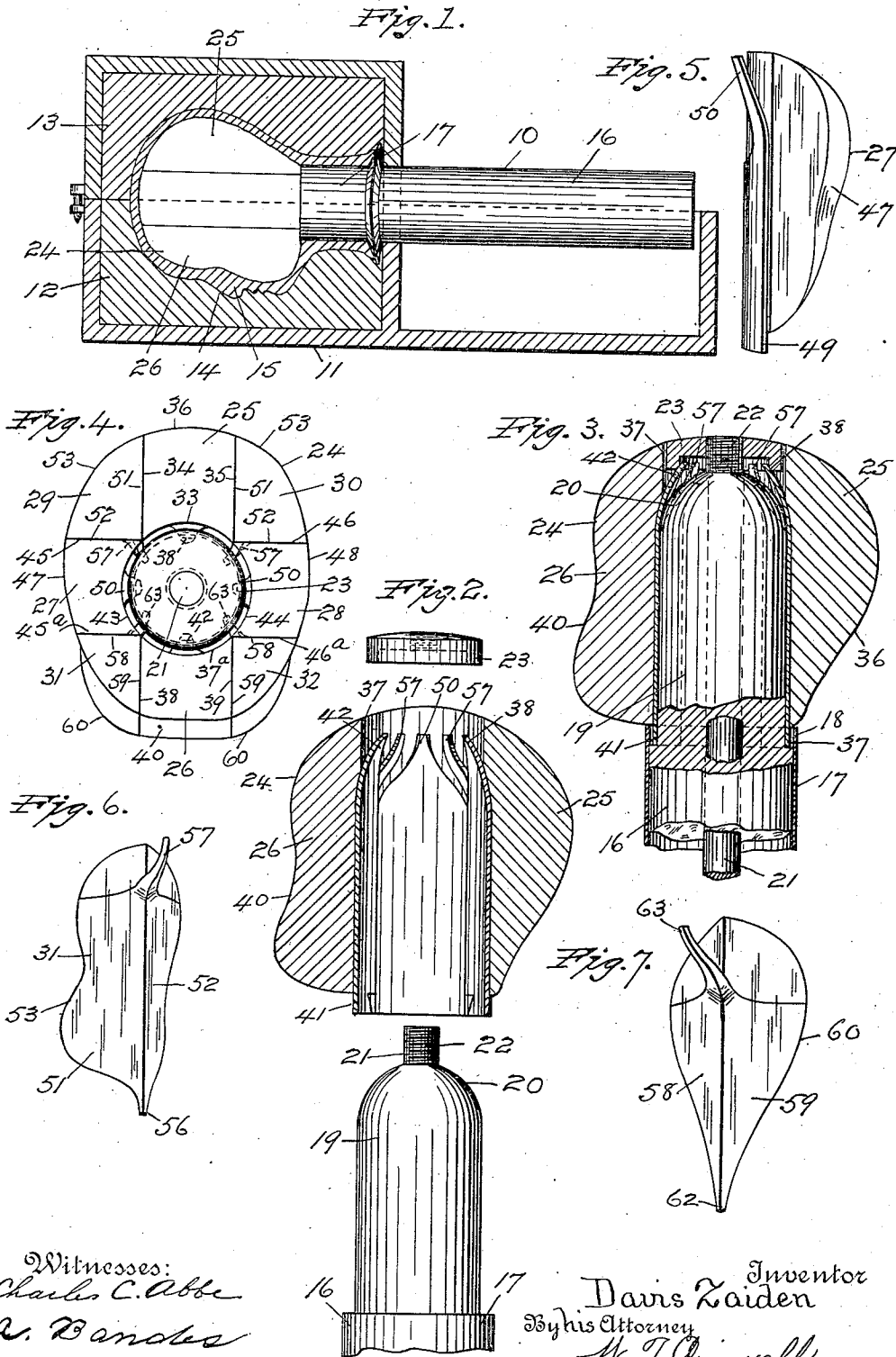


D. ZAIDEN.
 DEVICE FOR MOLDING HOLLOW HEADS OF FIGURES.
 APPLICATION FILED JAN. 28, 1911.

1,055,502.

Patented Mar. 11, 1913.



