

No. 609,285.

Patented Aug. 16, 1898.

E. LUNDGREN.
VESSEL CLEANER.

(Application filed Feb. 8, 1898.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 4.

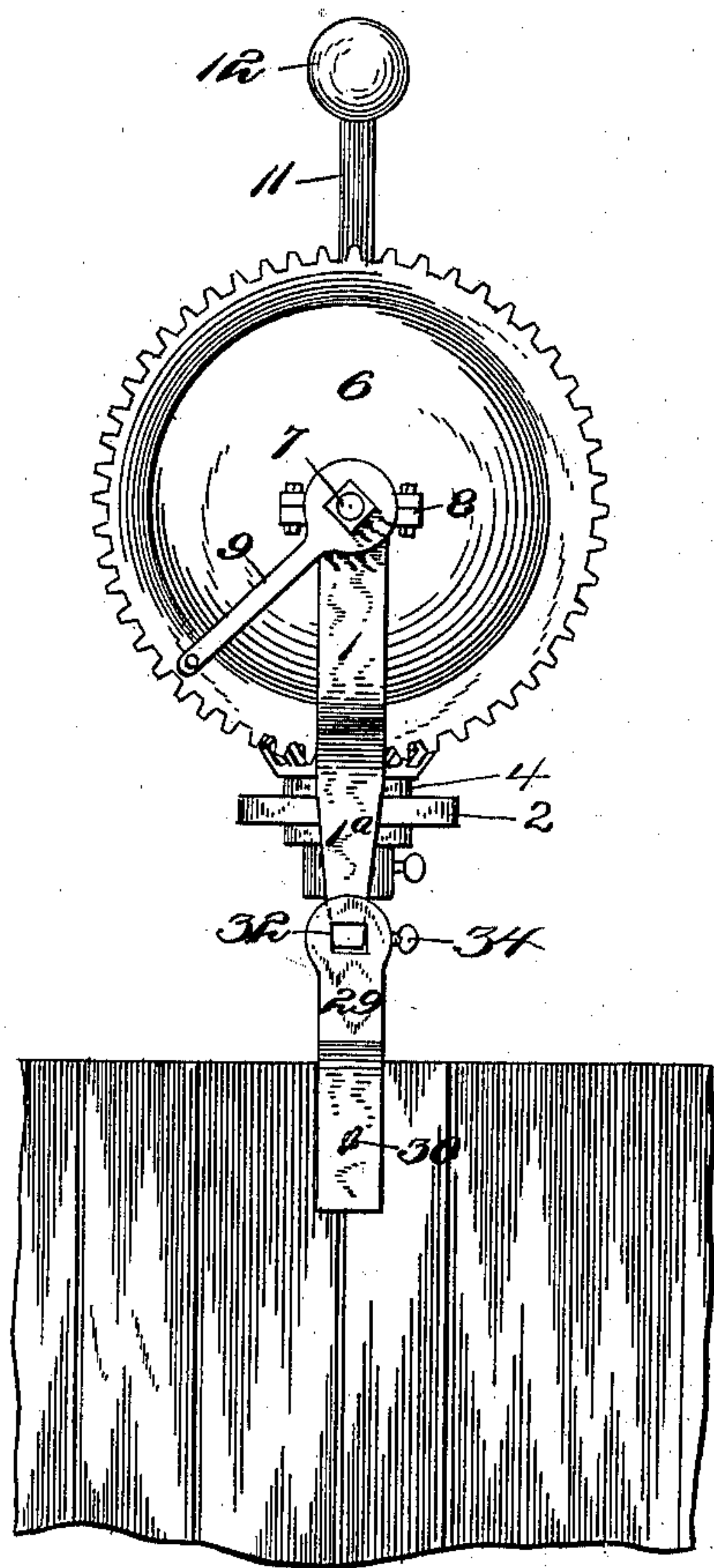


Fig. 6.

