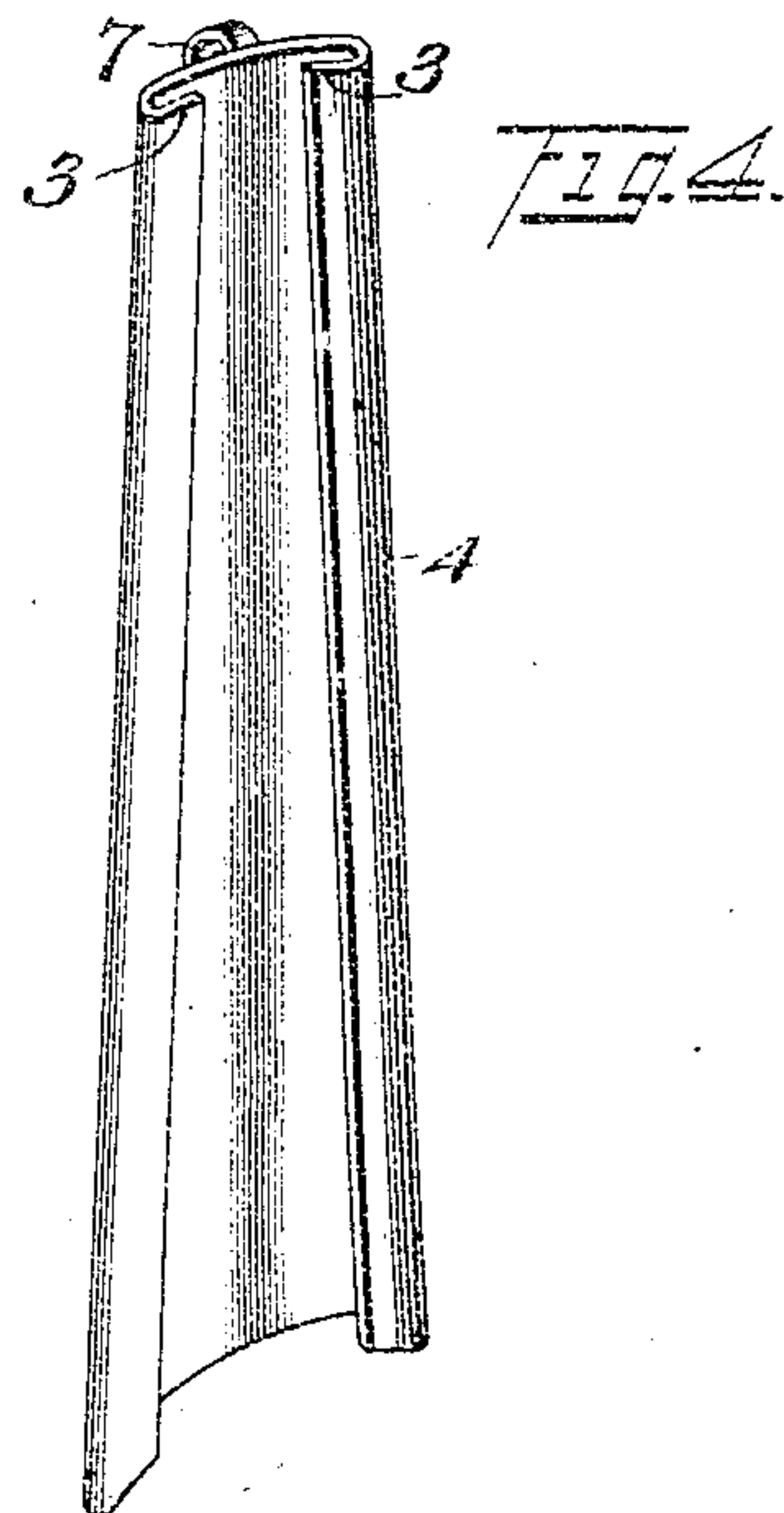
