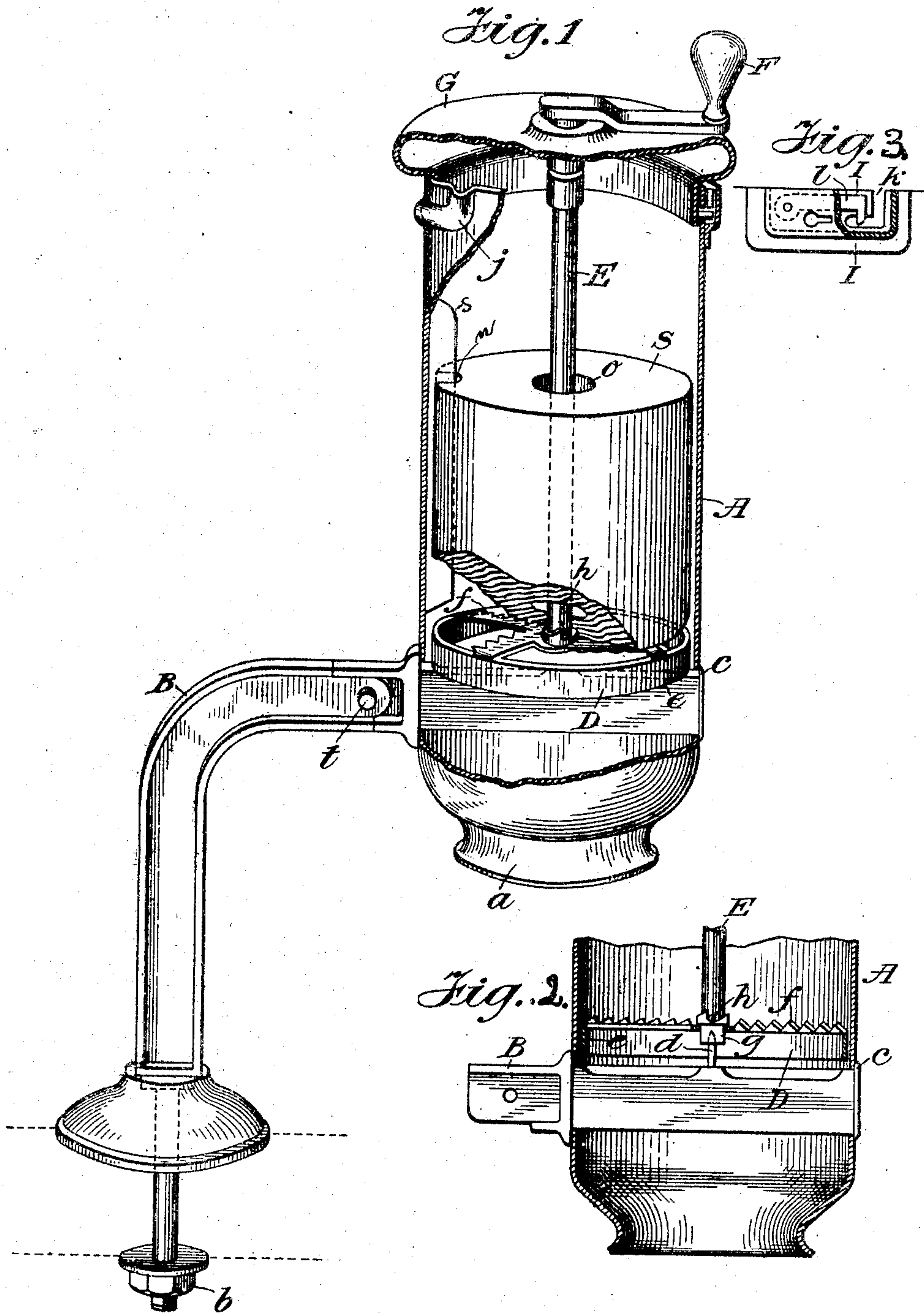


No. 826,896.

PATENTED JULY 24, 1906.

G. F. SHAVER.
SOAP SHAVING MACHINE.
APPLICATION FILED JAN. 3, 1905.

3 SHEETS—SHEET 1.



WITNESSES:
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BY HIS ATTORNEY *Lewis J. Doolittle*

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2 SHEETS—SHEET 2.

Fig. 4.

