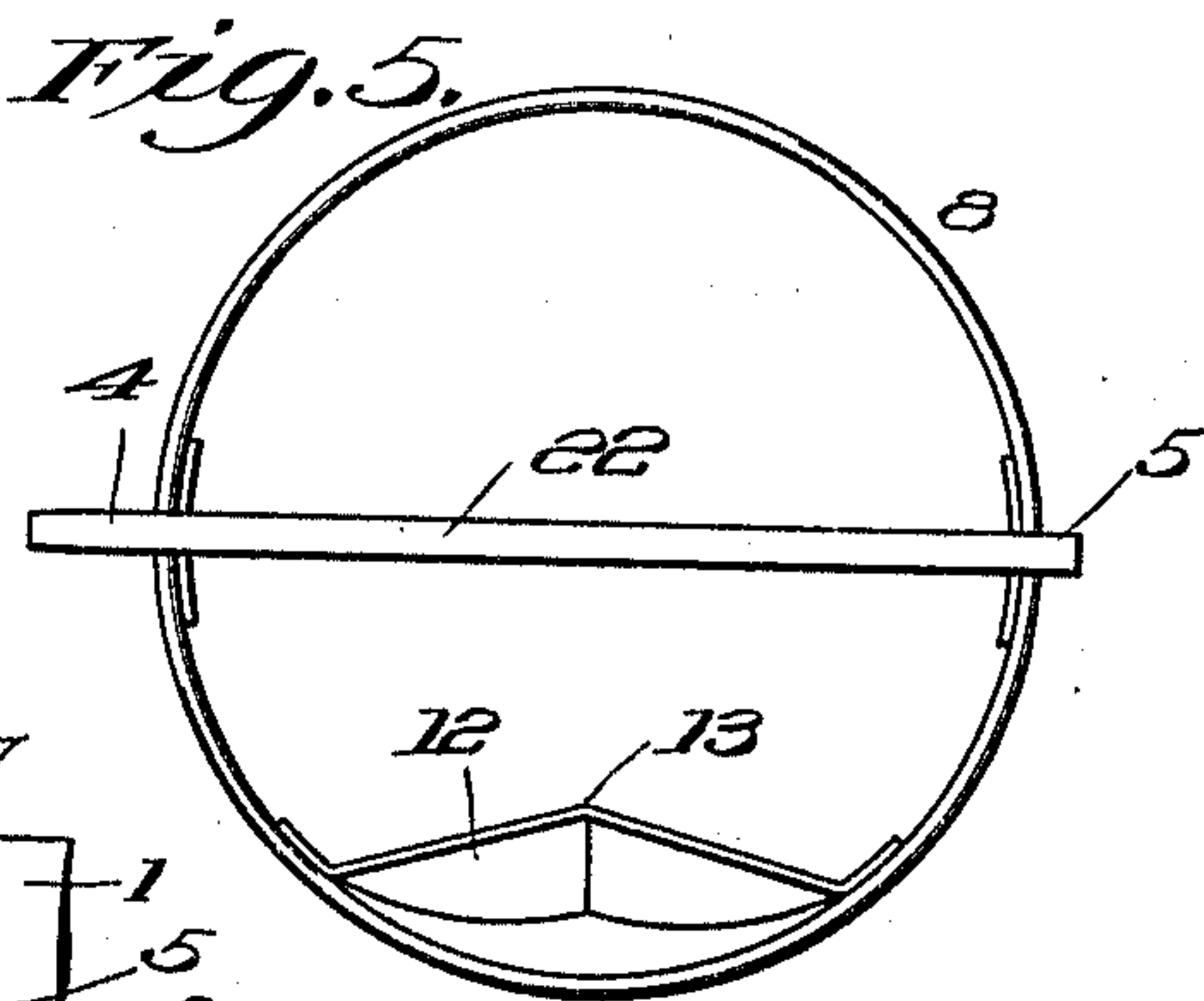