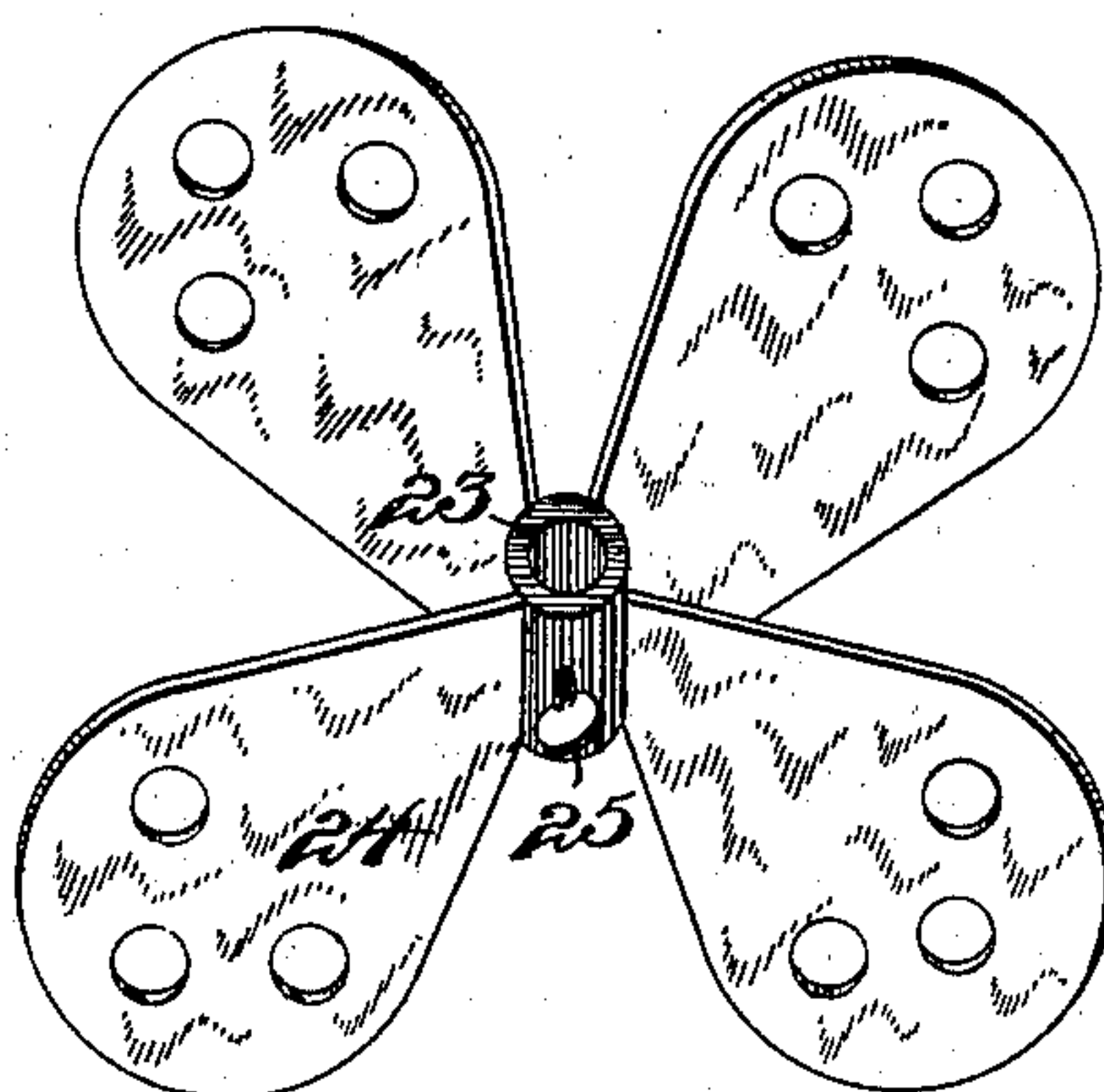


Fig. 7.