Witnesses:
 Charles C. Abbe
 A. Bonnes

Inventor
 Davis Zaiden
 By his Attorney
 W. T. Criswell

UNITED STATES PATENT OFFICE.

DAVIS ZAIDEN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO LOUIS LEVINE, OF BROOKLYN, NEW YORK, AND ONE-HALF TO W. C. HORN BRO. & CO., OF NEW YORK, N. Y., A JOINT STOCK ASSOCIATION OF NEW YORK.

DEVICE FOR MOLDING HOLLOW HEADS OF FIGURES.

1,055,502.

Specification of Letters Patent.

Patented Mar. 11, 1913.

Application filed January 28, 1911. Serial No. 605,243.

To all whom it may concern:

Be it known that I, DAVIS ZAIDEN, a subject of the Czar of Russia, and a resident of New York, borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Devices for Molding Hollow Heads of Figures, of which the following is a full, clear, and exact specification.

This invention relates more particularly to a class of devices whereby hollow heads of dolls and similar figures may be produced.

My invention has for its object primarily to provide a simple and efficient device adapted for use in conjunction with molds for making hollow heads of dolls and other figures from plastic material and wherein I employed a plurality of segments or members which when assembled form approximately the shape of the figure to be molded and which are detachably held to a handle in a manner so that the segments or members thereof may be readily and conveniently removed from the interior of the head subsequent to the head being molded in proper shape without danger of breakage or injury thereto.

A further object of the invention is to provide a form of handle having a post around which the segments of the head may be assembled in proper formation so that when removed from the head the segments thereof will collapse in the interior of the head for ready removal therefrom; and to provide means adapted to effectually hold the segments in assembled arrangement to the post and handle of said device.

A practical embodiment of the invention is represented in the accompanying drawing forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views, the said invention being more fully described hereinafter and then pointed out in the appended claims.

In the drawing, Figure 1 is a longitudinal vertical section of a mold with one form of my device as used in conjunction therewith for molding a hollow head. Fig.

2 is a sectional view, partly in detail showing separately various parts of the device. Fig. 3 is a fragmentary sectional view, partly broken away, of various parts of the device when assembled. Fig. 4 is a top plan of the head of the device. Fig. 5 is an elevation of one of the segments of the head of the device. Fig. 6 is an elevation of another segment of the head of the device, and Fig. 7 is an elevation of still another segment of the head of the device.

In practice the device 10 may be used in conjunction with any suitable mold, as 11, which consists of a male member 12 and a female member 13 both of which are usually made of metal, such as brass or the like. The opposed faces of the male and female members of the mold 11 are carved out so as to form the configuration of the head of a doll or other figure, as 14, which is to be molded hollow of plastic material, as shown at 15, by the use of the device 10.

The device 10 has a handle 16 which may be of any preferred size and shape, and at one end of said handle is provided a sleeve 17 which extends beyond the end of the handle so as to form an annular recess, as 18, Fig. 3 at one end of said handle. A post 19 of smaller diameter than the handle 16 extends from the end of said handle centrally of the sleeve 17, and said post has its free end rounded or hemispheric in form, as 20. Through the post 19 and handle 16 is provided a rod 21 which has a threaded end 22 projecting some distance beyond the rounded end 20 of the post 19, and upon the threaded end 22 of said post is adapted to be screwed a cap 23 for detachably holding the various parts of the device 10 together when assembled.

In order to provide for the use of my device to produce the hollow head of a doll or other figure, when molded of plastic material I provide a head 24 which is composed of a plurality of segments or parts 25, 26, 27, 28, 29, 30, 31, 32, each of which are of a formation to permit said parts or segments to fit snugly around the post 19 when assembled so that when said post is freed

from engagement therewith the segments or parts will collapse within the interior of the head for ready removal therefrom.

The segment or part 25 has a curved face, as at 33, so as to conform with the curvature of the post 19, and is provided with two opposed straight side faces, as 34 and 35. The face 36 of the segment 25 is curved in substantially the shape of the back of the head of a doll or other figure, and is provided at one of its ends with a finger, as 37, and has a curved projecting finger 38 provided adjacent to the opposite end thereof. The segment or part 26 has likewise a curved face, as 37^a, so as to snugly fit the curvature of the post 19 and is provided with two opposed straight side faces 38 and 39. In order to conform approximately with the forehead and jaw of the face of the doll head 14 the segment or part 26 has an irregularly curved face, as 40, and is provided at one of its ends with a finger 41 and has a curved projecting finger 42 formed adjacent to the opposite end thereof.