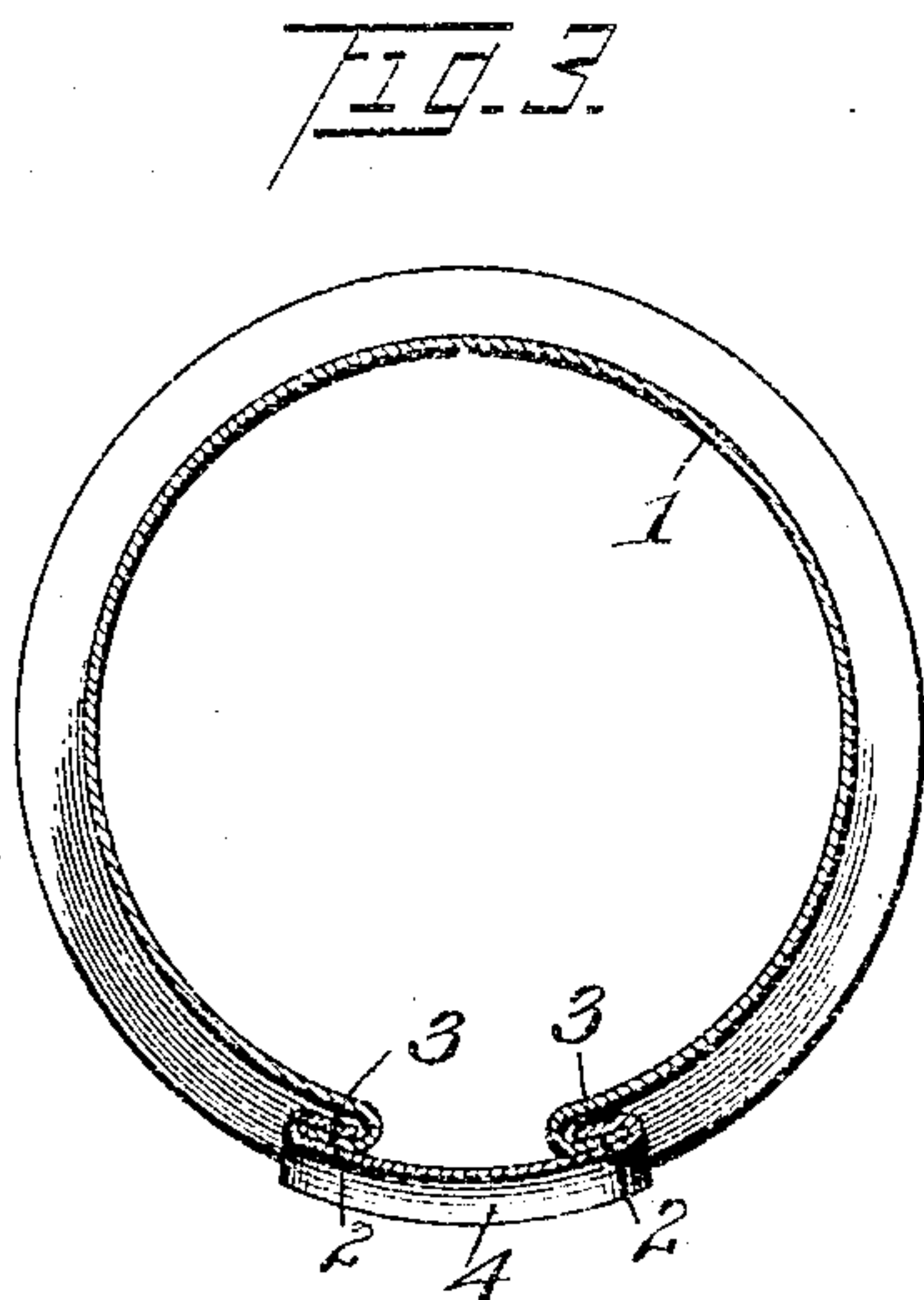
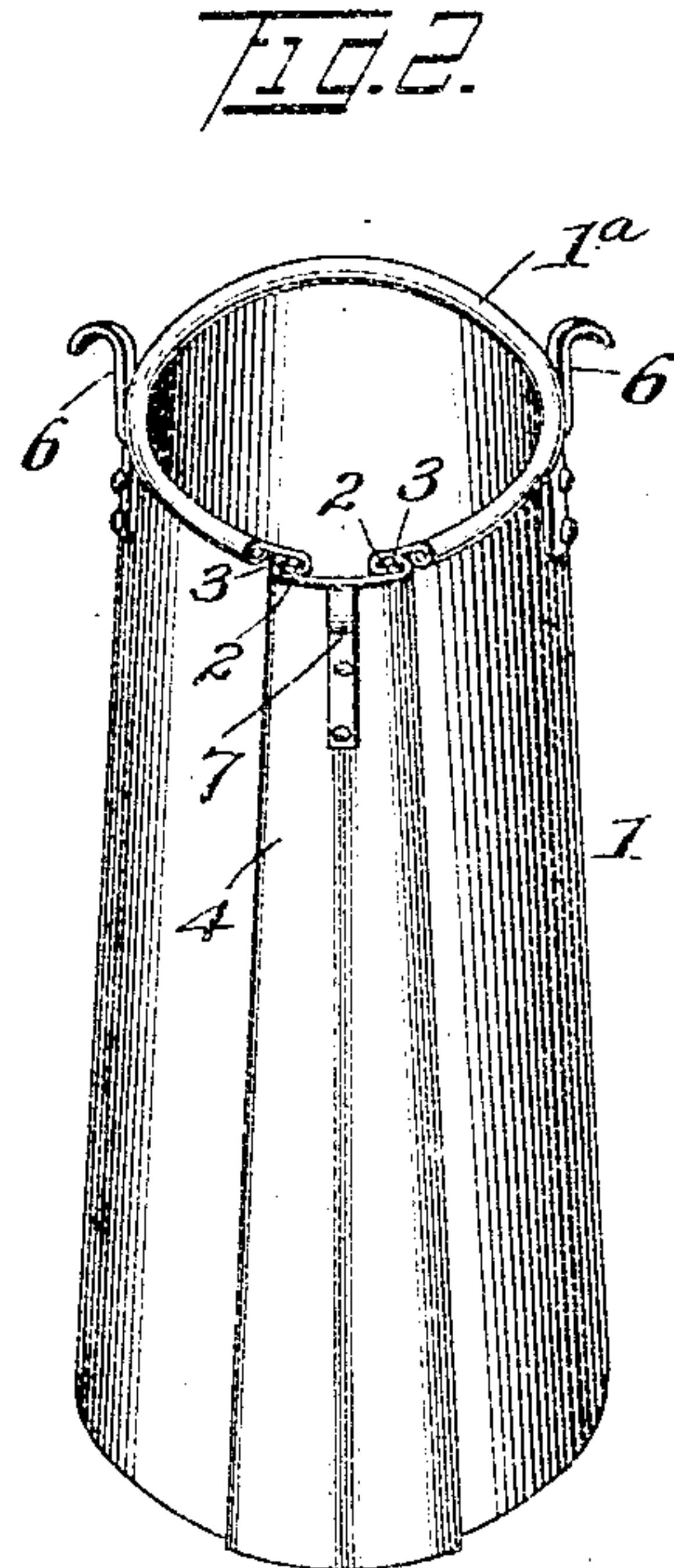