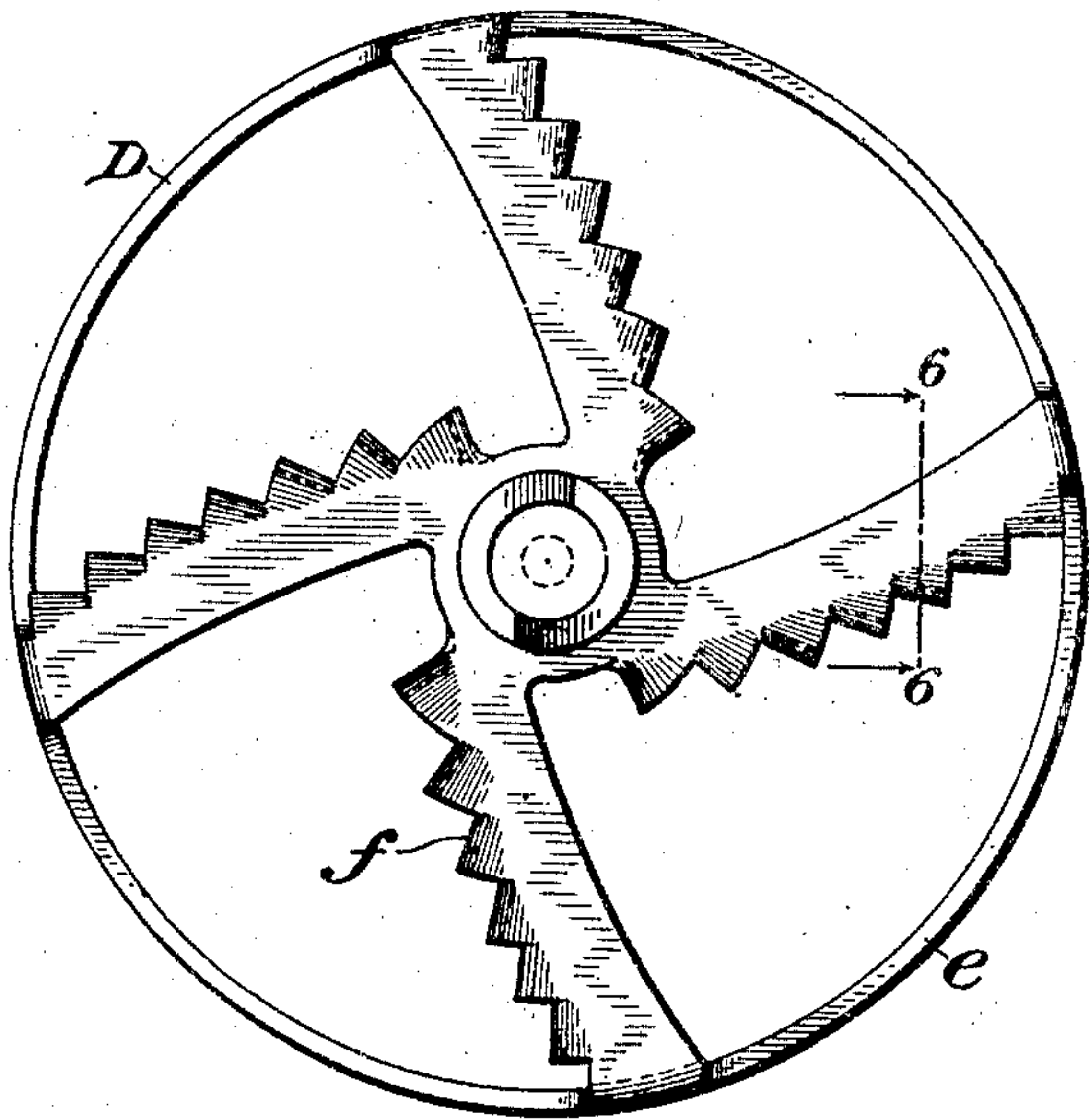
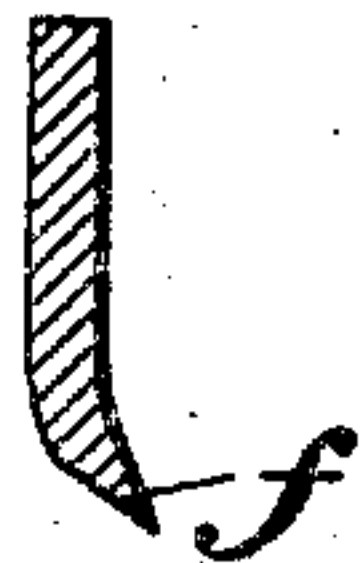


Fig. 5.



