

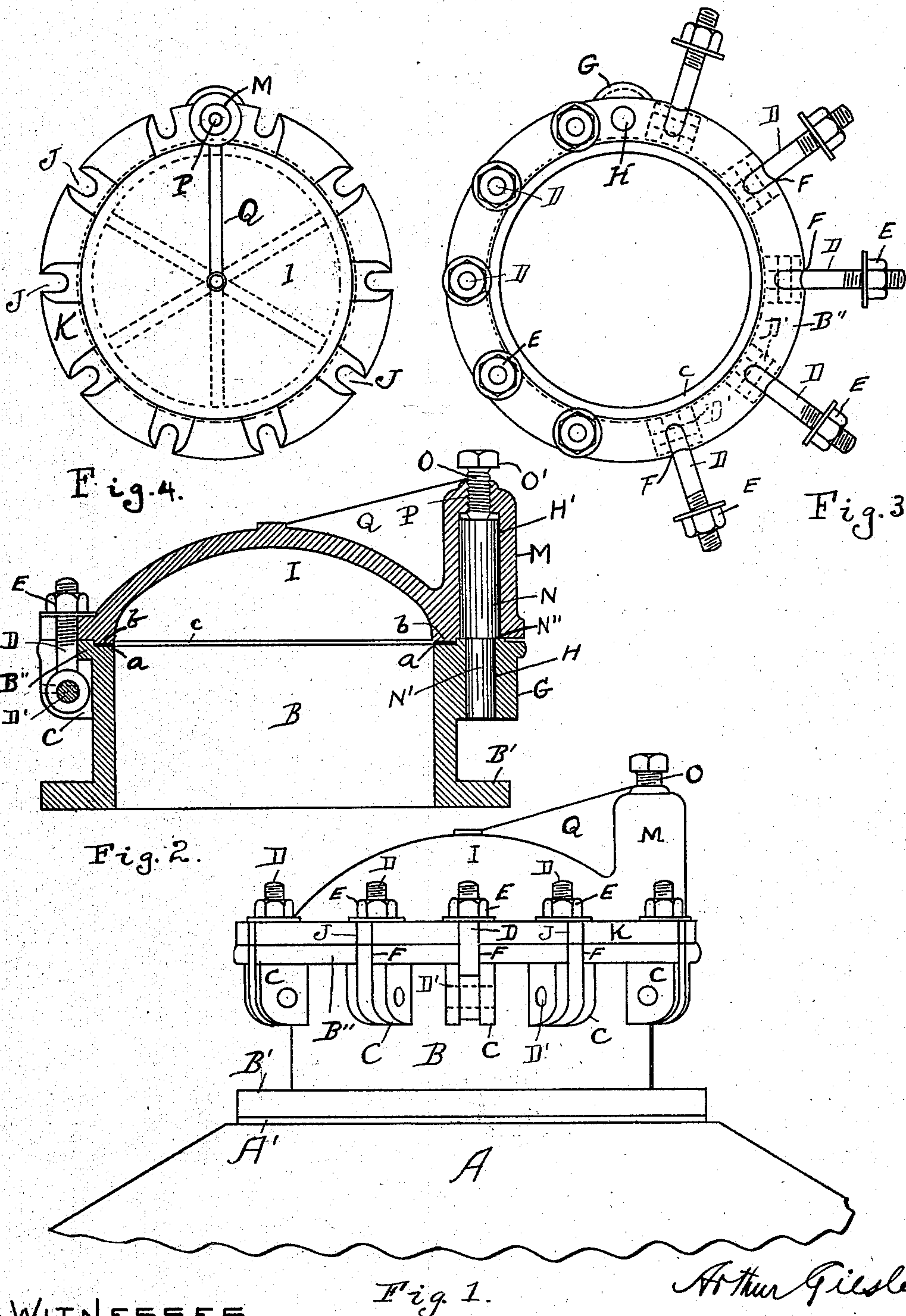
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A. GIESLER.
COVER FOR TANKS.

(Application filed July 11, 1902.)

(No Model.)



WITNESSES.
Matthew S. Sibley
Carolyn M. Theobald

Arthur Giesler
INVENTOR.
By R. J. McCarty,
his ATTORNEY.

UNITED STATES PATENT OFFICE.

ARTHUR GIESLER, OF DAYTON, OHIO, ASSIGNOR TO THE STILWELL-BIERCE & SMITH-VAILE COMPANY, OF DAYTON, OHIO, A CORPORATION OF NEW JERSEY.

COVER FOR TANKS.

SPECIFICATION forming part of Letters Patent No. 714,296, dated November 25, 1902.

Application filed July 11, 1902. Serial No. 115,143. (No model.)

To all whom it may concern:

• Be it known that I, ARTHUR GIESLER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Covers for Tanks; and I do 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 the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in apparatus-covers—such, for example, as digesters, retorts, and other vessels or apparatus of similar nature.

The invention is especially applicable to digesters for rendering oils, fats, glue, &c. Heretofore in connection with digesters common gate-valves were used, with the objectionable feature that when the material was dumped into the digester, or, in other words, when the digester was being filled, some of the parts of the material would remain in the slots or grooves of said gate-valve and prevent a tight closing of said valve. The material so lodging in the slots or grooves of the valve became harder and harder in the course of time and accumulated to such an extent that the valve could not be closed at all. This rendered necessary a thorough cleansing of the valve upon each filling of a digester.

