

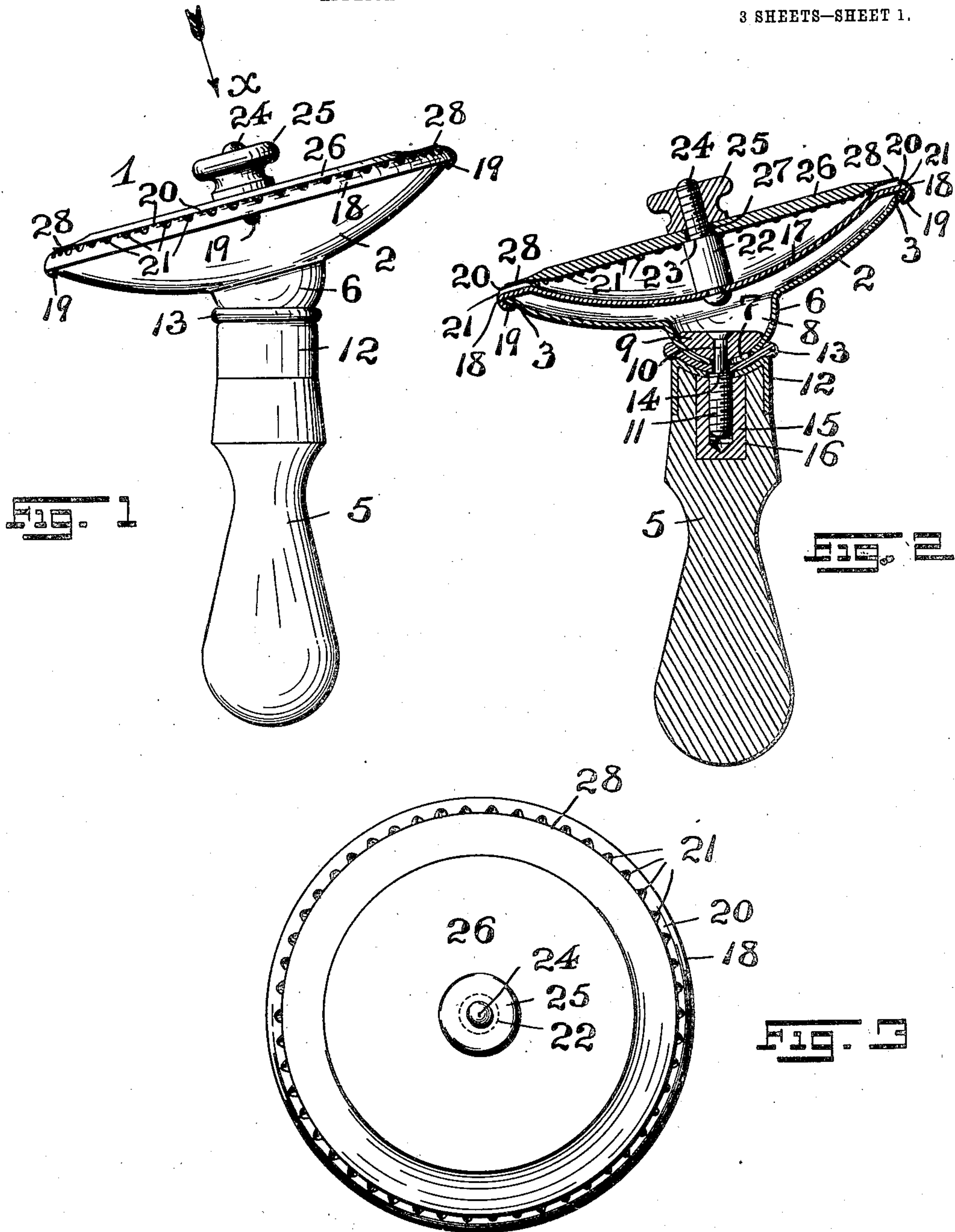
No. 827,718.

PATENTED AUG. 7, 1906.

B. VOM EIGEN.
SHAVING DEVICE.

APPLICATION FILED DEC. 2, 1905.