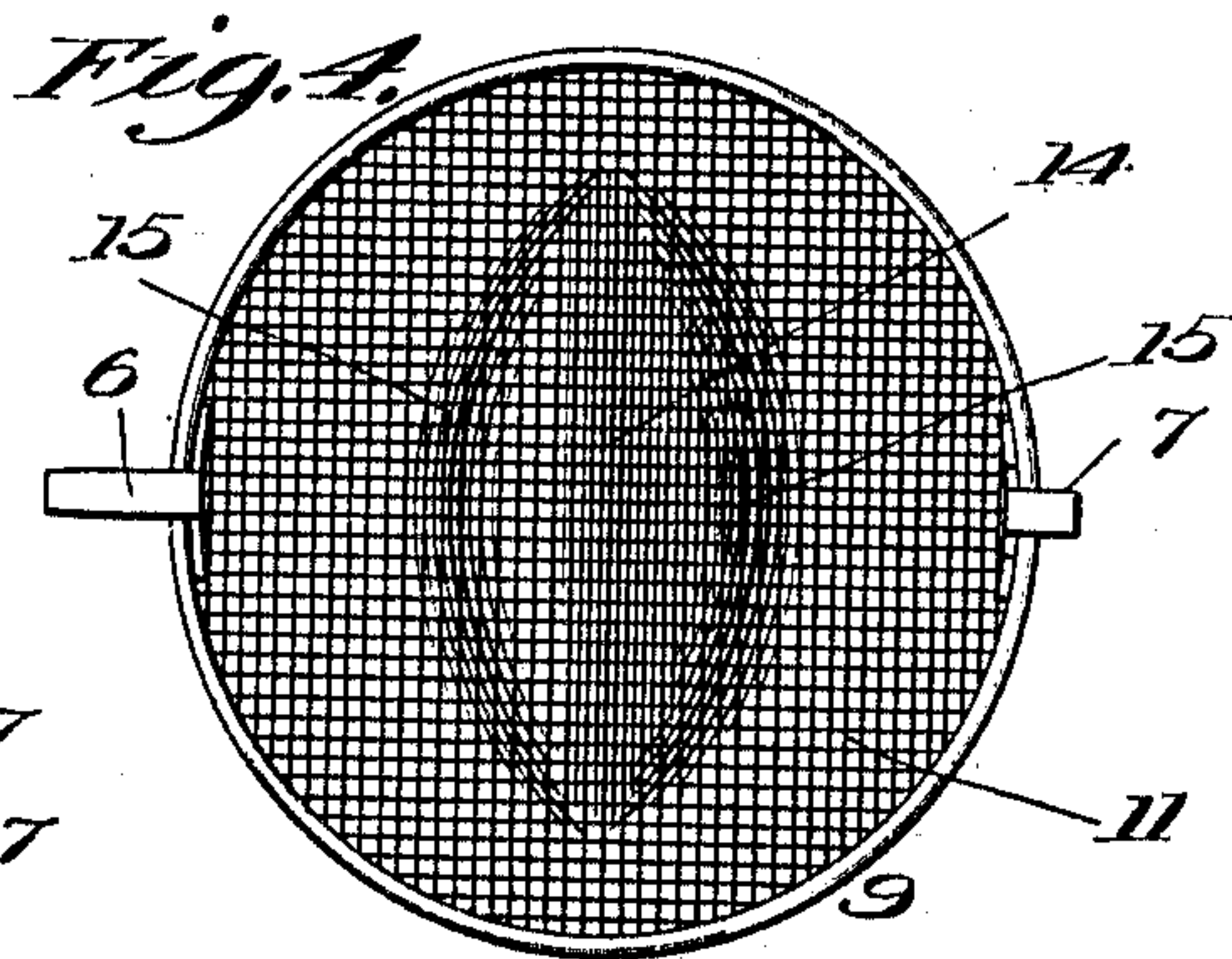