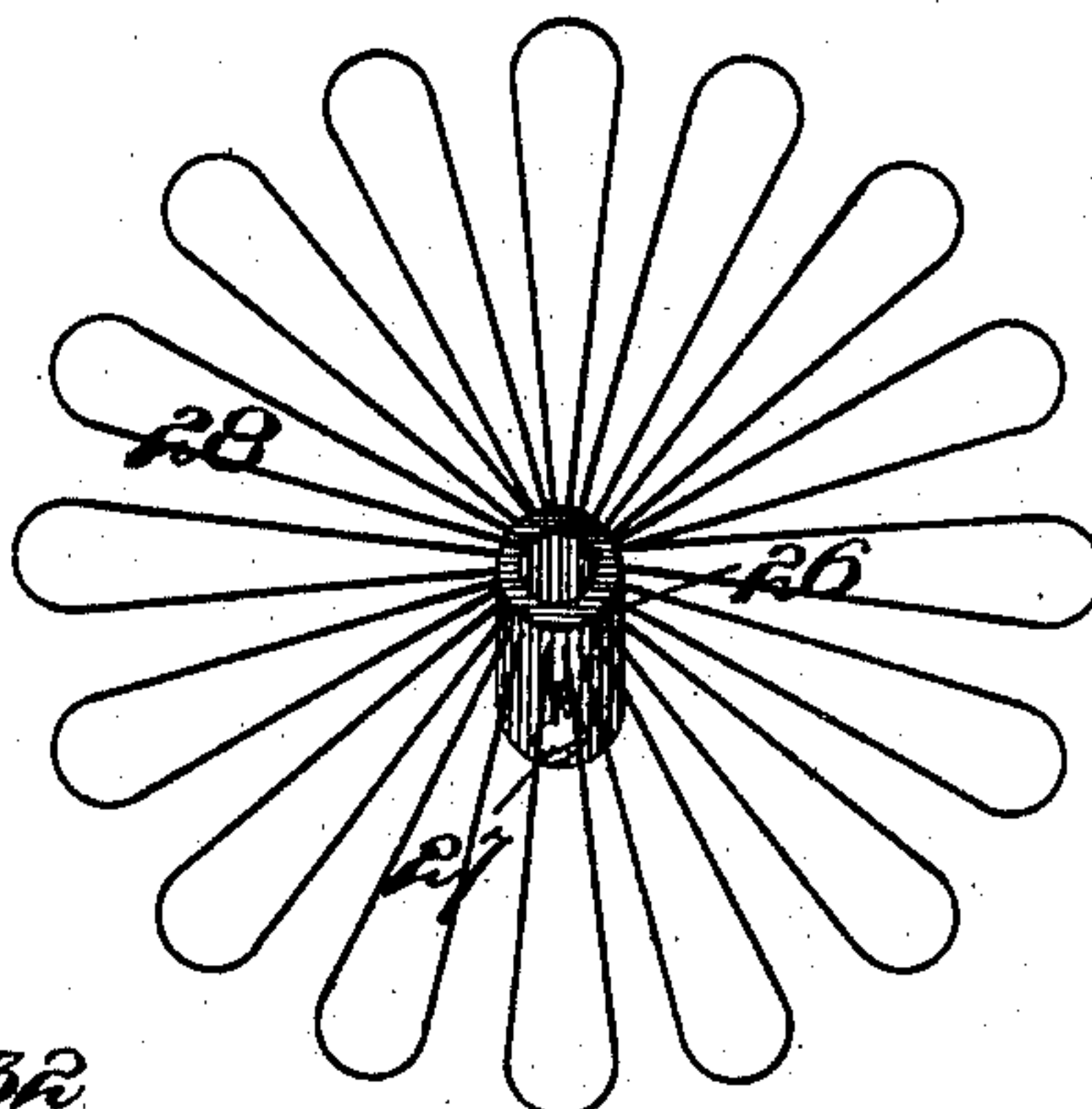


Fig. 5.