3 SHEETS—SHEET 1.



WITNESSES:
Geo. D. Richards
F. H. M. Fraentzel

INVENTOR:
Bertno vom Eigen,
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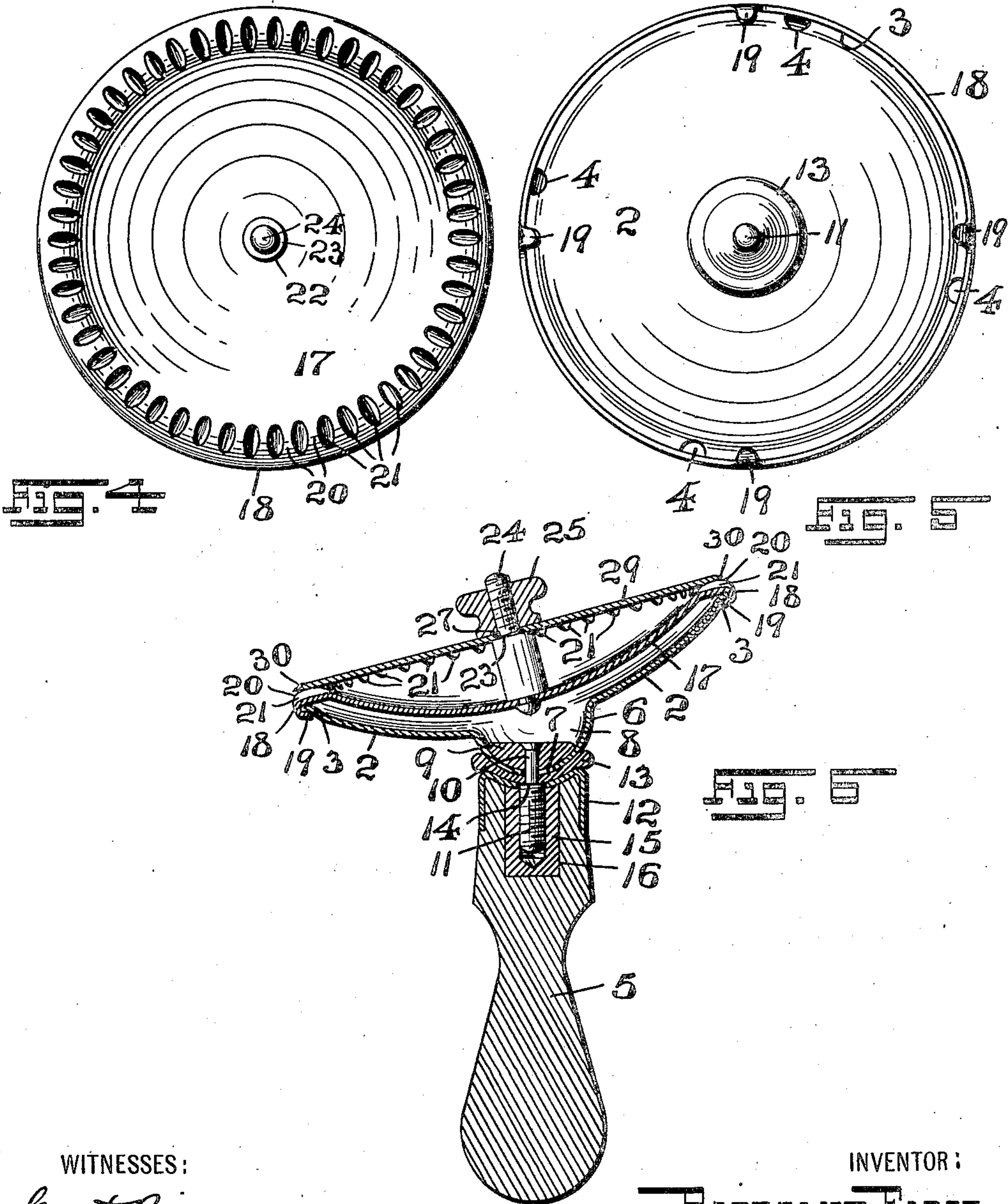
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3 SHEETS—SHEET 3.

