

(No Model.)

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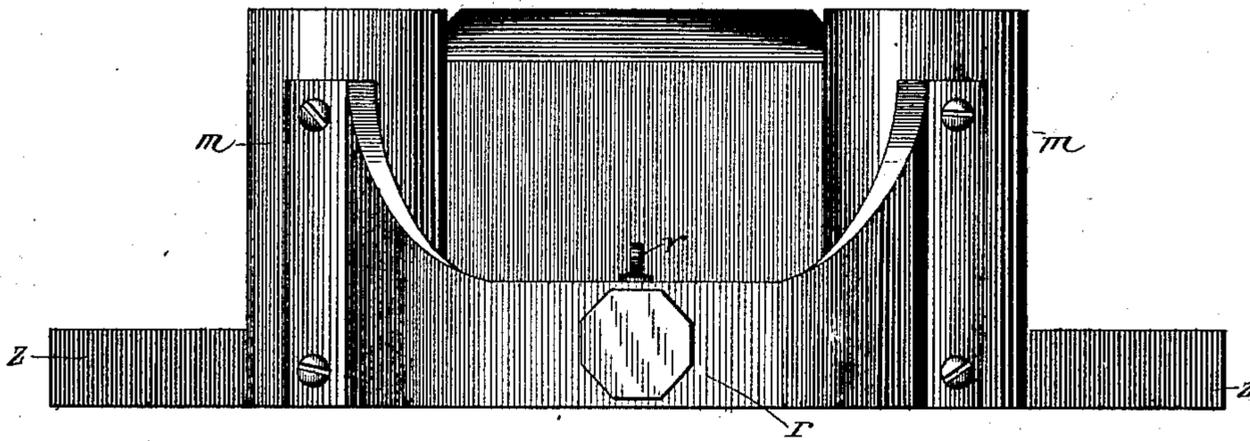
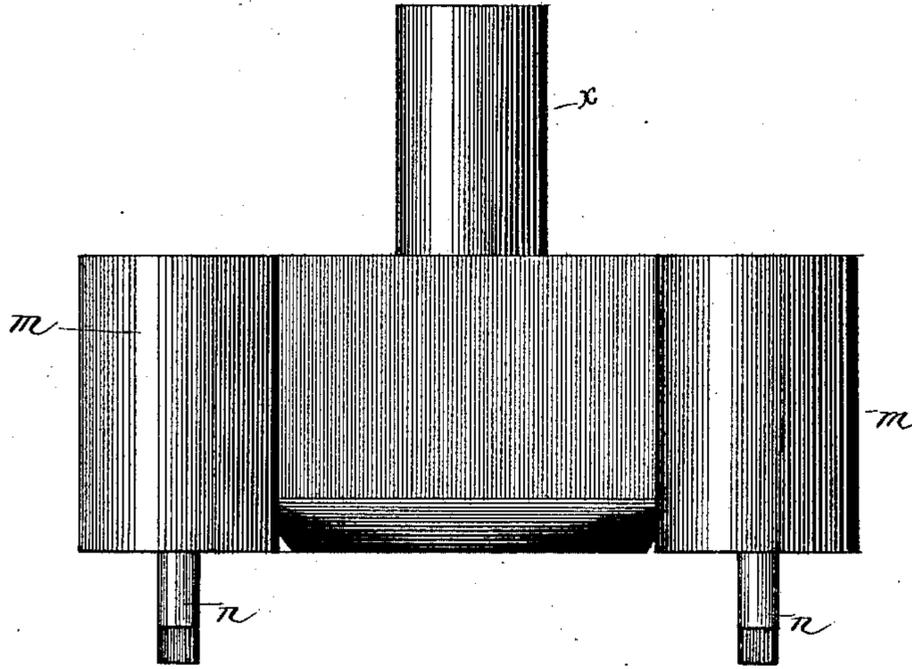
C. COLLIER.

SOAP MOLD.

No. 305,293.

Patented Sept. 16, 1884.

Fig. 1.



Witnesses,
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Frederick Goodwin

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(No Model.)