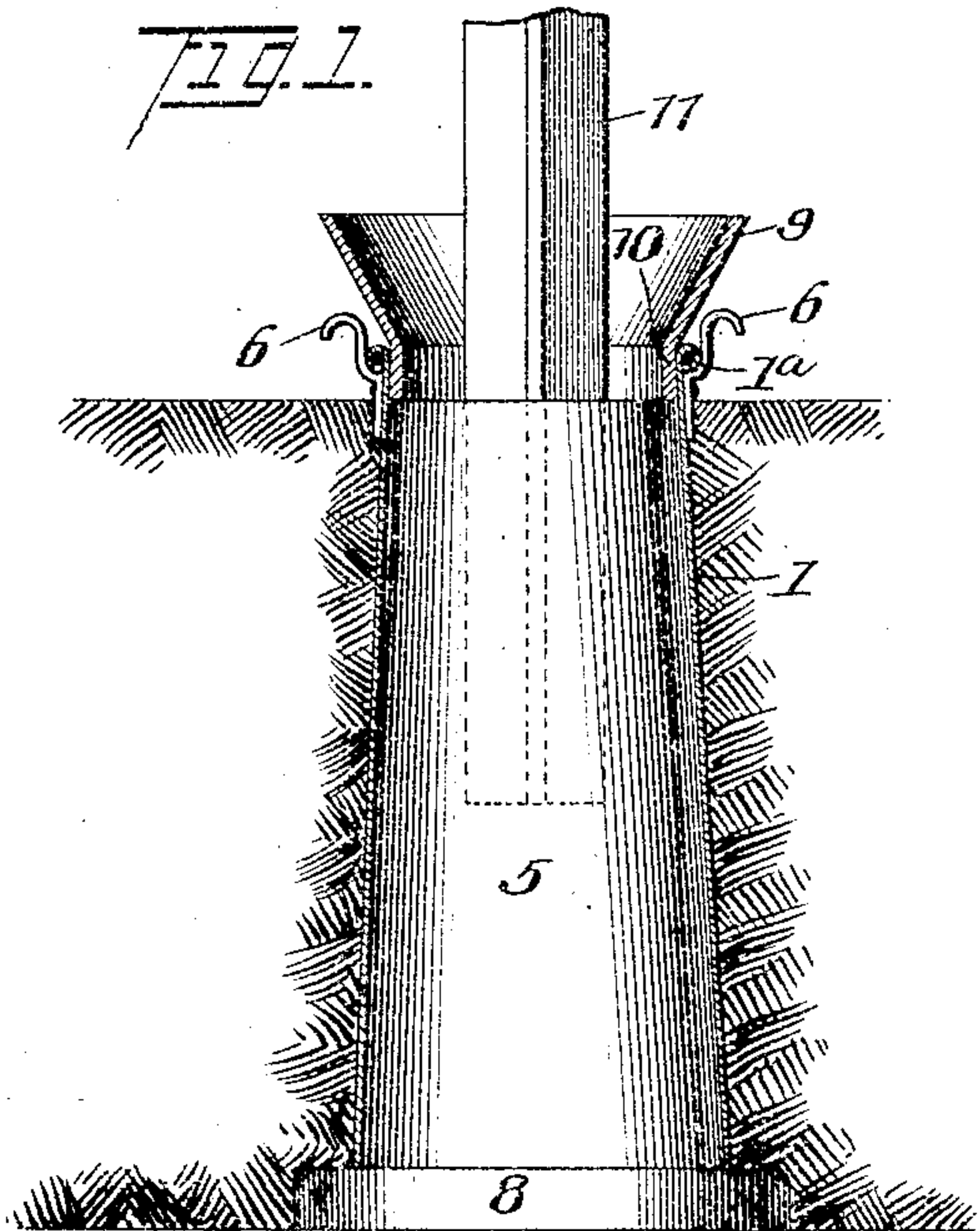