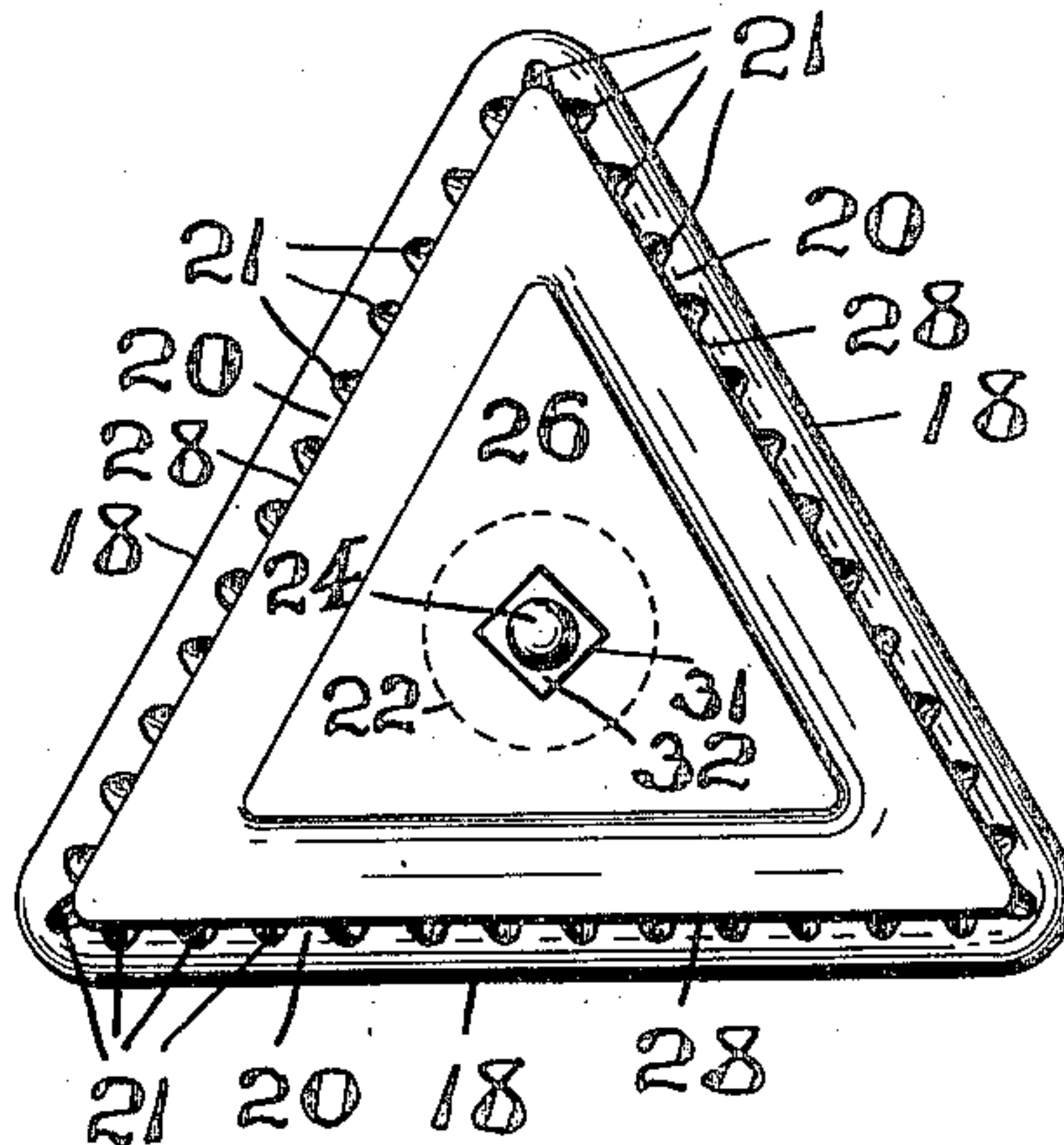
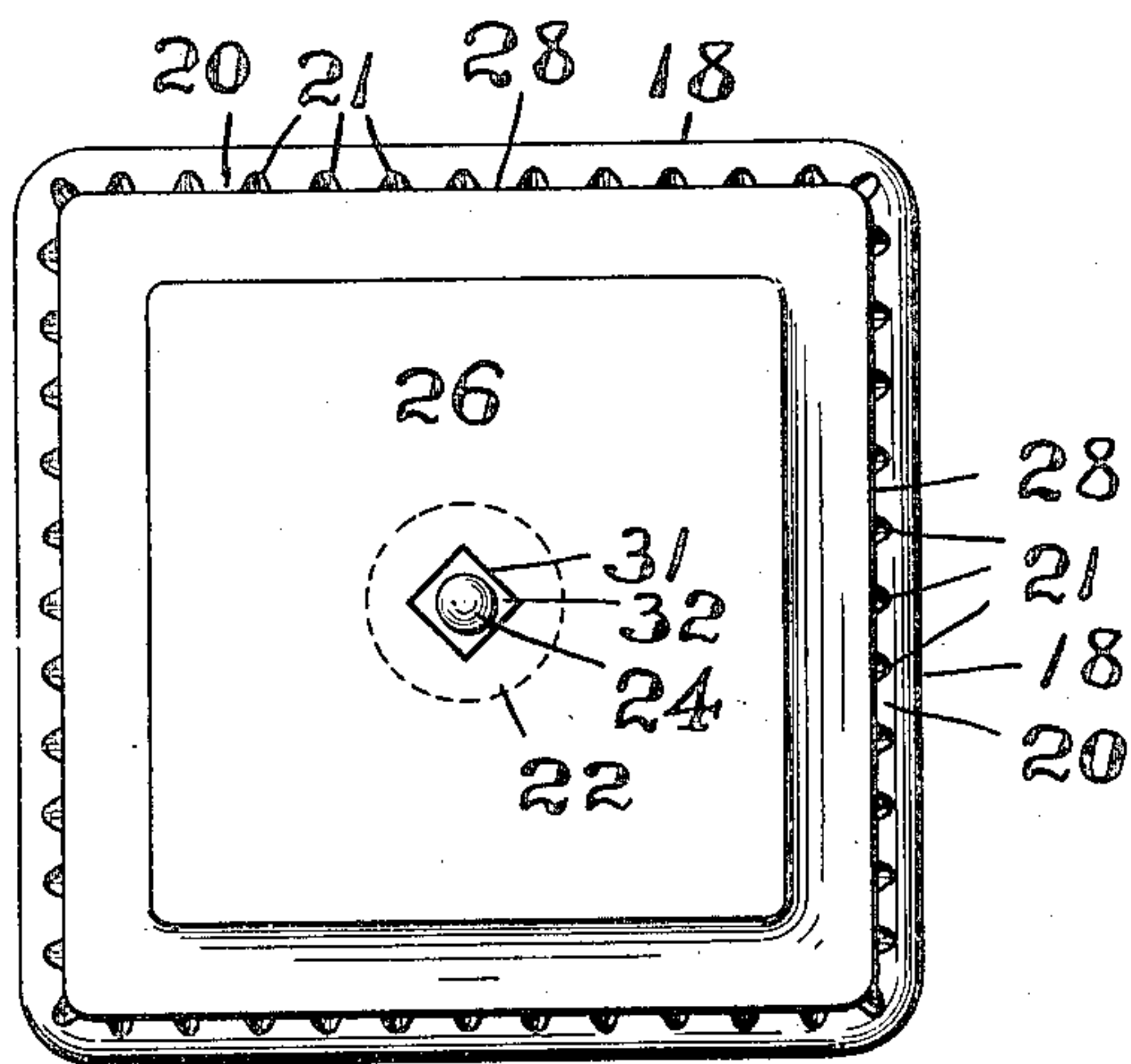