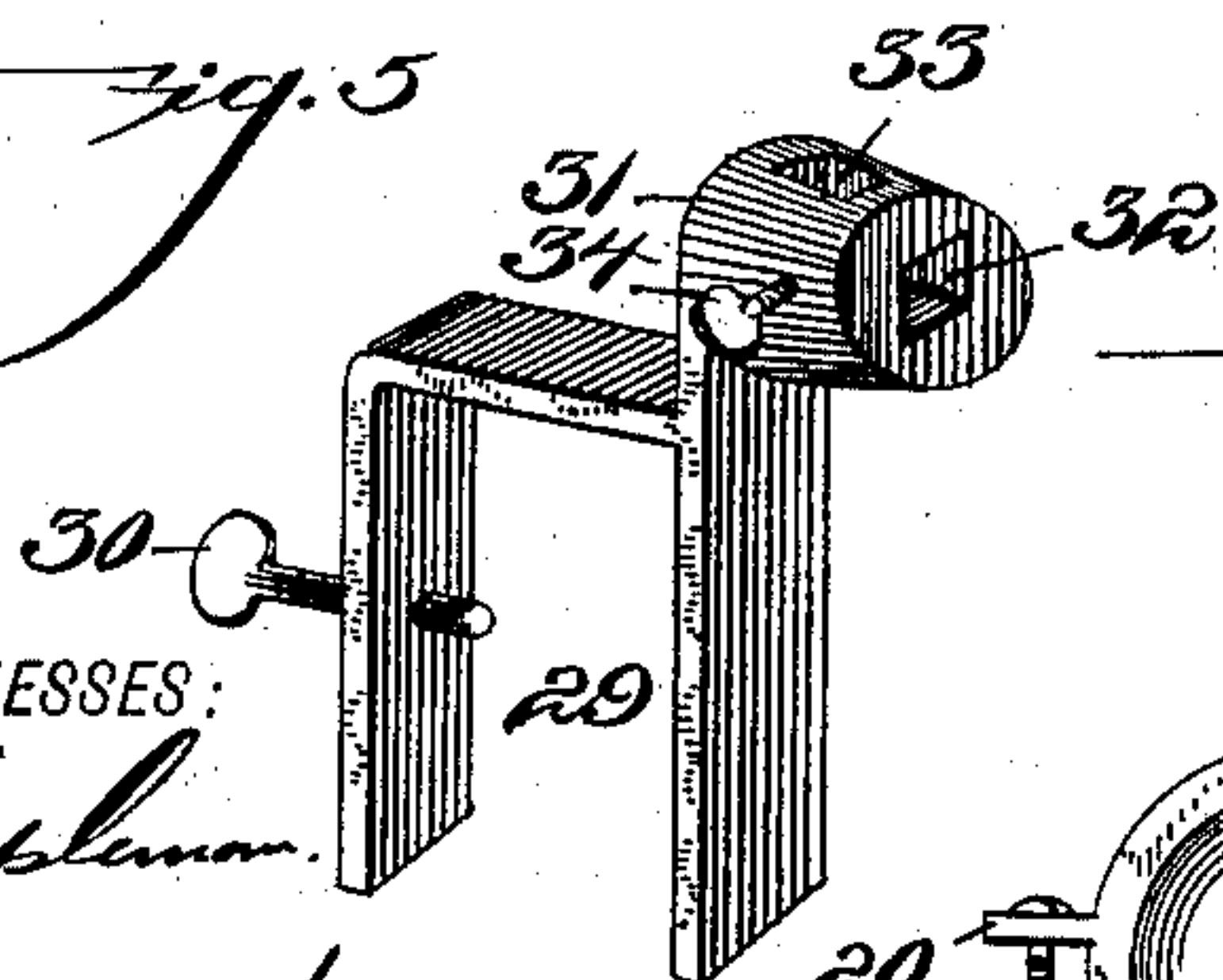
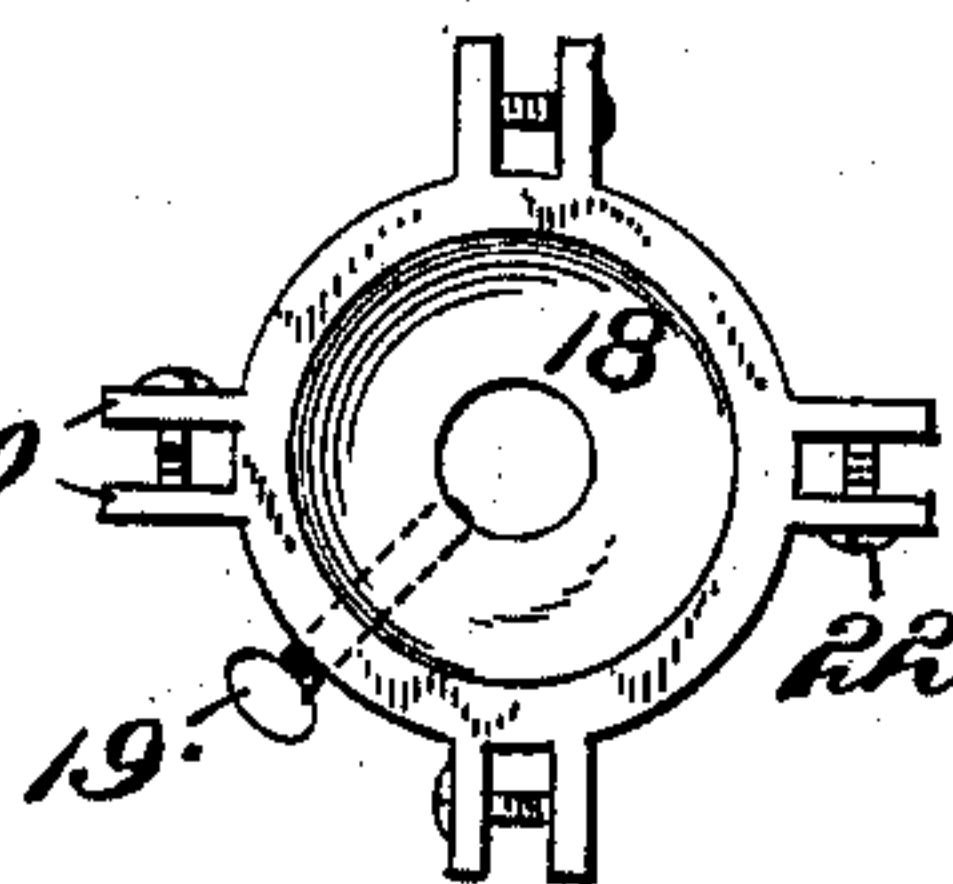


