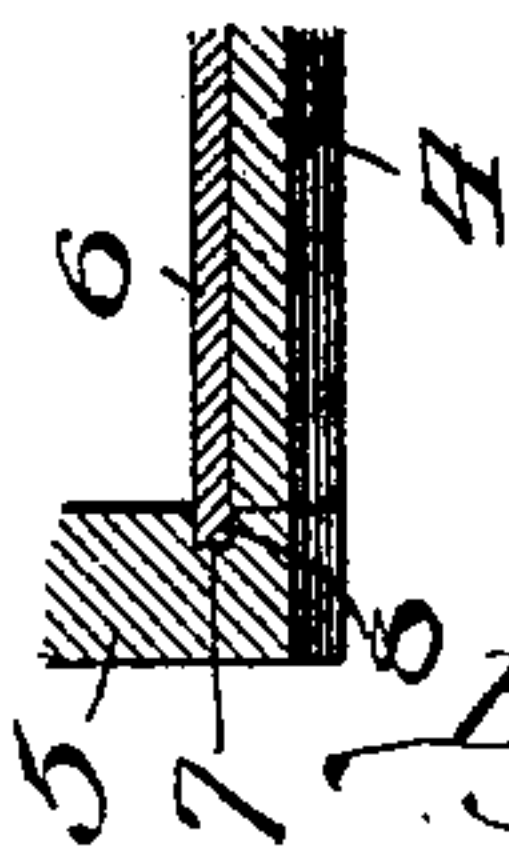


Fig. 7.

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UNITED STATES PATENT OFFICE.

CHARLES S. LONG, OF AURORA, ILLINOIS.

MACHINE FOR MOLDING BASES UPON FENCE-POSTS.

No. 912,249.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed February 8, 1907, Serial No. 356,424. Renewed April 20, 1908. Serial No. 428,285.

To all whom it may concern:

Be it known that I, CHARLES S. LONG, a citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Machines for Molding Bases upon Fence-Posts, of which the following is a description, reference being had to the accompanying drawings, forming a part of this specification, in which corresponding numerals of reference in the different figures indicate like parts.

The object of my invention is to provide simple, cheap and effective means for overcoming certain difficulties incident to the molding of bases formed from plastic material such, for example as asphaltum or asphaltum concrete upon metallic fence-posts. An important difficulty in molding this material by compression arises from an inherent quality which is characteristic of the material, viz., that when compressed in a mold having a movable die, that portion of the material acted upon by the moving element will be more compactly compressed than portions farther removed, resulting in a product, a portion of which will be very compact, while other portions will contain voids, thereby rendering it subject to injury from the action of the elements and particularly to that of frost. I accomplish said object in the manner hereinafter more particularly described and definitely pointed out in the claims.

In the drawings, Figure 1, is a longitudinal vertical sectional view of a mold embodying the features of my invention, said view being taken upon line 1—1, Fig. 4, viewed in the direction of the arrow there shown, Fig. 2, is a plan view of the removable pallet, Fig. 3, is a vertical sectional view taken upon the line 3—, Fig. 1, viewed in the direction of the arrow there shown, Fig. 4, is an end view taken upon the line 4—, Fig. 1, viewed as therein indicated by the arrow, Fig. 5, is a side view of a portion of said mold, Fig. 6, is a vertical sectional view of a portion of said mold, said view being taken upon the line 6—6, Fig. 3, viewed in the direction of the arrow there shown, Fig. 7, is a side view partially broken, of one of the vertical sliding shields, and Fig. 8, is a sectional view in plan of a portion of the mold with one of said sliding shields, said view being taken upon the line 8—, Fig. 5.

Referring to the drawings 1, 1, Figs. 3 and 5, represent parallel members constituting the side walls of an elongated frame, which are rigidly connected to each other by means of end plates 2, 2, Figs. 1, 4, 5 and 6, the inner faces of which serve to guide a movable die 3, Figs. 1, 3 and 6. A similar frame consisting of side walls 4, 4 and end pieces 5, 5, rigidly attached thereto, Figs. 1, 3, 4, 5, 6 and 8, is removably superimposed upon said first named frame and adapted to register accurately therewith. Loosely resting against the inner faces of the side walls 4 of said superimposed frame are shield plates 6, 6, shown also in Fig. 7, the length of which is slightly greater than that of the side rails 4. This is also true as to height. In order to hold said shields in place against the side walls, as well as to enable them to be moved vertically, they are loosely fitted in grooves 7, formed in the end pieces 5, as clearly shown in Figs. 6 and 8, and indicated in dotted lines in Fig. 4. Lugs 8, upon the ends of said shield-plates, Figs. 4, 5, 6 and 7, serve to support them in normal position. The inner faces of the shield-plates 6 are substantially flush with the upper inner faces of the die 3 as clearly shown in Fig. 3.

Loosely fitted between the shields is a die or follower 9, Figs. 1 and 3, the inner face of which is substantially semi-circular in cross section corresponding in this respect to that of the die 3, except that its arc has a smaller radius. The object of making the lower die larger, is to provide for the insertion of a removable lining or pallet 10, Figs. 1, 2 and 3, which consists of a trough-like element formed from sheet-metal, adapted to fit the contour of said die. A frame, consisting of bars 11, arranged to project at one end as shown at 12, and preferably in the form of a loop at the other, as shown at 13, is provided for lifting said pallet into and out of the die, the end plates 2 being notched as shown at 14, Fig. 6, to receive said bars. The thickness of the shield plates 6 corresponds to that of the pallet bars 11 and said plates are adapted to rest upon said bars when the pallet is in position as shown in Fig. 3, for the purpose hereinafter stated.