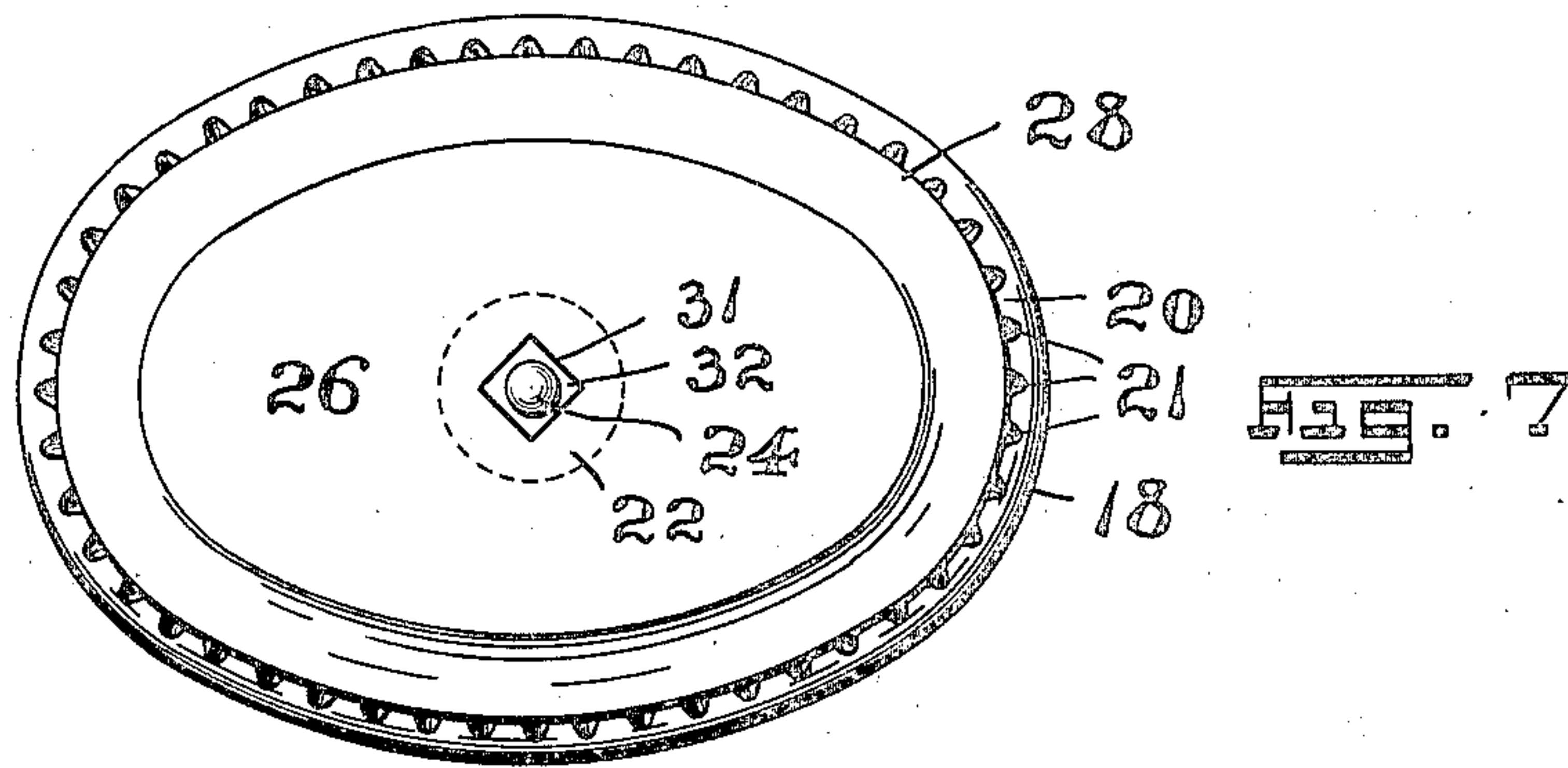