Fig. 8.



WITNESSES:

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EMIL LUNDGREN, OF ZILENOPH, PENNSYLVANIA.

VESSEL-CLEANER.

SPECIFICATION forming part of Letters Patent No. 609,285, dated August 16, 1898.

Application filed February 8, 1898. Serial No. 669,523. (No model.)

To all whom it may concern:

Be it known that I, EMIL LUNDGREN, a citizen of the United States of America, residing at Zilenoph, in the county of Butler and State of Pennsylvania, have invented certain new and useful Improvements in Vessel-Cleaners, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in vessel-cleaners; and it has for its object to provide a cleaner which may be employed in cleansing such vessels as milk-cans and the like and which may also
15 be adapted for various other purposes, among which is the substitution for the cleansing-brushes of a turbine, and thereby using the device for churning, or the substitution of an egg-beater, the substitution of a single brush,
20 whereby the device may be used for cleaning lamp-chimneys and the like, or various other uses to which the main principle of the invention may be adapted.

The principal features of my invention
25 comprise a rotatable shaft which passes through a bevel-gear that is driven by a larger gear having a crank for operating the same.

A clamp is provided for engaging the device to the table, tub, or other object to which it is desired to fasten the same, and the shaft
30 is adapted to carry the brushes, beaters, or the like, the former of which may be pivotally hung from a fulcrum-disk attached to the shaft, so that when the shaft is rapidly
35 revolved the centrifugal motion will force the brushes outwardly and into engagement with the sides of the vessel. I also provide means whereby the shaft may be locked and retained at one position within the wheel or the
40 same may be rapidly revolved, while at the same time raised and lowered by the operator, if so desired. All of this novel construction will be hereinafter more specifically described, and particularly pointed out in the claims.

45 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like figures of reference indicate similar parts throughout the several views, in
50 which—

Figure 1 is a side elevation of my improved vessel-cleaner attached to a table and also

showing a sectional view of a portion of the vessel and the movement of the brushes in dotted lines. Fig. 2 is a front view with the
55 shaft removed and a short shaft with but one brush attached thereto substituted in lieu of the movable shaft. Fig. 3 is a perspective view of a portion of the shaft. Fig. 4 is a rear view of the vessel-cleaner, showing the
60 manner in which the same may be attached to a tub or the like. Fig. 5 is a perspective view of the clamp for holding the cleaner in position. Fig. 6 is a perspective view of the turbine which may be attached to the shaft
65 and the device thereby used for churning. Fig. 7 is a perspective view of an egg-beater which may be attached to the shaft. Fig. 8 is a plan view of the fulcrum-disk to which the brushes are pivotally secured.
70

To put my invention into practice, I provide a frame from which the driving-gearing is supported, said frame being composed of an upright or standard 1, which has formed integral therewith a longitudinally-extending
75 plate 2, the latter being apertured to receive the sleeve 3, which is designed to operate in said aperture and is provided with a flange 4, which rests upon the upper face of the said plate. This sleeve has secured to its upper
80 end a bevel-gear 5, which is adapted to mesh with and be driven by a larger bevel-gear 6, which is carried by a shaft 7, for which a journal-box 8 is provided on the upper end of the standard 1, said shaft 7 having a crank
85 9 secured to its free end, by means of which motion is communicated to the gears. The sleeve 3 may be locked in its position in the plate 2 by means of the collar or washer 10, engaging around the said sleeve below the
90 plate 2. Passing through the aforesaid sleeve 3 and the bevel-gear 5 is a vertical shaft 11, which is or may be provided on its upper end with a knob or other suitable handle 12 and may be locked at any position within the
95 sleeve by means of the set-screw 14, engaging through said sleeve. This vertical shaft or rod may be provided with a flat side 16 to receive the set-screw 14, if desired. To the lower end of this vertical shaft or rod is at-
100 tached the brushes, beaters, or other objects, as the case may be, and when the device is used as a vessel-cleaner I preferably secure the series of brushes 17 to the disk 18, which