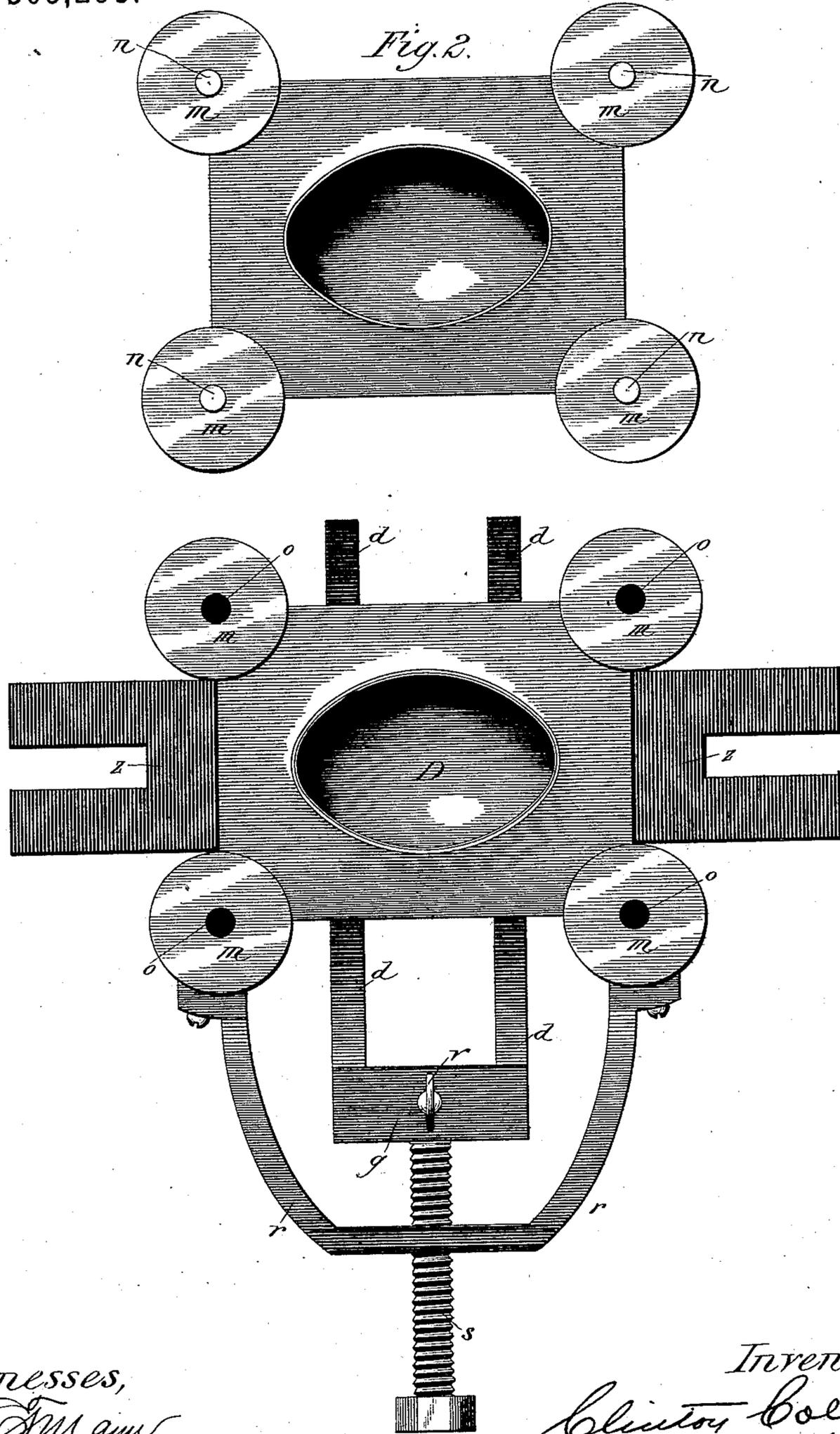
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Patented Sept. 16, 1884.