No. 892,592.

PATENTED JULY 7, 1908.

F. & C. J. HELM.  
POST AND TILE MOLD.  
APPLICATION FILED OCT. 17, 1905.

2 SHEETS—SHEET 1.



Witnesses

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*J. F. Riley*

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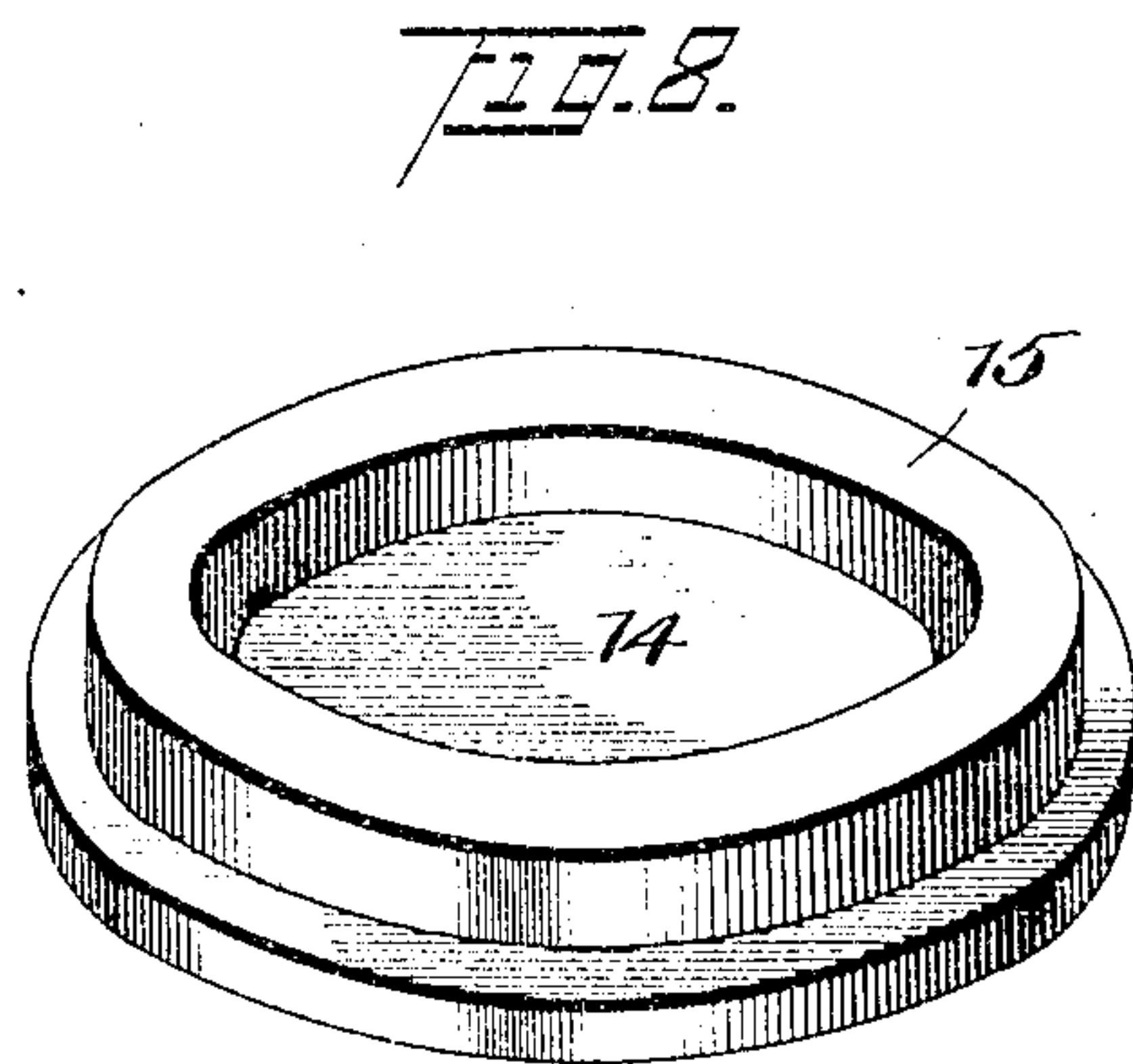