Fig. 8

Fig. 9

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UNITED STATES PATENT OFFICE.

BENNO VOM EIGEN, OF NEWARK, NEW JERSEY.

SHAVING DEVICE.

No. 827,718.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed December 2, 1905. Serial No. 289,961.

To all whom it may concern:

Be it known that I, BENNO VOM EIGEN, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Shaving Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

This invention has reference generally to improvements in safety-razors; and the invention relates more particularly to a novel construction of safety-razor which is provided with a razor-blade having a continuous cutting or shaving edge and which is of such a construction that the shaving device or razor can be applied to and moved upon the skin of any part of the face and neck of a person in any direction, either vertically, up or down, sidewise, or in any angular direction over the skin.

My present invention has for its principal objects to provide a novel construction of safety-razor and razor-blade therefor which shall be of a very simple and efficient construction and provides a blade having a continuous cutting or shaving edge which extends and is applicable for shaving on all sides of the blade.

A further object of this invention is to provide a safety-razor with a shaving-blade of the general character hereinafter specified, which presents innumerable cutting or shaving portions, so as to be capable of use for a very long time without having to further hone or strop the shaving or cutting edge of the blade.

A further object of this invention is to provide a safety-razor and blade therefor which can be easily manipulated by the most unskilled without any danger of cutting, gashing, or scratching the face, and, furthermore, when applied to the skin a uniform contact of the cutting portion of the blade with the skin being produced, and especially so in the case where the cutting edge of the blade is of a circular, elliptical, or oval configuration, the blade being more easily applied in the hollows of the neck of the person on account of the curved cutting edge of the blade conforming substantially to the contour of the

hollows between the neck and face of the person.

Another principal object of this invention is to provide a safety-razor of such a construction having in connection with the razor-blade a receptacle or receiver in which the lather and other matter from the face during the shaving is collected and can then be readily cleaned after the shaving operation has been performed.

A still further object of this invention is to provide an oscillatory bearing or ball-and-socket connection between a handle of the device and the blade support or frame to enable the user of the razor to set the razor-blade at any angle to the central longitudinal axis of the handle and the central support of the blade.

Other objects of this invention not at this time more particularly mentioned will be fully understood from the following detailed description of my said invention.