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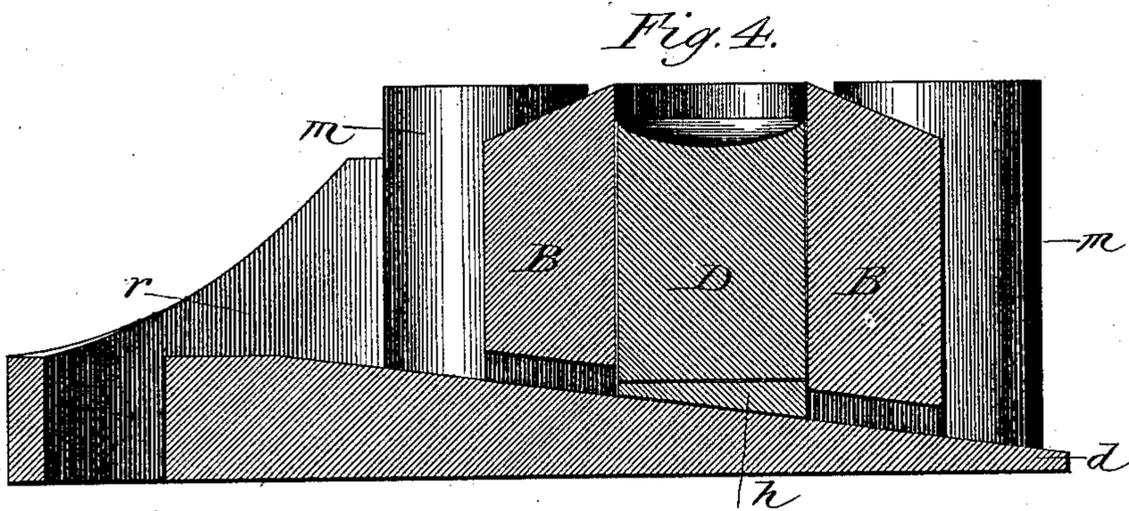
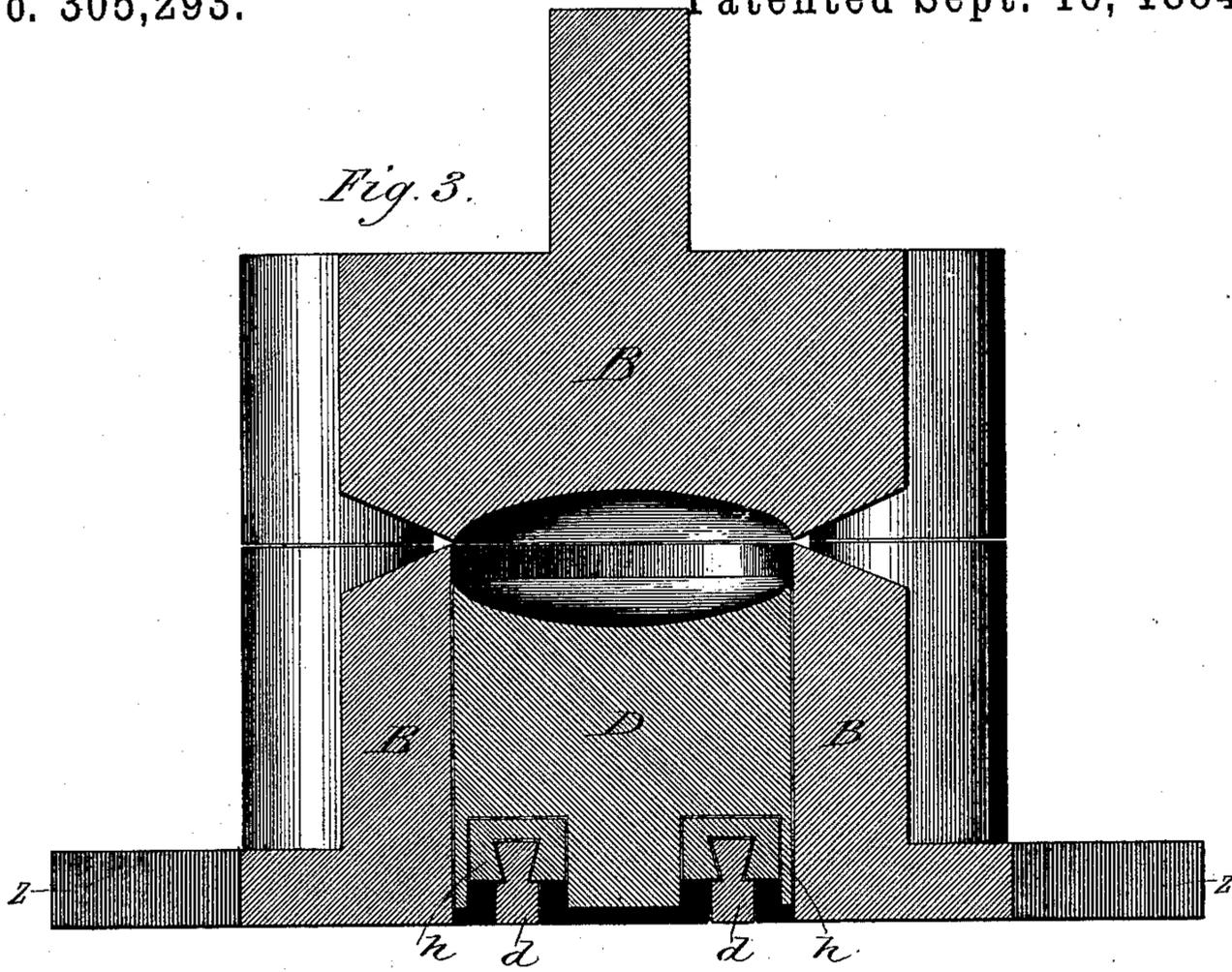
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(No Model.)