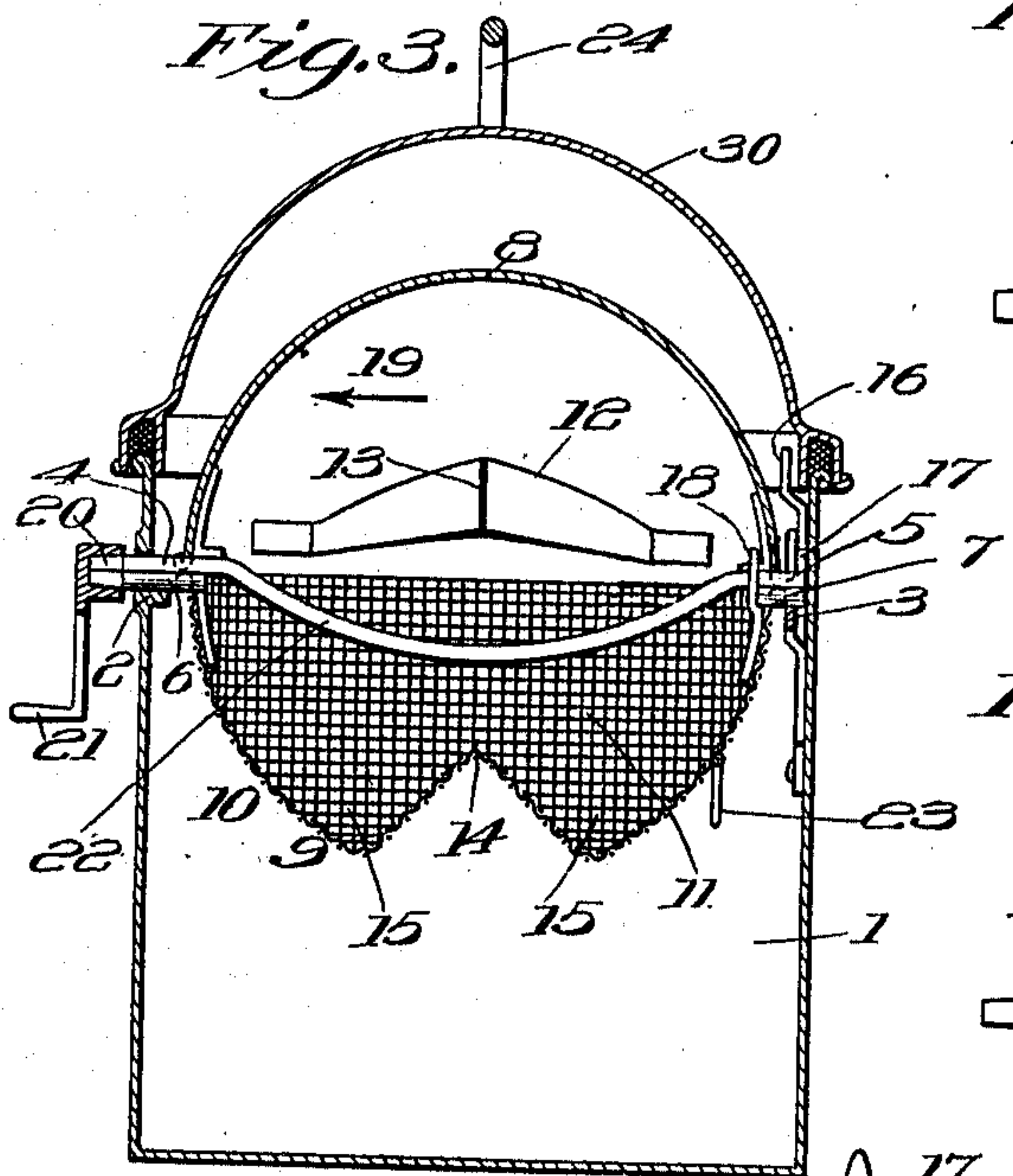