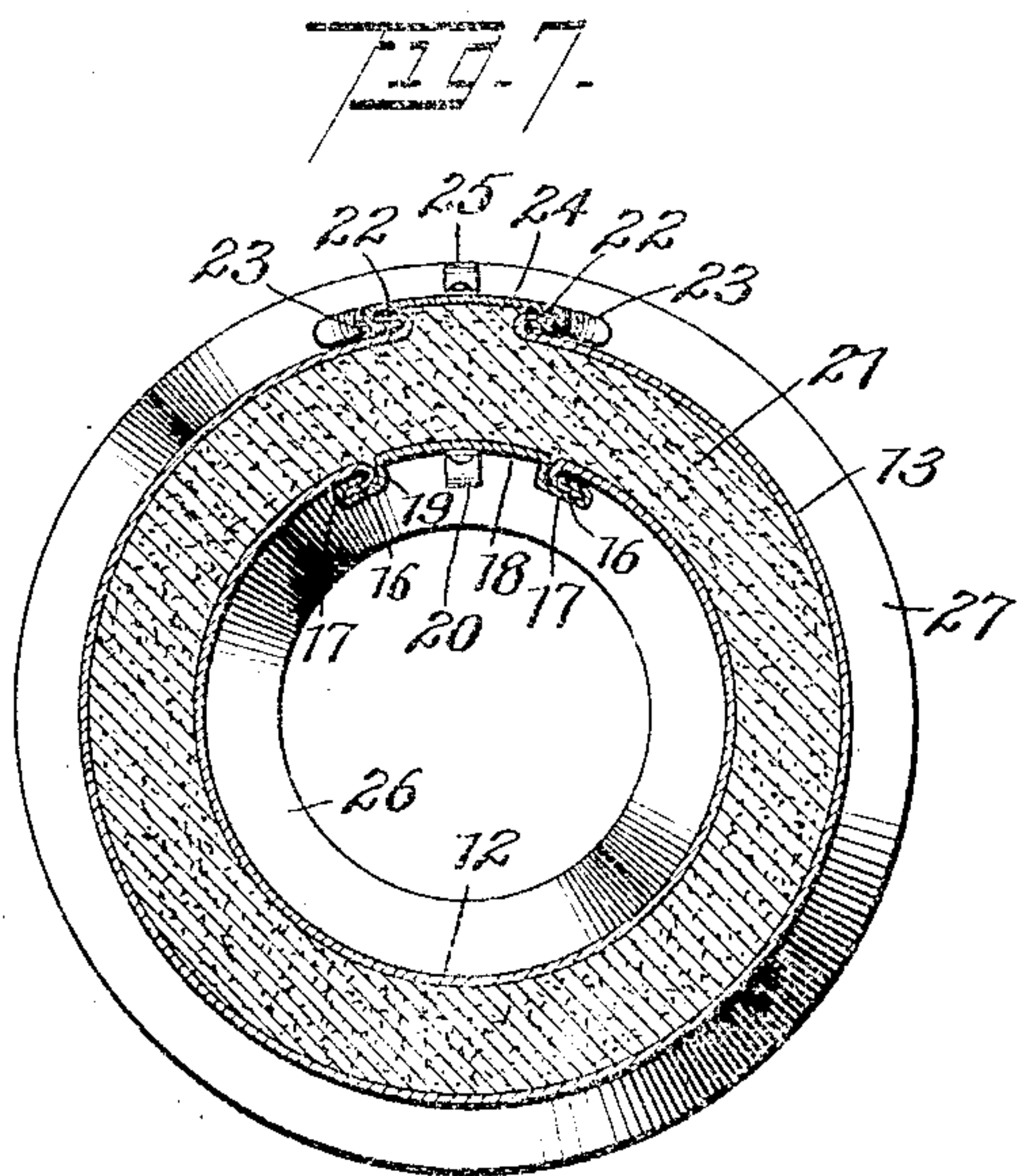
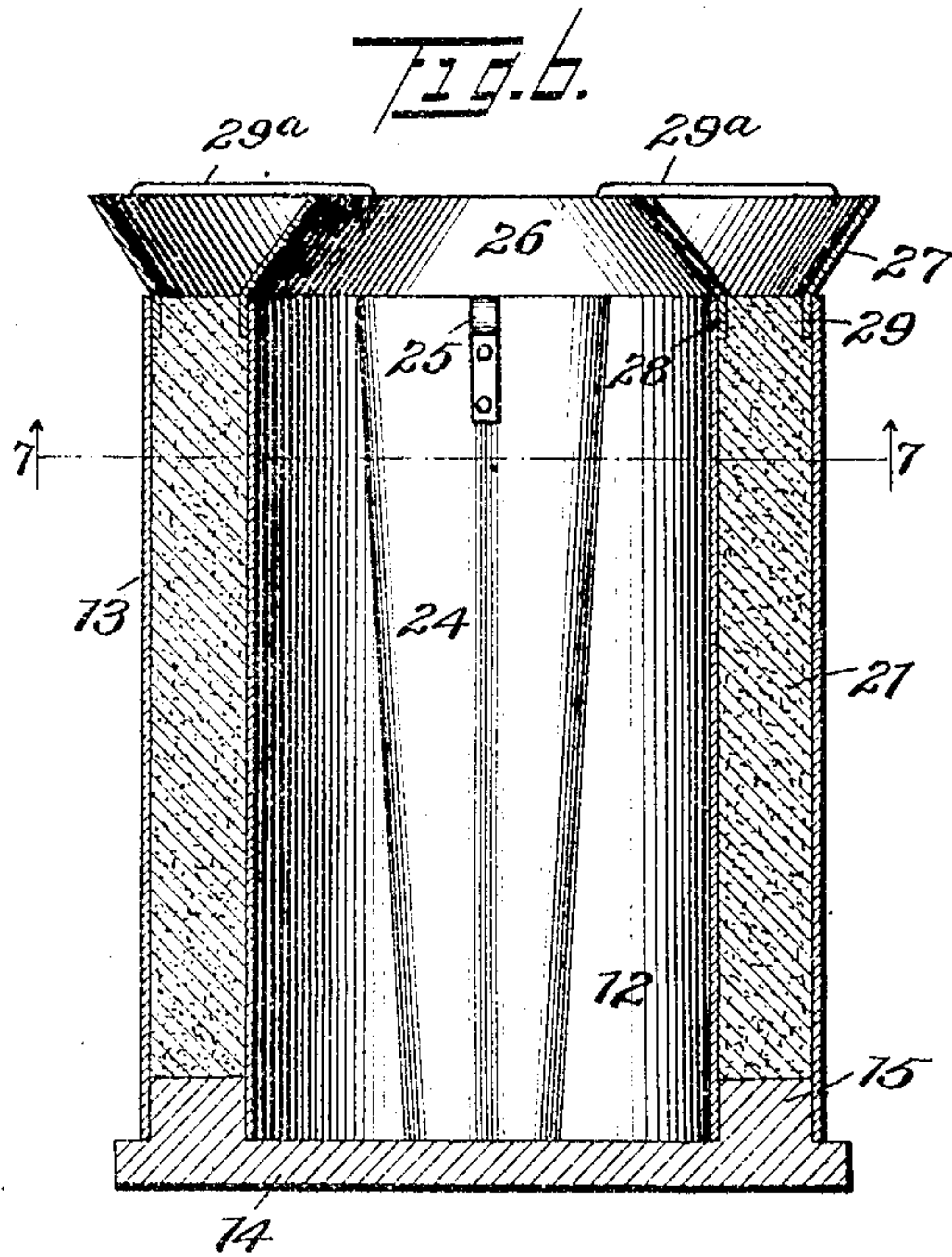
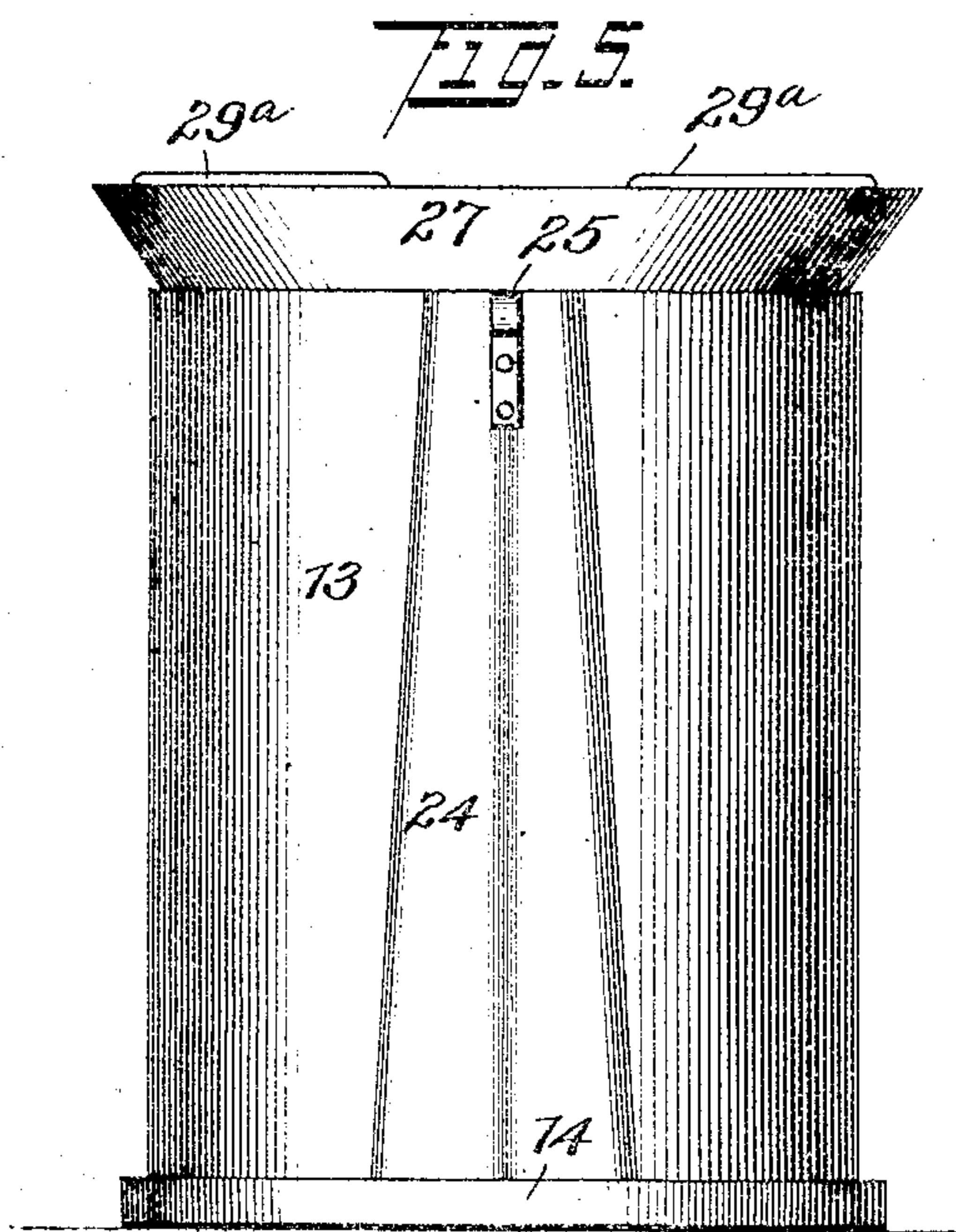
Attorney