Witnesses
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George F. Shaver, Inventor,
By his Attorney Lewis J. Doolittle.

UNITED STATES PATENT OFFICE.

GEORGE FREDERICK SHAVER, OF NEW YORK, N. Y., ASSIGNOR TO
HYGIENIC SOAP GRANULATOR COMPANY, OF NEW YORK, N. Y.,
A CORPORATION OF NEW JERSEY.

SOAP-SHAVING MACHINE.

No. 826,896.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed January 3, 1905. Serial No. 239,424.

To all whom it may concern:

Be it known that I, GEORGE FREDERICK SHAVER, a citizen of the United States of America, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Soap-Shaving Machines, of which the following is a specification.

This invention relates to toilet-fixtures, and more particularly to a device capable of use in connection with washbasins and adapted to dispense soap in such a form that it may be used in a more hygienic and economical manner than in the cake or bar form heretofore utilized.

It has for one of its objects to provide a device of the above character characterized by increased simplicity and efficiency.

Another object is to provide a cutting device such that the soap is dispensed in a form in which it may be more readily reduced to lather than in any form heretofore provided.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the mechanism hereinafter described, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings, wherein is illustrated one of the various possible embodiments of my invention, Figure 1 is a perspective view of a soap-shaving device with a portion of the soap-container broken away, showing the interior construction of the same. Fig. 2 is a vertical sectional view of the lower portion of the container shown in Fig. 1, showing the method of attaching the driving-spindle to the cutter. Fig. 3 is a detail view of the lock by means of which the cover is attached to the soap-container. Fig. 4 is a top plan view of the cutting device. Fig. 5 is a view in section taken through one of the arms of the cutting device on line 6 6, Fig. 4.

Preliminary to a more specific discussion of my invention and in order that certain of the important objects thereof may be better appreciated it may here be noted that the present invention is of the nature of an improvement over devices contemplating substantially similar objects, but which lack one or

more of the essential elements of efficiency. Soap-dispensing devices of this general nature as heretofore constructed have delivered the soap in a granular state, and while in a measure these devices have proven efficient it has been found that soap in the form of granules when wetted has a tendency to re-form into solid masses, caking in the hands, under the nails, beneath finger-rings, and between the fingers. Further, the granules being solid and having relatively small surfaces exposed considerable time is consumed to effect complete reduction to lather. I have therefore found it desirable in eliminating the above objections to provide a dispensing device such that the soap is cut and delivered in thin narrow strips or ribbons. It has been found that soap in this form by reason of the larger surface exposed to the action of the water will be reduced to lather practically instantaneously, leaving no undissolved particles.

The above and other advantages are secured in constructions of the nature of that hereinafter described.

Referring now to the drawings, in the shaving device which I have shown in the drawings as an illustration of an operative embodiment of my invention, a vertical cylindrical soap-container A, having a contracted opening *a* at the bottom, is used. This container is preferably formed of sheet metal and is supported by means of a bracket B, which is provided with suitable means, such as nut *b*, at the lower end thereof, for attaching the same to the table of the washbasin. The upper end of the bracket B is horizontal and adapted to form a support for the soap-container, which may be attached thereto at *c* by riveting or otherwise, as may be desired. A cutter D is provided with a central or hub portion having radially-extending arms terminating in a circular flange. These radially-extending arms are preferably formed by cutting away portions of the disk-shaped surface of the cutter and leaving on one side of these arms projections or serrations in the form of small blades or, as herein termed, "edged teeth." These edged teeth are bent upwardly, so as to project obliquely from their support in the direction of rotation of the cutter, and are beveled so as to present a sharp edge to the surface of the soap to be cut. Although I do not wish to limit myself

to any particular angle, it has been found by experience that when said edged teeth are inclined at an angle of about thirty-five degrees with the plane of rotation the best results are obtained.

The oblique position of the edged teeth in relation to their supports is shown more clearly in Fig. 5, which is an enlarged cross-sectional view of one of these supports and the edged teeth.

The supporting-arms having the edged teeth may project radially from the central hub, or said arms may be located at a slight angle or slightly curved in relation to the adjacent radii, the object being to provide a cutter which shall shave or cut the surface of the soap into thin narrow strips, such as described.

The cutter may be attached to the arm or support, or it may be formed by bending a portion of the same upwardly and in the direction of rotation, as shown, making the cutter and support in one piece.