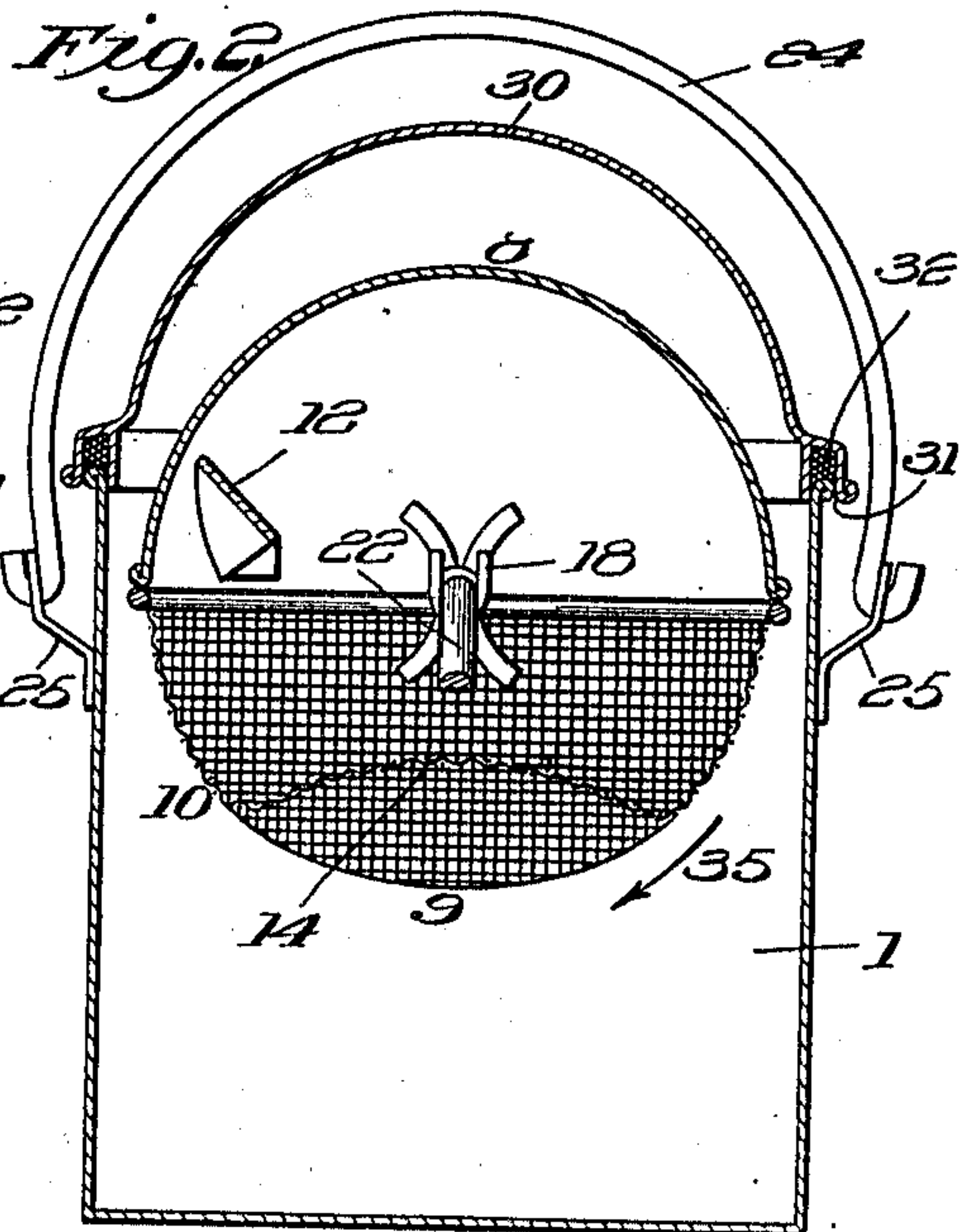