4 Sheets—Sheet 4.

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Fig. 5.

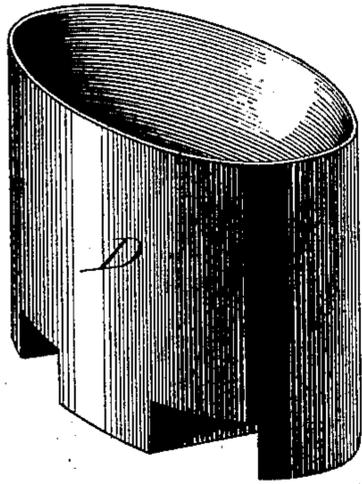


Fig. 6.

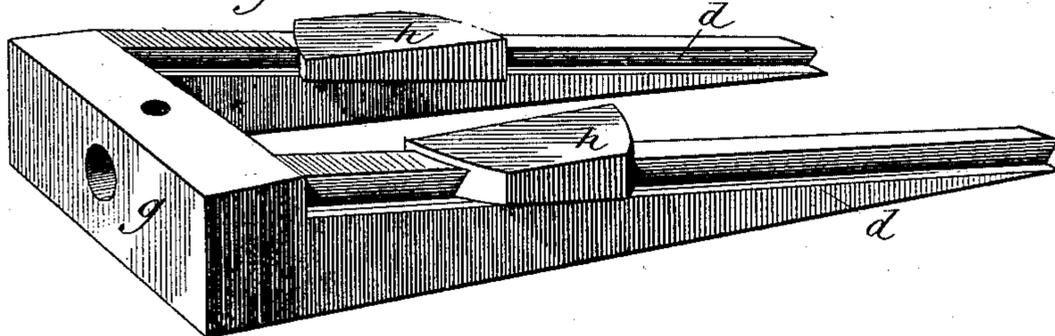
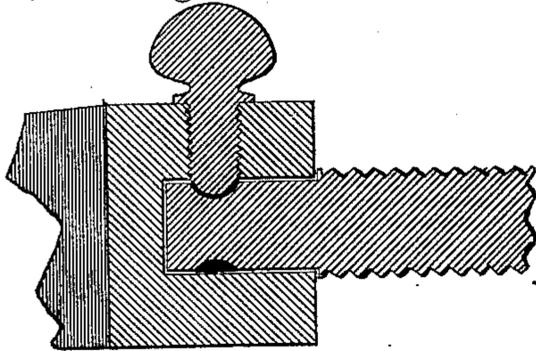


Fig. 7.



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UNITED STATES PATENT OFFICE.

CLINTON COLLIER, OF CHICAGO, ILLINOIS.

SOAP-MOLD.

SPECIFICATION forming part of Letters Patent No. 305,293, dated September 16, 1884.

Application filed August 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, CLINTON COLLIER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Soap-Molds, of which the following is a specification.

My invention relates to a soap-mold capable of being adjusted so as to form cakes both uniform in size and weight; and it consists in a construction whereby the bed of the die used in connection with the mold is movable and adjustable; and it consists, further, in the use of shoulders and guide-pins, which give to the movements of the separate parts of the mold an accuracy or precision which is highly desirable in making the finer classes of soaps, a uniformity of contour being in all instances secured for the cakes thus molded.

I have illustrated my invention by the accompanying drawings, in which Figure 1 is a front elevation of my improved soap-mold, the two principal parts thereof being shown as separate, or in position for receiving the soap to be molded. Fig. 2 is a plan view of the same, showing the die of the mold separate. Fig. 3 is a section of my improved mold when the parts are brought together in use, or while a cake of soap is being molded. Fig. 4 is a sectional view of the lower half of my mold, showing the method of adjusting the movable bed of the die. Fig. 5 is a perspective of the movable die-bed used in connection with my improved construction. Fig. 6 is a perspective of my improved adjusting-arms, together with the supports connected therewith, upon which rest the movable die, and by means of which the same is raised or lowered. Fig. 7 is a detail section of the inner end of my improved adjustment-screw.

Like letters refer to like parts in the several views.

A indicates the upper section of the mold, while B indicates the lower section of the same.