The edged teeth on adjacent arms are preferably staggered in relation to the corresponding series, so that their respective circles of rotation will be located intermediary of the corresponding circles of rotation of the adjacent series of teeth.

It has been found in using machines of this character that it is desirable to provide a space of relatively large size immediately in advance of the cutter in order that the soap ribbons or shavings will not accumulate and clog the cutting edges, and so render the same inoperative. By cutting away portions of the disk forming the support for the several series of edged teeth a unitary open space of relatively large size is provided immediately in front of each of said series of teeth, and as the cutter is rotated the soap-ribbons readily fall through this large opening and out of the lower end of the container into the hand of the operator.

The radially-extending arms not only provide a support for the blades, but also extend rearwardly from said blades and form a support against which the surface of the cake of soap which is being cut may rest. This not only prevents the advancing edges of the teeth from burrowing themselves too deeply into the soap, but also insures the cutting of soap into ribbons or shavings of uniform thickness, which may be regulated by bending the teeth to the required angle from the supporting-surface.

The hub *g* is recessed at the lower side thereof and is adapted to set over a pivot-post *d*, which is attached to the supporting-arm B. A vertical spindle E carries a pin *h*, which is adapted to engage notches in the upper end of the hub *g*. This provides a removable connection, by means of which the cutter D is rotated when the spindle is turned in a clockwise direction by means of a hand-

crank F at the upper end thereof or otherwise.

A removable cover G closes the upper end of the container and may be provided with a journal or bearing for supporting the spindle E, which projects therethrough.

Projecting pins *i* in the flange of the cover engage bayonet-joints, which are formed in the upper part of the rim of the soap-container. One of these joints *j* is formed by an angular groove indented in the rim, and the other joint *k* is formed by a slot which is cut through the rim. A hook-shaped piece or latch *l*, pivoted in front of the latter joint, serves to lock the cover. This is protected by a plate with a keyhole through which a key may be inserted for lifting the latch, allowing the cover to be turned sufficiently to disengage the pins from the bayonet-joints and allowing the same to be removed, together with the spindle.

On account of the separable construction of the coupling between the spindle and the cutter-hub *g*, which has already been described, the spindle may be removed and leave the cutter in position in the container.

A cake of soap is shown at S in position in the container. This soap is so formed as to be specially adapted for use with this device and is preferably cylindrical in form, corresponding to the shape of the container. A central opening *o* provides a space through which the spindle E extends from the cover of the container to the cutter located at the lower surface of the soap. A recess *n*, which is preferably in the form of a slot or keyway, is adapted to engage a projection or spline *s*, attached to the container. This prevents the soap from being rotated with the cutter, which would render the same inoperative.

The ribbons being cut by a rotative movement of the cutter have a tendency to curl, and when a suitable quantity thereof has been delivered into the hand of the user it will be found that all the surfaces of the soap by reason of the curled ribbon form thereof will be more readily accessible to water, and thus very easily reduced to lather.

In order to provide against ambiguity in the specification and claims, I wish it to be clearly understood that the terms "bent upward" and "inclined" are used solely in a relative sense, the soap-dispensing machine being shown in the drawings as disposed in a vertical or upright position. I also wish it to be clearly understood that the term "offset" as used in the claims is intended to express the function of the cutter whereby one of the edges of each serration limits or determines the width of the narrow ribbon or shaving cut by the other edge thereof.

By the term "advancing cutting edge" is meant the presenting of an edge of one of the serrations to the surface of the soap to be cut, whether the cutter is moved with rela-

tion to the cake of soap or the cake of soap moved over a stationary cutter.

It will accordingly be seen that I have provided a device well adapted to attain the objects of my invention which not only provides for the use of soap in a more hygienic manner than has heretofore been possible, but effects a great saving of time and material, with the consequent saving of expense.

As many changes could be made in the above construction and many apparently widely different embodiments of my invention could be made without departing from the scope thereof, I intend that all matter contained in the above description or shown in accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What I claim as new, and desire to secure by Letters Patent, is—

1. A cutter comprising a blade formed with a serrated edge bent slightly upward from the body of the blade and each serration formed with an advancing cutting edge, the other edge of such serration forming an offset whereby each cutting edge cuts its own distinct shaving.

2. A cutter comprising a supporting member upon which is mounted a plurality of blades each of which is formed with a serrated cutting edge bent slightly upward and each serration formed with an advancing cutting edge, the other edge of such serration forming an offset whereby each cutting edge cuts its own distinct shaving.