My present invention consists generally in the novel shaving device and razor-blade therefor embodying the various principles of this invention and hereinafter more fully set forth; and, furthermore, this invention consists in the various arrangements and combinations of the device and parts, as well as in the details of the construction of the same, all of which will be more fully described in the accompanying specification and then finally embodied in the clauses of the claim, which are appended to and which form an essential part of the specification.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a side view or elevation of the shaving device or safety-razor embodying the principles of this invention. Fig. 2 is a transverse vertical section of the same, and Fig. 3 is a top or plan view of the device looking in the direction of the arrow X in said Fig. 1. Fig. 4 is a similar view of the device with the razor-blade and securing-nut omitted from said view, and Fig. 5 is a rear view of the device detached from the handle. Fig. 6 is a transverse sectional representation of a shaving device embodying the principles of my present invention, but showing a shaving-blade of a slightly-modified form in cross-section. Figs. 7, 8, and 9 are plan views of modified forms of shaving devices or safety-razors each being provided with a razor-blade having a different marginal shaving or cutting edge.

Similar characters of reference are employed in all of the said above-described views to indicate corresponding parts.

Referring now to the several figures of the drawings, the reference character 1 indicates the complete shaving device or safety-razor embodying the principles of this invention, the same comprising a suitable concavo-convex shell or frame-plate 2, provided in its marginal edge 3 with a series of ear or lug receiving notches or cut-away parts 4, substantially as shown. This shell is preferably of a circular marginal configuration and is suitably secured to the end of a handle 5. One manner of attaching the shell to the end of handle 5 is by means of a universal or ball-and-socket joint, substantially as shown in Figs. 2 and 6 of the drawings. With this form of joint the shell is provided with a centrally-disposed and rearwardly-extending spherical projection 6, provided with an opening 7. Within the chambered portion 8 of the spherical projection 6 is a retaining or holding device 9, preferably in the form of a semispherical nut, as shown. A pin 10 is connected with the nut in any suitable manner, said pin extending into and through the opening 7 of the spherical projection 6 and being provided with a screw portion 11, which is screwed into the end of the handle 5. Between a suitably-constructed ferrule 12, suitably secured upon the end of the handle, said ferrule having a concaved end, and the outer convex surface of the spherical projection 6 is a correspondingly-formed washer 13, through which the pin 10 also extends and which rests upon a shoulder 14, formed by the preferably enlarged screw-threaded part 11 of the pin 10, as shown. Aside from the fact that this washer 13 serves the purpose of providing an ornamental finish between the end of the handle and the spherical projection 6 of the shell it serves also as a wear-plate and a means for tightly and operatively connecting the shell in any one of its oscillated or adjusted relations to the end of the handle. To provide a perfect and positive connection between the screw portion 11 and the end of the handle 5, a screw-threaded ferrule or sleeve 15, of metal, may be forced into a receiving-socket 16 in the wood of the handle for receiving the screw portion 11, as shown.

Resting upon the marginal edge 3 of the shell 2 is another concavo-convex or dished shell, plate, or disk 17, preferably of a circular marginal configuration made to conform with that of the shell 2 and provide a downwardly-extending marginal edge or bead 18, which can be fitted over the marginal edge 3 of the shell 2, substantially as indicated in the several figures of the drawings. That the plate 17 may be detachably connected with the shell 2, the plate is made upon its marginal edge or bead 18 with slightly down-

wardly and inwardly extending retaining or holding lugs or ears 19, corresponding to the number of the notches 4 in the marginal edge 3 of the shell 2. By inserting these hook-shaped ears 20 through the notches 4 and giving the plate 17 a slight turn the ears 19 are brought in holding engagement with the edge 3 of the shell 2, as clearly shown in Figs. 1, 2, 5, and 6 of the drawings, and thereby these parts are securely connected, but can be just as readily separated, as will be clearly understood.

From an inspection of Figs. 2 and 6 it will be seen that the curved body portion of the plate 17 when secured upon said shell will extend into the concaved portion of the shell and oscillate with the latter. The plate 17 is also provided in its raised marginal edge portion 20 with radially-disposed depressions 21, which extend from points near the marginal edge of the plate 17 and form channels leading directly into the depressed main body portion of said plate 17. The plate 17 is also provided with an upwardly-extending post 22, which has a shoulder 23 and is formed above said shoulder with a screw-stud 24 and suitable tightening-nut 25. The shoulder 23, as will be seen, lies in a plane passing through the lowest depths of the channels formed by radial depressions 21 and resting upon shoulder 23 by having its central hole or perforation 27 arranged about the screw-stud 24 is a shaving blade or disk 26, removably held in place by means of said nut 25. The said blade or disk 26 may be provided with a marginal and ground cutting or shaving edge 28, as indicated in Figs. 1, 2, and 3, or a thin disk or plate 29 of a tempered steel and provided with a sharpened knife or shaving edge 30 may be used, as shown in Fig. 6 of the drawings. From an inspection of Fig. 3 of the drawings it will be seen that the circular marginal shaving edges of the shaving-blades 26 and 29 are concentric with the marginal edge 18 of the plate 17, said edge terminating immediately back of the beginning of each channel 21, so as to nearly cover the channels, but leave sufficient opening to each channel to permit the lather and short hair which is removed from the skin by the shaving edges of blades 26 and 29 to enter and pass through the channel or channels into the receiving-chamber produced by the body of the blade and the concaved part of the plate 17.