D indicates the movable die, which is placed in the lower section of the mold.

m m m m indicate the outer shoulders of the mold, the upper of which have connected therewith pins *n n n n*, which pass within openings *o o o o* in the lower shoulders, so as to act as guide-pins, and to govern with pre-

cision the parts as they are brought together.

d d indicate the adjustable horizontal arms, which are connected by the end piece, *g*. 55

h h indicate two supports for the die-bed D, which are beveled oppositely from the adjustable arms *d d*, and readily slide thereon, so as to afford an even support for the die-bed when the said arms are moved in either direction. 60

r indicates an outer arm, which is connected, preferably, with two of the shoulder-posts of the mold. This arm has connected therewith the screw *s*, which extends to and within the outer end of the end piece, *g*, which connects the horizontal adjustment-arms *d d*. This screw at the inner end is held in position by the thumb-screw *v*, which either holds secure or releases the inner end of the screw *s*, as may be desired. At the outer end of the screw *s* is a thumb-piece, by means of which the same is turned, so as to adjust or regulate the arms *d d* and the supports *h h*, upon which rest the die-bed D. 75

x indicates a rod connected with the upper form of the mold, by means of which the same is connected with suitable means for elevating and lowering the same.

z z indicate side projections on the lower portion or section of the mold, which are designed to afford additional bearing for the same; but these projections, as well as the rod *x*, may be omitted or varied, as any method for connecting the mold so as to impart motion or afford sufficient support may be adopted or used. 85

Heretofore, when the die-bed used in connection with a soap-mold has been movable, it has been usual to adjust the position of such die-bed by the use, beneath the same, of pieces of metal or other substances possessing a sufficient degree of solidity, the number of such pieces placed under the die-bed regulating or governing the size of the opening above, within which the cake of soap was molded. This method of adjustment has been found to involve considerable loss of time, and to be wanting in uniformity. 95

A paramount feature of my invention consists in the supporting-shoulders and guide-pins, whereby the two parts of the mold are brought together with the greatest of precision, and so that all surplus soap is cut off 100

and thrown outward as the parts of the mold come together. The cakes thus molded are of uniform size and contour, while the shoulders act to receive the force of the parts when brought together and prevent injury to the outer edges of the lower die and of the upper mold.

Unless some means are afforded for guiding the parts of the die and for preventing the edges of the mold and of the die from coming in abrupt contact, as well as for shearing off and removing the surplus soap, the result is that the cakes of soap will be of irregular dimensions and unequal weight, while the edges of the die and of the mold will soon be so much defaced and bent as to require the substitution of new parts in their place.

Fine soap molds of this class being necessarily expensive, it is a matter of economy to have the construction such as will insure the greatest possible degree of permanence.

The screw which governs the adjusting-arms constitutes an important element of my improved construction, as well as of my invention.

As to the material to be used for the construction shown, I prefer to use brass for all the parts, excepting the guide-pins and the screws, which are preferably made of steel. The precise material, however, is not essential, provided that whatever may be used shall possess the desired requisites of solidity and durability.

My improved construction, as will be seen from the foregoing description, embodies utility and durability, insuring a finished product possessing the particular qualities sought after by the trade.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a soap-mold, of shoulders of such length and form as to receive the force of the parts when brought into con-

tact, thus preserving the edges of the mold and die, substantially as set forth and described.

2. In an improved soap-mold, the combination of supporting-shoulders, of guide-pins connected with said shoulders, and of openings for receiving said guide-pins when the parts are brought together, substantially as specified.

3. The combination, with one section of a soap-mold, of a movable die-bed, of an adjusting arm or arms, of a horizontal support or supports, which operate to sustain said die-bed, and of a screw or other equivalent device having suitable connection with the mold, whereby the adjusting-arms are controlled and the die-bed raised or lowered, substantially as described and set forth.

4. The combination, with a soap-mold, of a screw so supported by an arm or brace, and so connected with an adjusting arm or arms, or with the part uniting the same, as to be capable of moving said adjusting arm or arms either inward or outward, for the purpose of raising or lowering the die-bed, as set forth and described.

5. In an improved soap-mold, the combination of supporting-shoulders, of guide-pins, of openings to receive said guide-pins, of a movable die-bed, of an adjusting arm or arms, of a support or supports for sustaining said die-bed, and of an adjusting-screw, whereby said adjusting device is governed, substantially as set forth.

6. The method of molding soap by using molds and dies which are preserved from abrupt contact by supporting-shoulders, and controlled by guide-pins and guide-openings, and an adjusting device for governing the movable die-bed, said adjusting device being regulated by a screw, substantially as described and set forth.

CLINTON COLLIER.

Witnesses:

FREDERICK C. GOODWIN,
E. L. HUBER.