(No Model.)

G. E. REED.

CAPSULE FORMING DEVICE.

No. 564,340. Patented July 21, 1896.

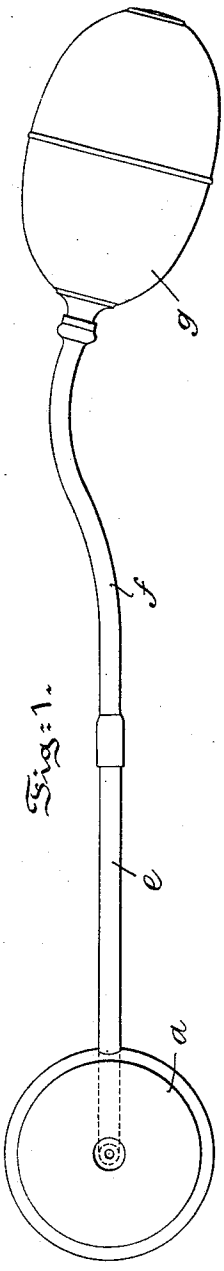

Fig: 1.

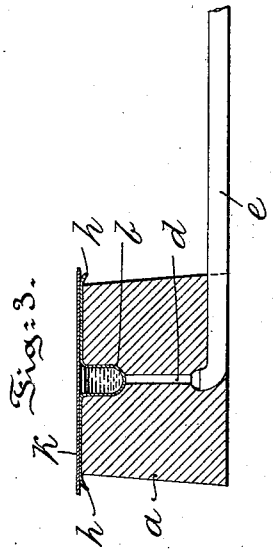

Fig: 3.

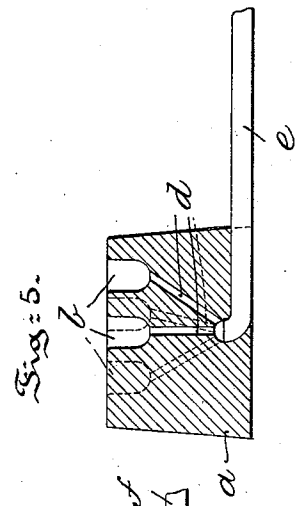

Fig: 5.

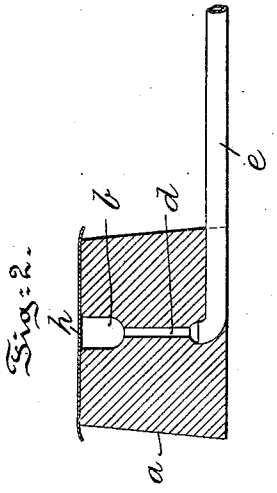

Fig: 2.

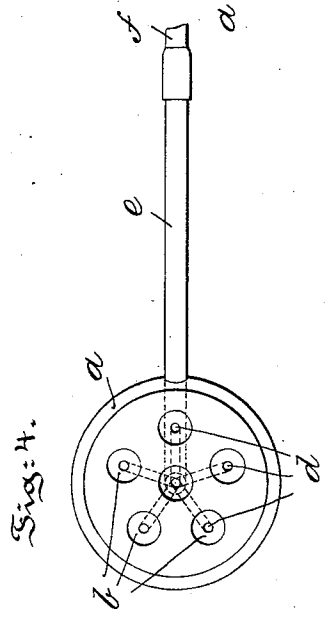

Fig: 4.

Witnesses:
Thomas M. Smith.
Richard C. Maxwell.

Inventor:
Geo. E. Reed,
By J. Walter Douglass.
Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE E. REED, OF PHILADELPHIA, PENNSYLVANIA.

CAPSULE-FORMING DEVICE.

SPECIFICATION forming part of Letters Patent No. 564,340, dated July 21, 1896.

Application filed January 31, 1896. Serial No. 577,532. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. REED, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Capsule-Forming Devices, of which the following is a specification.

My invention has relation to an appliance for forming a capsule or capsules by distending a gelatinous material or substance under exhaust or suction in a mold or molds, filling the same with a medicant or other substance, and then applying a gelatinous cap thereto.

My invention, stated in general terms, consists of a capsule-forming device constructed and arranged in substantially the manner hereinafter described and claimed.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a top or plan view of an apparatus adapted to form a single capsule. Fig. 2 is a central section of the same, illustrating the formation of the capsule. Fig. 3 is a central section illustrating the filling and sealing of the formed capsule, and Figs. 4 and 5 are respectively plan and sectional views illustrating an apparatus adapted to form a series of capsules at one and the same operation.

Referring to the drawings, *a* is a block of metal, wood, or similar inflexible material, in the upper face of which is formed one or more capsule-shaped molds *b*, the lower extremity of which or each of which terminates in a vertical duct *d*, leading to a transverse pipe or channel *e*. This pipe *e* is connected by means of a tube *f* with a compressible bulb *g* or other suitable air exhausting or suction appliance.

In Figs. 4 and 5 the vertical ducts *d* of the molds *b* all terminate in a single pipe *e*, although it is obvious from the description of the method of forming the capsule hereinafter given that the ducts *d* might terminate in a series of pipes or channels *e*, provided the pipes are all connected with some apparatus whereby air may be sucked or exhausted from the said ducts.

To form a capsule, the following preferred method is to be followed, to wit: I place upon the block *a* a thin sheet *h* of gelatinous material of the usual composition needed for the formation of a soluble capsule. The sheet *h* is preferably moistened and laid perfectly flat upon the block *a*, so that it covers the top of each mold *b*. By now sucking or exhausting the air from the mold beneath the gelatinous sheet *h*, through the duct *d*, this sheet will be distended to fit closely the interior of the mold, as indicated in Fig. 3 of the drawings. In this condition and still under suction the capsule is filled with the medicant or other substance and a cap or sheet of moistened gelatin *k* is laid over the distended sheet *h*, so as to cover completely the opening in the capsule. The sheets *h* and *k* are now cut through to the block very near the periphery of the capsule and the suction then relieved. The completed capsule can then be withdrawn from the mold *d* and is ready for use or sale.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a capsule-forming device, a block provided with a mold having the outline of one section of a capsule, a duct, a pipe or tube *e* from said duct, and a pneumatic device connected by a pipe *f* with said tube, substantially as and for the purposes described.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

GEO. E. REED.

Witnesses:
J. WALTER DOUGLASS,
THOMAS M. SMITH.