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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE

FRANK HELM AND CHARLES J. HELM, OF TRAVERSE CITY, MICHIGAN, ASSIGNORS TO E. G. SIGGERS, OF WASHINGTON, DISTRICT OF COLUMBIA.

## POST AND TILE MOLD.

No. 892,592.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed October 17, 1905. Serial No. 283,125.

*To all whom it may concern:*

Be it known that we, FRANK HELM and CHARLES J. HELM, citizens of the United States, residing at Traverse City, in the county of Grand Traverse and State of Michigan, have invented a new and useful Post and Tile Mold, of which the following is a specification.

The invention relates to improvements in post and tile molds.

The object of the present invention is to improve the construction of post and tile molds, and to provide a simple and comparatively inexpensive one, which will be strong and durable, and which will enable a concrete fence post to be constructed in the ground at the place where it is to be used, either with or without an anchoring flange at the lower end.

A further object of the invention is to provide a mold of this character, adapted to provide a tapering base for fence posts, and capable of enabling the taper of the base to be readily varied.

Another object of the invention is to provide a mold adapted for molding hollow tiles of concrete, and having inner and outer spaced shells or casings adapted to be contracted and expanded respectively to facilitate the removal of the mold from a tile.

With these and other objects in view, the invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawing and pointed out in the claims, hereto appended; it being understood that various changes in the form, proportion, size, and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a vertical sectional view of a fence post mold, constructed in accordance with this invention, the post being shown in elevation. Fig. 2 is a perspective view of the mold, the hopper being removed. Fig. 3 is a horizontal sectional view of the mold. Fig. 4 is a detail perspective view of the removable key. Fig. 5 is a side elevation of a tile mold constructed in accordance with this invention. Fig. 6 is a vertical sectional view of the same, illustrating the reversely arranged inner key for contracting the inner shell or casing.

Fig. 7 is a horizontal sectional view on the line 7—7 of Fig. 6. Fig. 8 is a detail perspective view of the pallet.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a substantially cylindrical shell or casing, constructed of resilient sheet metal, or other suitable material, and having spaced side edges, which are bent backward exteriorly of the mold to form flanges 2 for interlocking with inturned flanges 3 of a key 4, which constitutes a section of the mold and thereby closes or covers the space between the side edges of the shell or casing, and completes the same. The shell or casing is expansible, and is held in the confined position illustrated in Figs. 2 and 3 of the drawings by means of the key 4, which is tapered upwardly from the top to the bottom of the mold to taper or flare the shell or casing 1 for providing a tapering fence post base 5, as illustrated in Fig. 1 of the drawings. By employing keys of different widths, and of various tapers, a fence post base having the desired taper may be readily molded.

The upper edge 1<sup>a</sup> of the shell or casing is preferably rolled and provided with a stiffening wire arranged within the roll or bead, as clearly shown in Figs. 1 and 2 of the drawings. The shell or casing 1 is provided at its upper portion with opposite hooks 6 for facilitating the ready removal of the shell or casing from a post-hole after the post has been molded therein, as hereinafter explained. The key 4 is provided at its upper portion with a similar hook 7 for facilitating the removal of the same, and the said key is adapted to be readily drawn upward out of engagement with the flanges 2, with which the key is slidably interlocked. The key is adapted to be drawn upward freely, as it gradually increases in width from its upper to its lower end, and as the key is drawn upward, the shell or casing 1 extends and frees itself from the mold base 5.

The mold while adapted for making a fence post either in or out of the ground, is designed particularly for molding a fence post in the hole in which the post is to be used, as it avoids loss by breakage or any other damage through shipping and otherwise handling fence posts. In molding a fence post, a suitable hole is dug, and the mold is placed therein. The mold may be placed directly upon



the ground at the bottom of the hole or it may be suitably supported above the bottom of the hole, which may be enlarged thereat so that when the concrete or other plastic material is poured into the mold, it will extend beyond the same at the bottom thereof to form a bottom anchoring flange 8, as indicated in Fig. 1 of the drawings. The concrete may be simply poured into the mold, and allowed to set before removing the mold from the base, or the concrete may be tamped, which will enable the mold to be removed shortly after the base is molded. When making the post in the ground after the material is poured or tamped in the mold, the ground is replaced around the outside of the mold and tamped tightly, and the mold removed at once. The mold is provided with a hopper 9 consisting of a funnel shaped upper portion and a depending substantially cylindrical lower portion or flange 10, which fits within the top of the mold. The upper portion of the fence post preferably consists of an angle iron bar 11, T-shaped in cross section, and having its lower portion embedded in the concrete base 5, as clearly indicated in dotted lines in Fig. 1 of the drawings. Any suitable means may be provided for supporting fence wires, boards or other fencing material to the fence posts. The mold may be also provided for making posts or bases for underpinning or for any other purpose.

In Figs. 5 to 8 inclusive is illustrated a tile mold composed of inner and outer cylindrical shells 12 and 13, adapted to be arranged on a pallet 14, having an annular projecting flange or portion 15, spaced from the outer edge of the pallet, and adapted to be interposed between the inner and outer shells or casings of the mold for spacing the same the proper distance apart to provide a tile of uniform thickness. The pallet is circular and projects beyond the annular flange or portion 15 to provide a seat for the outer shell or casing.

The inner shell or casing is provided with spaced intumed side edges forming flanges 16, located within the space inclosed by the inner shell or casing, and slidably interlocked with hook-shaped flanges 17 of a key 18, which tapers from top to bottom, and which is bent at 19, adjacent to the hook-shaped flanges to arrange its intermediate portion in the same circular plane as the adjacent portion of the inner shell or casing. This construction also provides abutting shoulders for retaining the flanges of the inner shell or casing in their interlocked relation with the flanges of the key. When the key, which constitutes a section of the inner shell or casing and which is provided with a suitable hook 20 is drawn upward, it contracts the inner shell or casing, and withdraws the same from the inner face

of the tile 21, thereby facilitating the removal of the inner shell or casing from the tile.

The outer shell or casing is provided with spaced side edges having exteriorly arranged flanges 22, which are slidably interlocked with intumed flanges 23 of a key 24, which also constitutes a section of the outer shell and tapers from its lower end to its upper end, whereby when the key is drawn upward, the exterior shell or casing will be permitted to expand and free itself from the tile. The key 24, which is preferably provided with a suitable hook 25 to facilitate its upward movement, may be bent at opposite sides similar to the inner key 18 to arrange its intermediate portion in the same circular plane as the adjacent portion of the outer shell or casing.