The segments or parts 27 and 28 are alike in formation, each having a curved face 43 and 44 so as to conform with the curvature of the post 19, and each of said segments also have two opposed straight faces 45, 45^a and 46, 46^a. To provide for properly shaping the interior of each side of a doll head or other figure each of the segments is provided with a curved surface, as 47 and 48, and each of said segments has a finger, as 49, at one of its ends and adjacent to the opposite end thereof is a curved projecting finger 50. The segments or parts 29 and 30 are also alike in form, each having straight surfaces disposed at a right angle to each other, as 51 and 52, so as to fit between the segments 26, 27 and 28 respectively. The face 53 of each of the segments 29 and 30 are irregularly curved, and at one end of each of said segments is provided a finger 56 and adjacent to the opposite ends thereof is a curved projecting finger 57. The segments or parts 31 and 32 are likewise similar in formation, each having straight surfaces disposed at a right angle to each other, as 58 and 59, so as to fit between the segments 26, 27 and 28 respectively. The face 60 of each of the segments 31 and 32 is irregularly curved and at one end of each of said segments is a finger 62 and in proximity to the opposite end thereof is a curved projecting finger 63.

In operating my device for producing the hollow head of a doll the segments 25, 26, 27, 28, 29, 30, 31, 32 of the head 14 are assembled in the order, as illustrated in Fig. 4, around the post 19, as shown in Fig. 3. The fingers 37, 41, 49, 56, 62, are then inserted in the recess 18 of the sleeve 19 of the handle of the device. The cap 23 is screwed upon the threaded end 22 of the rod 21 and is guided over the projecting fingers 38, 42, 50, 57, 63

of said segments. A sufficient quantity of plastic material to make a doll's head is applied in the members 12 and 13 of the mold 11, and the head 24 of the device 10 is pressed into the material and said members are clamped together by any suitable means. When the plastic material is hardened the rod 21 is released from engagement with the cap 23 by revolving the handle 16 in a reverse direction, and the post 19 is then withdrawn from between the segments 25, 26, 27, 28, 29, 30, 31, 32. The segments will then collapse within the doll head and may be readily removed therefrom in any preferred way.

In the foregoing description I have embodied the preferred form of my invention, but I do not wish to be understood as limiting myself thereto, as I am aware that modifications may be made therein without departing from the principle or sacrificing any of the advantages of this invention; therefore I reserve to myself the right to make such changes as fairly fall within the scope thereof.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A device for molding hollow heads of figures, comprising a suitable frame having mating parts, dies seated therein and also having mating parts adapted to mold the exterior of the head of the figure, a mold substantially the shape of the head and adapted to mold the interior surface of the hollow head, and comprising a plurality of substantially rectangular, and triangular sections which are alternately disposed, in said mold, each of said sections having an inwardly projecting finger upon its upper end and each having an extended portion at its lower end, a cap adapted to form a section of the core at the top thereof, said cap having a screw threaded opening there-through, and an annular recess in the lower side thereof, adapted to engage the said projecting fingers upon the said sections of the core, a sleeve adapted to engage the extended portions of the said sections on the outer periphery thereof, a post having hemispheric end and adapted to closely engage the interior of the cylindrical cavity within the sectional mold of the head and the interior surfaces of the projecting fingers on the upper parts of the sections whereby the said fingers are held in close engagement with the periphery of the annular recess in the said cap, said post having a longitudinal bore therethrough, and a core having a screw threaded end adapted to traverse the said bore and engage the screw threaded opening in the said cap whereby the cap is made to closely engage the projecting fingers of the sections of the head and compress them against the hemispheric end of the said

post, all arranged and combined to operate in the manner set forth and for the purposes stated, substantially as shown and described.