3. A rotary cutter comprising a support which carries a blade formed with a serrated cutting edge bent slightly upward and each serration formed with an advancing cutting edge, the other edge of such serration forming an offset whereby each cutting edge cuts its own distinct shaving.

4. A rotary cutter comprising a central supporting member from which extends a plurality of blades formed with serrated cutting edges bent slightly upward and each serration formed with an advancing cutting edge, the other edge of such serration forming an offset whereby each cutting edge cuts its own distinct shaving.

5. A rotary cutter comprising a supporting-hub and an outer ring and a plurality of blades extending outwardly from said hub to said ring, each blade formed with a serrated cutting edge bent slightly upward and each serration formed with an advancing cutting edge, the other edge of such serration forming an offset whereby each advancing cutting edge cuts its own distinct shaving.

6. A rotary cutter comprising a flanged disk, portions of which are cut away to provide a plurality of blades formed with serrated cutting edges bent slightly upward from the base of the serrations and each serration formed with an advancing cutting

edge, the other edge of such serration forming an offset whereby each advancing cutting edge cuts its own distinct shaving.

7. A soap-dispensing machine, comprising in combination, a container for a cake of soap, a supporting member arranged near the lower portion of said container, a cutter mounted upon said supporting member and adapted to support a cake of soap, said cutter being provided with a blade formed with a serrated cutting edge, the serrations of which are bent slightly upward from the body portion of the blade, and each serration formed with an advancing cutting edge, the other edge of such serration forming an offset whereby each advancing cutting edge cuts its own distinct shaving and means for causing a relative movement between said cutter and the cake of soap.

8. A soap-dispensing machine, comprising in combination, a container for a cake of soap, a supporting member arranged near the lower portion of said container, a rotary cutter rotating upon said supporting member and upon which rests the cake of soap to be cut thereby, said cutter being constituted by a blade formed with a serrated cutting edge the serrations of which are bent slightly upward from the body portion of the blade and each serration formed with an advancing cutting edge whereby each blade cuts its own distinct shaving, a spindle for rotating said cutter, which spindle is adapted to extend through an opening in said cake of soap, and means connected with said spindle whereby the same may be rotated.

9. A soap-dispensing machine, comprising in combination, a container for a cake of soap, a supporting member extending transversely of said container and provided with a portion upon which a cutter is mounted, a cutter mounted to revolve upon said portion of supporting member and adapted to support a cake of soap, said cutter having a plurality of blades formed with serrated cutting edges bent slightly upward from the bases of the serrations, and each serration formed with an advancing cutting edge whereby each edge cuts its own distinct shaving, a spindle which is adapted to extend through an opening provided in a cake of soap in the container having a detachable connection with said cutter, and means whereby said spindle may be rotated.

10. A cutter formed of a central hub and a series of flat blades projecting therefrom tangentially, each of said blades formed with a serrated cutting edge bent slightly upward at the base of the serration.

11. A device of the class described comprising a cutter formed of a central hub and a series of flat curved blades projecting therefrom tangentially, each of said blades formed with a serrated cutting edge bent slightly upward at the base of the serrations, the serra-

tions of each blade being staggered in relation to those of an adjacent blade.

12. A rotary cutter, comprising a series of non-radial blades each formed with a serrated edge bent slightly upward, and each serration formed with an advancing cutting edge, the other edge of such serration being offset whereby each cutting edge cuts its own distinct shaving.
13. In a soap-shaving machine, a vertical cylindrical soap-container, open at the bottom, a disk cutter pivoted in the container, with saw-tooth cutting-points disposed along lines oblique to radii of the disk and projecting obliquely from the face of the disk with a unitary open space in front of all the teeth of each row whereby the point and one edge of each cutting-point is caused to act on the soap with a self-burrowing cut, when the machine is operated, a cover for the top of the

container, a vertical spindle journaled in the cover, a crank for operating the spindle, means for coupling the spindle and cutter, and means for preventing rotation of the soap with the cutter, substantially as described.

14. A cutter comprising a blade having a serrated edge, each serration thereof being inclined upward from the horizontal plane of the cutter and each serration formed with an advancing cutting edge, the other edge of such serration forming an offset whereby each cutting edge cuts its own distinct shaving.

Signed at New York city, New York, this 30th day of December, 1904.

GEORGE FREDERICK SHAVER.

Witnesses:

SAMUEL W. BALCH,
HUGH H. SENIOR.