Rigidly bolted to each of the side walls, 1, are vertical bars 15, which are connected by means of angle bars 16 rigidly attached thereto.

Notches 17, 18, better shown in Fig. 5, are

provided for the insertion and serve as bearings for shafts 19, upon which are mounted eccentrics 20 adapted to roll upon friction rollers 21 supported in suitable bearings 5 formed upon the dies 3 and 9 respectively. The upper eccentrics are adapted to be operated by means of levers 22, and the lower ones, preferably by means of cranks adapted to fit upon the squared ends 23, Figs. 3 and 10 4, of the eccentric shafts.

I make no claim herein to the die operating means described inasmuch as it has, in substantially the same form, been shown and described in Letters-Patent heretofore issued 15 to me.

The end plates 2 and 5 at one end of the mold, are cut away or notched to conform to the cross-sectional contour preferably of a Y-bar 24 which is intended to form the post 20 and is projected centrally into the mold as shown in Figs. 1, 3, 4 and 5.

The operation of said device is as follows: The upper die, together with the upper half of the frame, being removed and the die 3 25 moved to its extreme lower limit, the pallet is inserted therein. The upper frame is then placed in position with the parts 4 resting upon the parts 1 and the shield plates 6 upon the bars 11. The post 24 being placed in 30 position with a predetermined quantity of plastic material in the mold, the upper die is inserted and the eccentric shafts 19 placed in position. The lower mold is then forced up to its full limit by means of the cranks and 35 eccentrics. The presence of the shield plates 6, prevents the material from expanding laterally. This being accomplished, the upper eccentrics are operated in like manner by means of the levers to depress the upper 40 die and complete the compression. In raising the lower die the shield-plates are pushed up by the action of said die resulting in a perfectly formed base of uniform density in all parts. As the plates 6 bear against the 45 side walls 4 with more or less friction, the tendency is to cause said parts to be lifted with the plates. This may be prevented by means of springs 25, Fig. 1, which are attached to the top of the die 9 and arranged 50 to bear upon the end plates 5. As soon as the material of the base shall have become set and in condition to be removed, the upper portion of the mold is detached, when the post with its base thereon can be taken out 55 by lifting the pallet from the lower die.

The compressing of the material from opposite directions not only possesses the advantage of securing uniform density of the material throughout, but it avoids all danger 60 of bending the post and insures its alinement with the axis of the base.

The advantage of the movable plates 6 is that it is necessary to provide lateral space above the upper edges of the lower mold for 65 the reception of the pallet-bars 11, which

necessitates the making of the walls of the lower mold correspondingly thick. Were the walls of the member 9 made to fill the space between the walls 4 of the frame, there would be an off-set or space upon each side 70 between the edges of the molds when separated, into which the plastic material would enter, thereby not only forming a rib upon each side of the base when molded, but would prevent a complete compression of the 75 material where most desired. The use of the movable plates 6, by filling these spaces when the molds are separated, enables a knife-edge to be formed upon the mold 9 and prevents a lateral flow of the plastic mate- 80 rial so that it may be readily shaped to the exact form of the molds.

Having thus described my invention, I claim:

1. A machine of the class described in 85 which is combined two separable mold frames, the walls of which are arranged to register with each other, a movable die forming a half mold fitted in each of said frames, a framework connected with one of 90 said frames, means for holding a post in a predetermined position between said dies and compression means connected with said framework for actuating said dies independently of each other. 95

2. A machine of the class described comprising movable half molds arranged in stationary separable guide frames, means for actuating said molds independently of each other, a removable pallet adapted to 100 fit within one of said half molds, and movable shield-plates upon opposite sides of said opposite half mold arranged to project beyond the same to fill the voids at the respective sides when the molds are separated 105 from each other and prevent a lateral spread of the plastic material when compressed.

3. A machine of the class described having separable die frames, a movable die forming a counterpart half-mold located in each of 110 said frames, the curve of the inner face of one of said dies forming a longer radius than that of the other to permit the insertion therein of a removable pallet, movable side shields between the frame and the sides of 115 said smaller die, said side shields being arranged to rest upon the edges of said pallet when inserted, and means for actuating said dies independently of each other.

4. A machine of the class described, hav- 120 ing separable die frames, a movable die forming a half mold located in each of said frames, the curve of the inner face of one of said dies having a longer radius and a shorter arc than that of the other, a removable 125 pallet adapted to fit therein, the curve of the inner face of which corresponds substantially in radius and length of arc with that of the opposing die and movable side shields upon opposite sides of said opposing 130

die the edges of which are arranged to rest upon the edges of said pallet.

5 5. A machine of the class described, having separable die frames, a movable die forming a half mold located in each of said frames, the curve of the inner face of one of said dies having a longer radius and a shorter arc than that of the other, a removable pallet adapted to fit therein, the curve of the
10 inner face of which corresponds substantially in radius and length of arc with that of the opposing die, movable side shields upon opposite sides of said opposing die the edges

of which are arranged to rest normally upon the edges of said pallet, and means for preventing the separation of the frame elements when the die holding said pallet is moved to compress the material therein. 15

In testimony whereof, I have signed this specification in the presence of two sub- 20 scribing witnesses, this fifth day of February, 1907.

CHARLES S. LONG.

Witnesses:

D. H. FLETCHER,
CARRIE E. JORDAN.