The shells 2 and 17 and the blades 26 and 29 are preferably all of a circular marginal configuration; but other shapes may be used, as shown in Figs. 7, 8, and 9. Thus in Fig. 7 an oval or elliptic configuration of the parts is illustrated, while in Fig. 8 I have shown a square and in Fig. 9 a triangular configuration of the said parts.

In Figs. 7, 8, and 9 of the drawings that the

blades may be more readily assembled in their proper relations to their respective shells, plates, or disks each shaving-blade is made with a centrally-disposed opening 31 of a square or angular configuration, which is fitted upon a correspondingly-squared or angularly-shaped portion 32 between the post portion 22 and the screw-stud or part 24, as will be clearly evident from an inspection of said figures.

From the foregoing description of my invention it will be seen that I have devised a neat and simply-constructed shaving device which is provided with a shaving-blade entirely surrounded on its marginal edge or edges by a knife or shaving edge of maximum length, and it will be evident that the device may be used upon the skin for direct strokes in any direction, either forward or backward or sidewise, or it may be used in a reciprocatory manner, according to the conditions of the skin and desires of the person using the device.

It will, furthermore, be evident that after use the parts can be quickly separated for removing the lather and other matter, whereby the device is easily kept clean, and after cleansing the parts are again readily and easily assembled in their operative relation for shaving. Furthermore, on account of the increased shaving edge of the blade the device can be used for a very long time without honing or stropping.

Other advantages are that the knife-edges of the blades may be readily reground or, of furnishing with each shaving device a number of thin steel blades which are to be discarded when worn out.

I claim—

1. In a shaving device, a handle, a cup-shaped shell, and a shaving-blade, said shell and the blade forming a lather-receiving chamber, a second cup-shaped shell with which said first-mentioned shell is connected, and a means of oscillatory connection between said second shell and said handle, substantially as and for the purposes set forth.

2. In a shaving device, a handle, a cup-shaped shell, and a shaving-blade, said shell and the blade forming a lather-receiving chamber, a second cup-shaped shell with which said first-mentioned shell is connected, and a means of oscillatory connection between said second shell and said handle, consisting of a spherical extension on said second shell having a centrally-disposed hole, a semispherical nut in said extension, and a screw connected with said nut having its end screwed into the handle, substantially as and for the purposes set forth.

3. In a shaving device, a handle, a cup-shaped shell, and a shaving-blade, said shell and the blade forming a lather-receiving chamber, a second cup-shaped shell with

which said first-mentioned shell is connected, and a means of oscillatory connection between said second shell and said handle, consisting of a spherical extension on said second shell having a centrally-disposed hole, a semispherical nut in said extension, a ferrule provided with a cup-shaped end on said handle, a concavo-convex washer between said extension and the end of the ferrule, and a screw connected with said nut having a shoulder on which said washer rests and its screw end screwed into the handle, substantially as and for the purposes set forth.

4. In a shaving device, a handle, a cup-shaped shell having radially-disposed channel-forming grooves, and a shaving-blade having its shaving edge arranged over said grooves, said shell and the blade forming a lather-receiving chamber with which said grooves communicate, a second cup-shaped shell with which said first-mentioned shell is connected, and a means of oscillatory connection between said second shell and said handle, substantially as and for the purposes set forth.

5. In a shaving device, a handle, a cup-shaped shell having radially-disposed channel-forming grooves, and a shaving-blade having its shaving edge arranged over said grooves, said shell and the blade forming a lather-receiving chamber with which said grooves communicate, a second cup-shaped shell with which said first-mentioned shell is connected, and a means of oscillatory connection between said second shell and said handle, consisting of a spherical extension on said second shell having a centrally-disposed hole, a semispherical nut in said extension, and a screw connected with said nut having its end screwed into the handle, substantially as and for the purposes set forth.