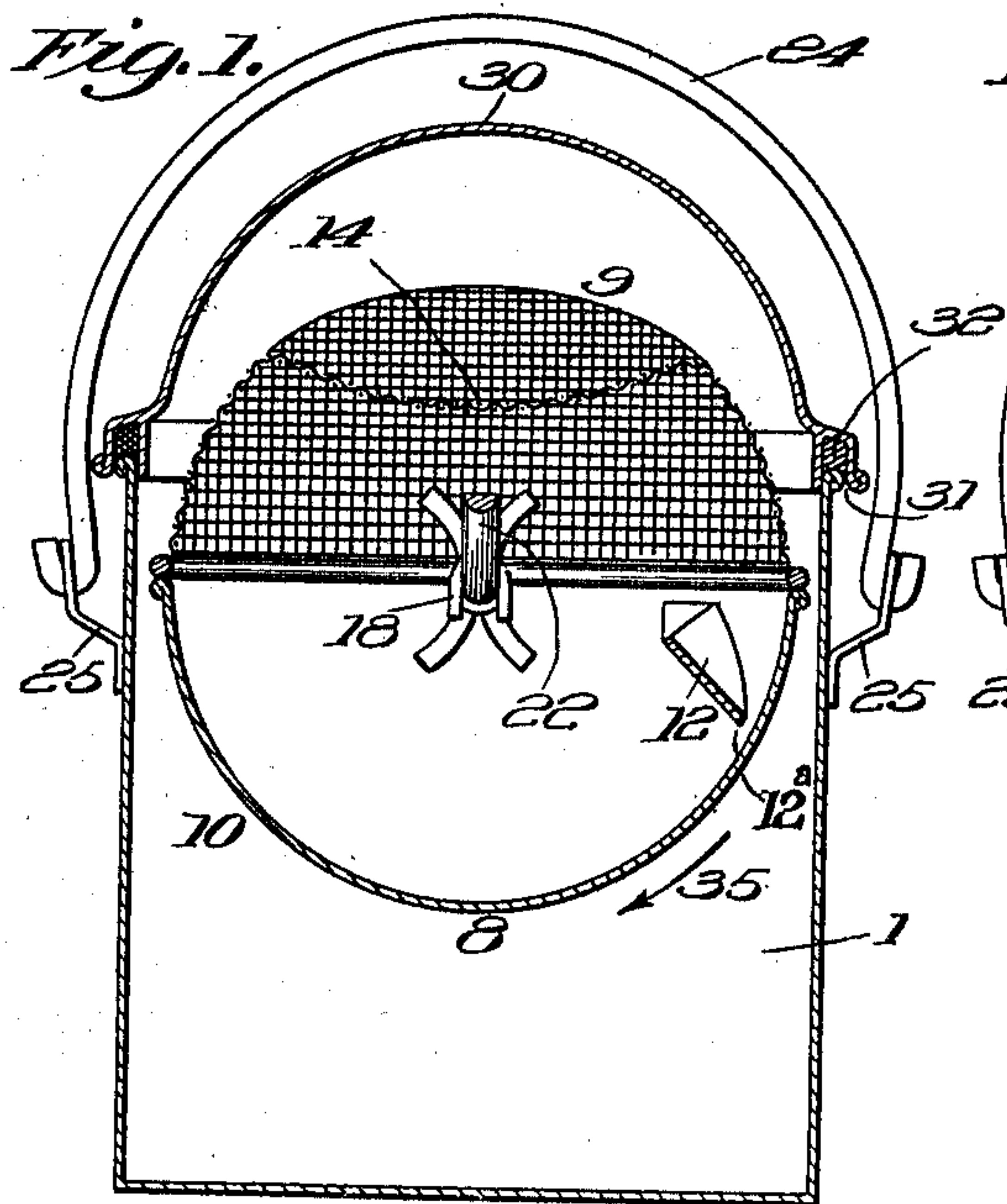