The shells or casings and the keys constitute mold members, and the interlocked edges, which are inclined longitudinally, form guides. By this construction, the peripheral area of the inner and outer shells or formers of the mold may be contracted and expanded.

The pallet 14 is the only one necessary for molding the tiles, and after a tile has been molded, the mold may be inverted to permit the ready removal of the pallet 14.

The mold is provided with a hopper composed of inner and outer oppositely inclined members 26 and 27, having depending annular flanges or portions 28 and 29, which fit within the space between the inner and outer cylindrical shells or casings. The walls or members 26 and 27 of the hoppers are preferably connected at the top by suitable rods 29<sup>a</sup> and extending across the space between the members 26 and 27 and arranged at suitable intervals. The rods 29<sup>a</sup> by being located at the upper edges of the inner and outer walls of the funnel, are adapted to serve as handles for placing the funnel in and removing the same from the mold. The concrete or other plastic material may be tamped in the mold, or it may be simply poured into the same, and when tamped the mold may be removed from the tile after the operation of molding has been completed, but owing to the very low cost of the mold, a number may be employed and the material may be left in the molds until it sets.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is:—

1. A mold comprising an expansible shell or casing, formed in a single piece and having spaced side edges arranged at one side of the mold, and a single upwardly tapered key for the mold constituting a section of the shell or casing and slidably interlocked with the spaced side edges of the same, and bridging the space between said side edges, said key



holding the side edges of the shell or casing against outward movement, and movable vertically to expand the shell or casing and free the latter from a post or tile.

5 2. A mold comprising a shell or casing having spaced side edges, and a key tapering from the bottom to the top of the shell or casing, and constituting a section of and completing the same, both the inside and  
10 outside faces of the key being substantially continuous with the inside and outside faces of the shell or casing, the said key being slidably interlocked with the edges of the said shell or casing, and movable vertically  
15 to contract the same.

3. A mold comprising outer and inner expansible and contractile shells or casings having spaced side edges, and reversely tapered keys connecting the side edges and  
20 constituting sections of the shells or casings and extended from the top to the bottom of the same, said keys being vertically movable to expand the outer shell or casing and contract the inner one.

25 4. A mold comprising inner and outer resilient shells or casings having spaced side edges, and reversely tapered keys extending from the top to the bottom of the mold and constituting sections of the said shells or  
30 casings to complete the same, said keys being slidably interlocked with the said spaced edges and being movable vertically to contract one of the shells or casings and to expand the other.

35 5. A mold comprising a pallet having an upwardly projecting portion, inner and outer shells or casings having their lower ends fitted against the inner and outer edges of the projecting portion of the pallet, said  
40 shells or casings having spaced side edges, a funnel having spaced portions fitting between the upper ends of the inner and outer shells or casings, and reversely tapered keys extending from the top to the bottom of the  
45 mold and slidably interlocked with the said spaced edges, and movable vertically to contract one of the shells or casings and expand the other to disengage the same from the projecting portion of the pallet and the  
50 funnel.

6. A form for molding articles in concrete and plastic material composed of two relatively expansible mold members, to wit, a  
55 shell or casing in one piece, and a single-piece key; the outer surfaces of both of which constituting molding surfaces and connected at their edges by longitudinally inclined interlocking guides, whereby the longitudinal movements of one member will, through the

interlocking guides, positively draw in and  
60 force out the other member, and contract and expand the peripheral area of the former.

7. A post and tile mold consisting of collapsible parts, relatively-movable longitudinally, the outer surfaces of which parts  
65 constitute molding surfaces, one of the parts being connected with another part by complementary longitudinally inclined interlocking guides, whereby the longitudinal movement of one part will, through said inter-  
70 locking guides, positively draw in and force out another part, and thus contract and expand the peripheral area of the mold.

8. A mold comprising a substantially cylindrical shell or casing constructed of resilient  
75 sheet metal having spaced side edges provided with flanges or guides which are longitudinally inclined, and a key tapering from one end to the other and extending from the top to the bottom of the shell or casing and  
80 constituting a section of and completing the said shell or casing, said key being slidably interlocked with the said flanges or guides and movable longitudinally to free the shell or casing from the article being molded. 85

9. A mold comprising a shell or casing formed in a single piece and having spaced side edges which are provided with flanges or guides, and a key tapering from one end to the other, and extending from the top to the  
90 bottom of the shell or casing, and constituting a section of and completing the same, said key having flanges or guides at its edges, slidably interlocked with the flanges or guides of the shell or casing, and movable ver-  
95 tically to free the shell or casing from the article being molded.

10. A mold comprising a substantially cylindrical shell or casing having spaced side edges, and a key tapering from one end to  
100 the other and extending from the top to the bottom of the shell or casing, said key being slidably interlocked with the edges of the said shell or casing, and constituting a section of and completing one side of the same, 105 said key having its inside and outside faces curved and substantially continuous with the contiguous curved faces of the shell or casing.

In testimony, that we claim the foregoing  
110 as our own, we have hereto affixed our signatures in the presence of two witnesses.

FRANK HELM.

CHARLES J. HELM.

Witnesses:

CHAS. E. HALE,

EVERETT WHITNEY.