may be securely fastened to the vertical shaft or rod by means of the set-screw 19, said disk having jaws 20 arranged around its periphery, which are adapted to receive the stems 5 21 of the brushes, which are or may be fastened within said jaws by means of screws 22 or other suitable fastenings.

In Fig. 2 I have shown the shaft or rod 11 removed and the shorter shaft or rod 11^a secured in the sleeve, said shaft having a rigid brush 17^a secured in its free end. This form may be conveniently used for cleaning lamp-chimneys and the like. The turbine shown in Fig. 6 is adapted to permit the device to 15 be used for churning and comprises a collar or sleeve 23, to which the paddles 24 are attached, said collar or sleeve carrying a set-screw 24 for fastening a turbine to the shaft or rod 11. The egg-beater shown in Fig. 6 is likewise composed of a collar or sleeve 26, having a set-screw 27, provided with a series of beaters 28, arranged around its periphery in any desired form.

For the purpose of permitting a securing 25 of the device to various objects—such as a table, tub, or the like—I provide a universal clamp 29 for the set-screw 30, and a head 31, which is provided with sockets 33 33, also carries the set-screw 34.

30 When the device is attached to a table or the like, the socket 32 will receive the supporting-stem 1^a, formed on the frame, and when the device is to be attached to a tub, which is the position shown in Fig. 4 of the drawings, the socket 33 will receive the afore- 35 said stem, the set-screw 34 engaging the stem, so as to retain the same in its position when inserted in the sockets.

Motion is communicated to the shaft, and 40 consequently to the brushes or other device attached to the ends of the same, by turning the crank 9, causing the gear 6 to operate the gear 5 and sleeve 3, this latter thereby revolving the shaft. When the set-screw 14 45 is adjusted firmly against the shaft, the same will be retained at the one elevation; but when this set-screw is loosened the shaft may be raised and lowered by the operator simultaneously with the revolving of the same, 50 and thereby bring the brushes into contact with all portions of the inner face of the vessel.

Where it is desired to use the brush at one elevation at all times, the long shaft or rod

11 may be removed and a single brush, as is 55 shown in Fig. 2, substituted and locked therein by means of the set-screw 10.

The device may be used for various other purposes by removing the disk 18, carrying the brushes, and substituting therefor the 60 turbine, egg-beater, or other device which it is desired to use. It will also be noted that various changes may be made throughout the details of construction without departing from the general spirit of my invention. 65

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

1. In combination, a frame comprising a vertical standard or upright and a horizontal 70 plate, which is provided with an aperture to receive a sleeve, a bevel-gear secured to the upper end of said sleeve, a shaft journaled in the upright and carrying a bevel-gear to engage with the aforementioned bevel-gear 75 of the sleeve, a supporting-clamp for the frame and a vertical rod or shaft passing through the sleeve and having a series of brushes fulcrumed thereto, as and for the purpose set forth. 80

2. In combination, a frame, a supporting-clamp for same, a shaft journaled in said frame, a bevel-gear secured on one end of said shaft, and a crank on the other, a sleeve supported by and operating in said frame, a bevel- 85 gear secured on said sleeve and engaging the aforementioned bevel-gear, a vertical shaft or rod passing through said sleeve, a removable disk on said rod and a series of brushes fulcrumed in said disk, as and for the pur- 90 pose set forth.

3. In combination, a frame, an adjustable clamp for supporting said frame, a bevel-gear carried by said frame, a sleeve carried by and operating in said frame, a bevel-gear carried 95 by said sleeve and engaging the aforementioned bevel-gear, and a movable shaft passing through said sleeve, said shaft carrying devices, which are rotated through the operating of the shaft, substantially as shown 100 and described.

In testimony whereof I affix my signature in the presence of two witnesses.

EMIL LUNDGREN.

Witnesses:

JOHN NOLAND,
WILLIAM E. MINOR.