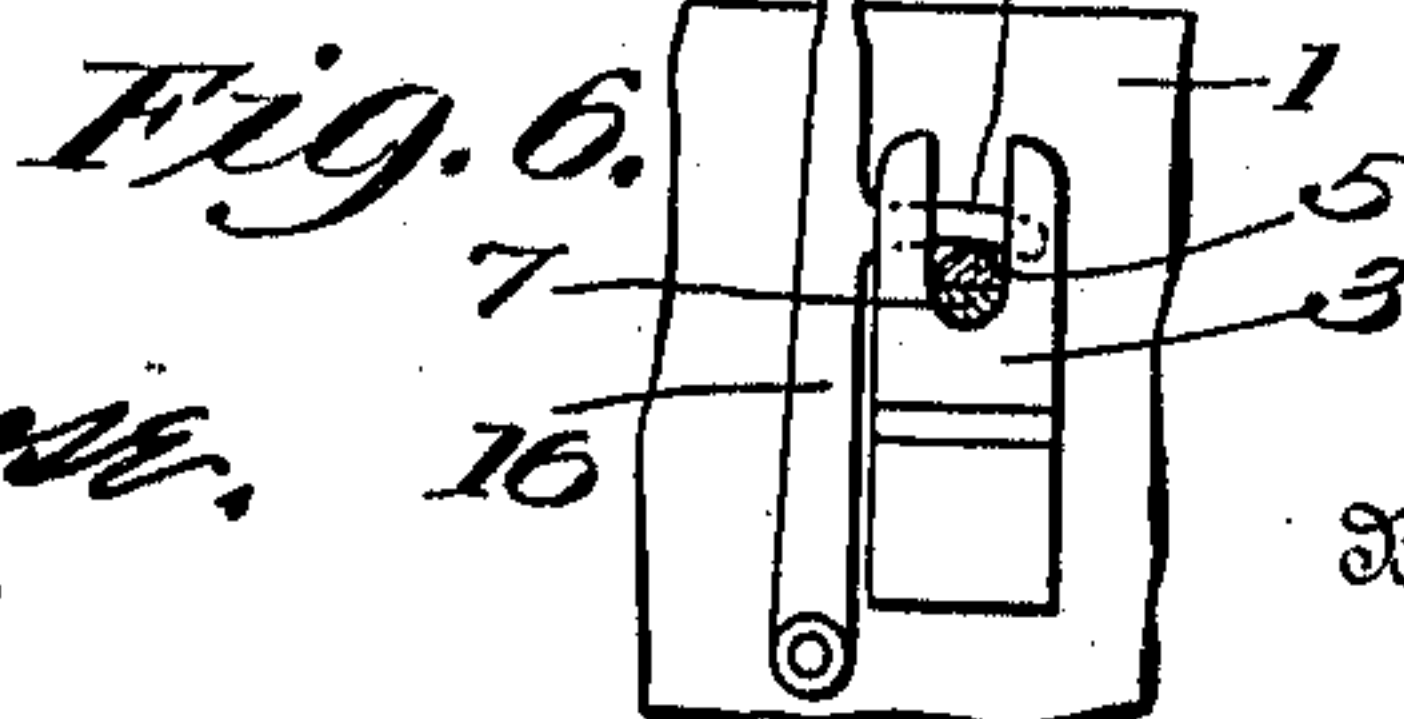
J. H. SCHOLDING.  
ASH SIFTER.  
APPLICATION FILED APR. 6, 1910.