6. In a shaving device, a handle, a cup-shaped shell having radially-disposed channel-forming grooves, and a shaving-blade having its shaving edge arranged over said grooves, said shell and the blade forming a lather-receiving chamber with which said grooves communicate, a second cup-shaped shell with which said first-mentioned shell is connected, and a means of oscillatory connection between said second shell and said handle, consisting of a spherical extension on said second shell having a centrally-disposed hole, a semispherical nut in said extension, a ferrule, provided with a cup-shaped end on said handle, a concavo-convex washer between said extension and the end of the ferrule, and a screw connected with said nut having a shoulder on which said washer rests and its screw end screwed into the handle, substantially as and for the purposes set forth.

7. In a shaving device, a circular cup-shaped shell, a centrally-disposed and upwardly-extending post, and a shaving-blade

on said post, said blade having its shaving edge concentric with and in close proximity to the edge of said shell or disk, substantially as and for the purposes set forth.

5 8. In a shaving device, a circular cup-shaped shell, a centrally-disposed and upwardly-extending post, said post being provided with a shoulder and a screw-stud, a shaving-blade arranged upon the shoulder of
10 said post, said blade having its shaving edge concentric with and in close proximity to the edge of said shell or disk, and a nut on said screw-stud for securing said shaving-blade in position, substantially as and for the purposes set forth.

15 9. In a shaving device, a cup-shaped shell having a circular marginal configuration, a centrally-disposed and upwardly-extending post, and a circular shaving-blade on said
20 post, said blade having its circular marginal shaving edge concentric with and in close proximity to the edge of said circular shell or disk, substantially as and for the purposes set forth.

25 10. In a shaving device, a cup-shaped shell having a circular marginal configuration, a centrally-disposed and upwardly-extending post, said post being provided with a shoulder and a screw-stud, a circular shaving-
30 blade arranged upon the shoulder of said post, said blade having its circular marginal shaving edge concentric with and in close proximity to the edge of said circular shell or disk, and a nut on said screw-stud for securing said shaving-blade in position, substantially as and for the purposes set forth.

35 11. In a shaving device, a handle, a cup-shaped shell having radially-disposed channel-forming grooves, and a shaving-blade
40 having its shaving edge arranged over said grooves, said shell and the blade forming a lather-receiving chamber with which said grooves communicate, said cup-shaped shell being provided with marginal holding-lugs,
45 and a second cup-shaped shell provided with marginal notches for the insertion therein of said holding-lugs, to slide said lugs in engagement with the marginal edge of said second shell, substantially as and for the purposes set forth.

50 12. In a shaving device, a handle, a cup-shaped shell having radially-disposed channel-forming grooves, and a shaving-blade having its shaving edge arranged over said
55 grooves, said shell and the blade forming a lather-receiving chamber with which said grooves communicate, said cup-shaped shell being provided with marginal holding-lugs, and a second cup-shaped shell provided with

marginal notches for the insertion therein of
60 said holding-lugs, to slide said lugs in engagement with the marginal edge of said second shell, and a means of oscillatory connection between said second shell and said handle, substantially as and for the purposes set forth.

13. In a shaving device, a handle, a cup-shaped shell having radially-disposed channel-forming grooves, and a shaving-blade having its shaving edge arranged over said
70 grooves, said shell and the blade forming a lather-receiving chamber with which said grooves communicate, said cup-shaped shell being provided with marginal holding-lugs, and a second cup-shaped shell provided with
75 marginal notches for the insertion therein of said holding-lugs; to slide said lugs in engagement with the marginal edge of said second shell, and a means of oscillatory connection between said second shell and said handle,
80 consisting of a spherical extension on said second shell having a centrally-disposed hole, a semispherical nut in said extension, and a screw connected with said nut having its end screwed into the handle, substantially as and for the purposes set forth.

14. In a shaving device, a handle, a cup-shaped shell having radially-disposed channel-forming grooves, and a shaving-blade having its shaving edge arranged over said
90 grooves, said shell and the blade forming a lather-receiving chamber with which said grooves communicate, said cup-shaped shell being provided with marginal holding-lugs, and a second cup-shaped shell provided with
95 marginal notches for the insertion therein of said holding-lugs, to slide said lugs in engagement with the marginal edge of said second shell, and a means of oscillatory connection between said second shell and said handle,
100 consisting of a spherical extension on said second shell having a centrally-disposed hole, a semispherical nut in said extension, a ferrule provided with a cup-shaped end on said handle, a concavo-convex washer between said extension and the end of the ferrule, and screw connected with said nut having a shoulder on which said washer rests and its screw end screwed into the handle, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 27th day of November, 1905.

BENNO VOM EIGEN.

Witnesses:

FREDK. C. FRAENTZEL,
GEORGE D. RICHARDS.