2. In a device for molding hollow heads of figures, comprising a plurality of sections so arranged as to form a mold substantially the shape of the exterior of the head of the figure to be molded; a plurality of alternately disposed removable sections, a number of which have two parallel sides, and the other sections having two of their sides formed at right angles, the sections formed with parallel sides having their inner surfaces curved in the form of a segment of a circle, and having projecting segmental lower ends and inwardly projecting curved and pointed upper ends, the sections having their faces meeting in an angle, having downwardly projecting lower ends and inwardly projecting curved upper ends, a circular cap having a screw threaded opening centrally therethrough, and an annular recess in the lower surface thereof, adapted to be interposed between the upper ends of the sections of the mold, and to engage the inwardly projecting curved upper ends of the said sections, and a sleeve adapted to engage the outer periphery of the projecting lower ends of the said sections, a cylindrical post having a rounded end, and having a longitudinal bore therethrough, a rod having a screw threaded end adapted to be disposed in the bore in the post, and engage the screw threaded opening in the said cap, and a suitable handle for said post, all arranged and combined to operate in the manner set forth and for the purposes stated, substantially as shown and described.

3. In a device for molding hollow heads of figures in combination, a sectional core, means for locking the sections together, a core rod having a part thereof which varies in diameter and which is removably inserted between the sections of the core, a plurality of sectional parts of said core having two parallel sides and a segmental inner side, the outer side molded to form a part of the mold, and a plurality of sectional parts having two of their surfaces at right angles to each other, and substantially triangular in shape, the third side being so molded as to form a part of the mold of the head of the figure to be molded, said sections having downwardly projecting ends, a sleeve adapted to engage the outer periphery of the said ends, and said sections having also inwardly projecting curved pointed upper ends, a cylindrical post having a rounded end adapted to fit closely within a cylindrical recess between the segmental surfaces of the sectional parts of the core, said post having a longitudinal bore therethrough, a rod having a screw threaded end adapted to be disposed in the said bore in the post, and a cap having a threaded central opening, and an an-

nular recess on its under side adapted to receive the inwardly projecting curved ends of the sectional parts of the core, said cap being adapted to secure the said parts together by being screwed to the threaded rod, said device being provided with a suitable handle, all arranged and combined to operate in the manner set forth and for the purposes stated, substantially as shown and described.

4. In a device for molding hollow heads of figures, comprising a core rod and core sections, a plurality of detachable sections forming a collapsible head, a part of said sections having two parallel sides, and the others of said sections having two of their sides meeting in a right angle at a point contiguous to the core rod, the outer surface of the sections being shaped in the form of the head of the figure, and said sections having parallel opposite side surfaces, a cylindrical post provided exteriorly of the core rod, said post having a rounded upper end, and a longitudinal bore adapted to admit the core rod, said core rod having a screw threaded end seated in said bore, downwardly extended ends at the lower end of all said sections, a sleeve surrounding the cylindrical post and engaging the outer surfaces of the said extended ends, and the inwardly inclined curved upper extended ends, of all said sections adapted to engage the rounded end of said cylindrical post, and surrounding the said core rod, a cap having a screw-threaded opening through the central part thereof, adapted to engage the screw threaded end of said core rod, said cap having its annular flange adapted to engage the said inwardly inclined curved upper ends of said sections and secure them in position with the end of said post, all arranged and combined to operate in the manner set forth and for the purposes stated, substantially as shown and described.

5. In a device for molding hollow heads of figures, the combination with a core rod; of a plurality of segmental sections having two parallel sides and a plurality of sections adapted to be interposed between the said sections with parallel sides, and having two of their sides meeting at right angles, said sections each having a metal plate attached thereto which is provided with a downwardly projecting end, and an upwardly projecting inwardly inclined curved end, a core post having a longitudinal bore adapted to admit the core rod, and having a rounded end, said post forming a support for the said sections of the core, and a sleeve provided upon the core rod adapted to engage the downwardly projecting ends of the metal plates of the sections, and a cap having a threaded central bore therethrough adapted to admit the screw threaded end of the core rod, said cap having an annular

4
5 flange adapted to engage the upwardly inwardly inclined ends of said metal plates whereby said sections are held in engagement with the core post surrounding the core rod, all being arranged and combined so that a collapsible core is produced, substantially as shown and described.

This specification signed and witnessed
this twenty fifth day of January A. D. 1911.

DAVIS ZAIDEN.

Witnesses:

ROBT. B. ABBOTT,
SAM HASKELOVITZ.