993,722.

Patented May 30, 1911.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN H. SCHOLDING, OF YONKERS, NEW YORK.

ASH-SIFTER.

993,722.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed April 6, 1910. Serial No. 553,821.

*To all whom it may concern:*

Be it known that I, JOHN H. SCHOLDING, a citizen of the United States, and resident of Yonkers, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Ash-Sifters, of which the following is a specification.

This invention relates to improvements in means for sifting ashes or other products.

One object of the invention is to provide an improved form of sieve adapted to thoroughly separate the coarse from the finer particles of the products to be sifted, being particularly adapted for sifting ashes.

Another object is to provide a sieve of this character which will be simple and efficient in operation.

The invention consists in novel features of construction and arrangements of parts hereinafter described and pointed out in the claims.

A desirable embodiment of my invention is illustrated in the accompanying drawings, in which similar reference characters indicate corresponding parts in the several views.

Figure 1 is a vertical section illustrating my invention; Fig. 2 is a view similar to Fig. 1, but with parts shown in a different position from that shown in Fig. 1; Fig. 3 is a vertical section taken at right angles to Figs. 1 and 2, with the parts in the position corresponding to Fig. 2; Figs. 4, 5 and 6 are detail views of parts of the device.

A receptacle 1 is provided with bearings 2 and 3 to receive the trunnions 4, 5, 6 and 7 formed on the hemispherical members 8 and 9 of the spherical shell 10 in which the products to be sifted are placed, whereby said shell is rotatably mounted within the receptacle. The trunnions 4, 5, 6 and 7 are semi-circular in cross-section and are arranged with their flat surfaces in alinement with the flat edges of the hemispherical members 8 and 9; the trunnions 4 and 6 and 5 and 7 are also adapted to register with each other when the members 8 and 9 are placed together for use, so that such trunnions will be cylindrical in shape, thus insuring smooth rotation thereof in their respective bearings 2 and 3. The wall of the hemispherical member 8 is solid while the wall of the member 9 is perforated or foraminous and consists, preferably, of a screen or wire gauze 11. The member 8 is provided with a sep-

arator 12 which comprises a plate in the form of an isosceles triangle, one edge 12<sup>a</sup> of which is located near but spaced apart from the shell at a suitable distance, so as to permit the finer particles of the products to be sifted to pass between said plate and wall and drop into and through the screen 11 as the shells are rotated, the coarser particles of said products being gathered in front of said separator and carried around with the member 8 until the separator is in such a position that said particles will drop off into the hemispherical member 9, such position being shown in Fig. 2. The plate 12 is preferably plow-shaped, the sides thereof being secured to the member 8 and converging inwardly to an edge 13 so that the products will be diverted as they drop therefrom and fall on each side of the center of the member 9.

The wall of member 9 is provided with a ridge 14 which lies within a segment of the circle of rotation and divides the member 9 into two separate channels 15, the sides of said ridge being inclined toward the bottoms of said channels so that any particles which happen to drop on the top edge of said ridge will fall down said inclined sides into said channels or pass through the perforations. As the channels 15 are located on each side of the plane of edge 13 of separator 12, the products as they drop and are diverted by the diverging sides of the separator will be distributed in both of said channels, and as member 9 rotates the products resting in said member will be divided, part passing into each channel 15, sifting of the finer particles being effected as the member rotates beneath such products.

The bearing 3 is open at its top to permit the trunnions 5 and 7 to be inserted therein or removed therefrom as shown in Fig. 6. To prevent the trunnions 5 and 7 from lifting out of the open part of bearing 3, an arm 16 having a locking member 17 adapted to be brought over the top of said trunnions, is provided, as shown in Fig. 6. The ends of the trunnions 4 and 6 are provided with a squared portion 20 by means of which a crank 21 is attached to said trunnions, whereby the shell 10 is rotated. Hand power is not necessarily the only means of rotating the shell 10 as it is obvious that a pulley may be secured to said trunnions and the shell rotated by motive power without departing from the spirit of the invention.



The member 8 is shown provided with a handle 22 by means of which said member is lifted out or placed in receptacle 1. Parts 4, 5 and 22 are shown in a single piece, providing strength with security of parts. The member 9 is also provided with a handle 23 for manipulating the same. A yoke 18 secured to the member 9 straddles the handle 22 or trunnions of member 8 and rests against the inside of said member whereby lateral movement of the member 8 in the direction of the arrow 19 is prevented, and member 8 is guided to its working position when being applied. A handle 24 pivoted in brackets 25 secured to receptacle 1 is provided so that the receptacle may be conveniently lifted and dumped or carried about. A cover 30 may be provided for the receptacle to prevent the escape of dust. The cover 30 has formed therein an annular groove 31 provided with an annular packing ring 32. The upper edge of the receptacle fits in said groove against said packing ring when the cover is placed on the receptacle, whereby a dust-proof joint is insured between the receptacle and said cover.