The present invention comprises a cover which does away with all of the objectionable features outlined above, is simple in operation, and may be quickly manipulated by a single person. The digesters referred to are of great size, and the covers likewise are very heavy. The fact, therefore, that the present cover may be manipulated to open and close the same by a single person is a matter which is highly appreciated by the users of rendering apparatus. It further may be stated that the cover can be closed upon the vessel or digester in a much tighter manner than was possible to close the gate-valve hereinbefore referred to.

Preceding a detail description of my inven-

tion reference is made to the accompanying drawings, of which—

Figure 1 is a side elevation of the upper portion of a rendering or digester apparatus, showing my improved cover in position thereon. Fig. 2 is a sectional elevation through the cover and the flanged ring which surmounts the top of the digester. Fig. 3 is a top plan view of the cover. Fig. 4 is a top plan view of the flanged ring, the cover being removed.

A designates the upper portion of a rendering apparatus or digester, to which my improved cover is applied. The mouth or open end of the same is provided with a flanged ring A', to which is bolted or otherwise permanently secured a flanged ring B, the bolts passing through the flange B' of said ring. Projecting from the upper end of said ring B is a lateral flange B''. Immediately below the flange B'' there is a series of lugs C, projecting from the sides of the ring B and extending around said ring at uniform distances. Each two of these lugs C provide a space in and out of which is movable a series of locking-bolts D. These bolts are pivoted between the lugs C by pivot-pins D', and the said bolts receive upon their upper screw-threaded ends nuts E. The flange B', which, as before stated, is a portion of the ring B, has a series of slots F, each of which is in line with the space between each two of the lugs C in order that the bolts may be raised to an upright position, as shown in Fig. 1. The ring B has on one side thereof a projection G, which is provided with a vertical opening H, extending entirely through it.

I designates a cover, the circumference of which has a series of recesses J, into which the bolts D enter when said bolts are moved to the upright positions, as in Fig. 1. The recesses J are in the flanged portion K of said cover, said flanged portion being of substantially the same width as the flange B''. The cover I has an upright projection M on one side thereof, in which there is a bore H'. The bore H' is of somewhat wider diameter than the opening or bore H in the extension G, which, as before stated, is on the ring B. When the cover is in position, as in Figs. 1

and 2, the parts M and G occupy the same vertical plane and the openings or bores H and H' are in alinement.

N designates a pin, the lower portion N' of which is of a less diameter than the upper portion of said pin and is driven into the bore H in the projection G until the shoulder N'' comes in contact with the surrounding surface of projection G, so that the said pin will have a tight fit in the flanged ring B. The upper portion of said pin fits loosely in the bore H', so that the cover I may be turned on said pin as a hinge.

The inner upper surface of the ring B is provided with an annular packing-recess *a*, and the cover I is provided with a matching surface or projecting portion *b*. Between these parts a suitable packing-ring *c* is placed. It is obvious that in order to swing the cover I upon its pivot-hinge N the said cover must be first elevated a sufficient height to remove the annular projection *b* out of the recess *a*. This is accomplished by means of a screw O, which penetrates a screw-threaded opening P in the upper portion of the extension M and makes contact with the upper end of the pin N. The said screw may have a square or hexagon head O', by means of which it may be turned in either direction to lower or raise the cover.

It will be understood that the cover I is elevated by turning the screw O in one direction, and by turning said screw in the other direction said cover is lowered. The cover is joined with the vertical projection M by means of a web Q to impart the necessary strength to the structure.

When the cover is in a closing position, as in Figs. 1 and 2, it will be understood that the bolts D are elevated to positions within the openings J in said cover, and the nuts E are turned tightly in position to make a tight connection between the cover and the ring. The cover is moved to the closed position and is then lowered by turning the screw O in the proper direction, as hereinbefore specified.

Having described my invention, I claim—

1. A cover comprising a ring, a series of bolts pivoted around the circumference of said ring, a projection on one side of said ring, said projection having an opening, a cover inclosing said ring the same having a series of recesses around its circumference into and out of which the said pivotal bolts are movable, a projection on one side of said cover having an opening, said projection lying in the plane above the projection on the ring a pivot-pin the lower portion of which is reduced in diameter to enable it to enter the opening in the projection on the ring, the upper portion of said pin being within the opening in the projection on the cover, a screw penetrating the projection on the cover above the upper end of said pin, said screw being adapted to raise or lower the cover from the ring and to thereby enable the cover to be turned upon the pin in opening said cover, substantially as set forth.

2. A cover of the class above specified, comprising a flanged ring having a series of locking-bolts pivoted around the circumference of said ring, a projection G on one side of said ring having an opening therein, a pin secured within said opening, a packing-ring recess around the upper surface of said ring, a cover having a series of openings in the circumference thereof in and out of which the locking-bolts are movable, a projection M on one side of said cover above the projection G, an opening in said projection M into which the pin loosely projects, a screw-threaded opening in the top of said projection M, and a screw penetrating said screw-threaded projection and adapted to make contact with the upper end of the pin, to raise or lower the cover, substantially as set forth.

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

ARTHUR GIESLER.

Witnesses:

JOHN W. KALBFUS,
R. J. McCARTY.