The operation of my invention is as follows: Assuming the cover 30 and the shell 10 to be removed from the receptacle, and the arm 16 thrown back so that the locking member 17 will be out of registration with the bearing 3, the hemispherical member 8 is filled with the products to be sifted and placed within the receptacle 1, or such products are dumped in member 9 while it is in position, the trunnion 4 being first inserted through the opening in the bearing 2 and the trunnion 5 then inserted in the bearing 3; the member 9 is then placed within the receptacle, the trunnion 6 being first inserted through the opening in bearing 2, and the trunnion 7 then inserted in the bearing 3 so that both members and their trunnions will register with each other, and the yoke 18 will straddle the handle 22 and rest against the interior of the member 8, thus forming the shell 10 and inclosing the products to be sifted therein; the arm 16 is then swung toward the bearing 3 until the locking member 17 rests over the top of the trunnions 5 and 7, thus locking the shell in position to be rotated within receptacle 1; the cover 30 is then placed on the receptacle with the top edge thereof resting in the groove 31 against the packing ring 32; the crank handle 21 is then placed on the squared ends of the trunnions 4 and 6 and the shell 10 is rotated in the direction of arrow 35 until the products are thoroughly sifted.

By means of the separator 12, ridge 14 and channels 15 the particles are continually being separated and dropped into the screen 11 and tumbled over and over and generally agitated to such an extent that the

finer particles of the products are very quickly and thoroughly sifted through the screen 11 into receptacle 1. When the shell 10 is at rest it assumes the position shown in Fig. 1 of the drawing, with the heavier hemispherical member 8 resting below the member 9 and containing the coarser particles of the products, so that the coarser products may be taken out of the receptacle while within member 8.

To remove the sifted products the cover 30 is first removed from the receptacle, the arm 16 is then swung around until the member 17 releases the trunnions 5 and 7, the member 9 is then tilted and moved upwardly, so that the trunnion 7 will first be moved upwardly out of the open end of bearing 3 with the trunnion 6 following through the opening in bearing 2 until the member 9 is removed from the receptacle; the member 8 is then removed from the receptacle in the same manner with the trunnion 5 first passing out through the open end of the bearing 3 with the trunnion 4 following through the opening in the bearing 2. The coarser particles are then taken out of the member 8 and the finer particles are removed from the receptacle as desired.

Having now described my invention what I claim is:—

1. The combination with a receptacle, of a shell rotatably mounted in said receptacle, said shell having a perforated portion with a ridge therein extending in the direction of rotation and a plate in the shell having converging sides adapted to distribute the material in the shell and on the ridge.

2. The combination with a receptacle, of a shell rotatably mounted in said receptacle, said shell having a perforated portion through which the finer particles of the products are sifted and a solid portion, a plow-shaped separator secured to the solid portion of said shell, the outer adjacent edge of said plow-shaped separator being spaced apart from the inner surface of said solid portion to permit the finer particles of the products to pass therethrough and into said perforated portion.

3. The combination with a receptacle, of a shell rotatably mounted in said receptacle, said shell having a perforated portion provided with a ridge extending in the direction of rotation of the shell forming channels on opposite sides thereof, the said ridge being within a segment of the circle of rotation.

4. The combination with a receptacle, of a shell rotatably mounted in said receptacle, said shell having an imperforate portion and an opposed perforated portion, the imperforate portion being provided with a separator, and the perforated portion having a ridge receiving particles dropped thereon from the separator.



5. The combination with a receptacle, of a shell rotatably mounted in said receptacle, said shell having an imperforate portion provided with a separator having one edge at a distance from said imperforate portion, said shell also having a perforated portion provided with a ridge pressed inwardly from the material thereof forming channels on opposite sides of the ridge. 15
- 10 6. The combination with a receptacle, of a shell rotatably mounted in said receptacle, said shell having an imperforate portion provided with a separator having one edge at a distance from said imperforate portion, said shell also having a perforated portion provided with a ridge pressed inwardly from the material thereof forming channels on opposite sides of the ridge, and a yoke carried by one portion of the shell adapted to coact with a trunnion of the other portion of the shell. 20

Signed at New York city, in the county of New York, and State of New York, this 4th day of April, A. D. 1910.

JOHN H. SCHOLDING.

Witnesses:

T. F. BOURNE,

MARIE F. WAINWRIGHT.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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