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C. WELLHÖFER.

SPITTOON.

No. 561,247. Patented June 2, 1896.

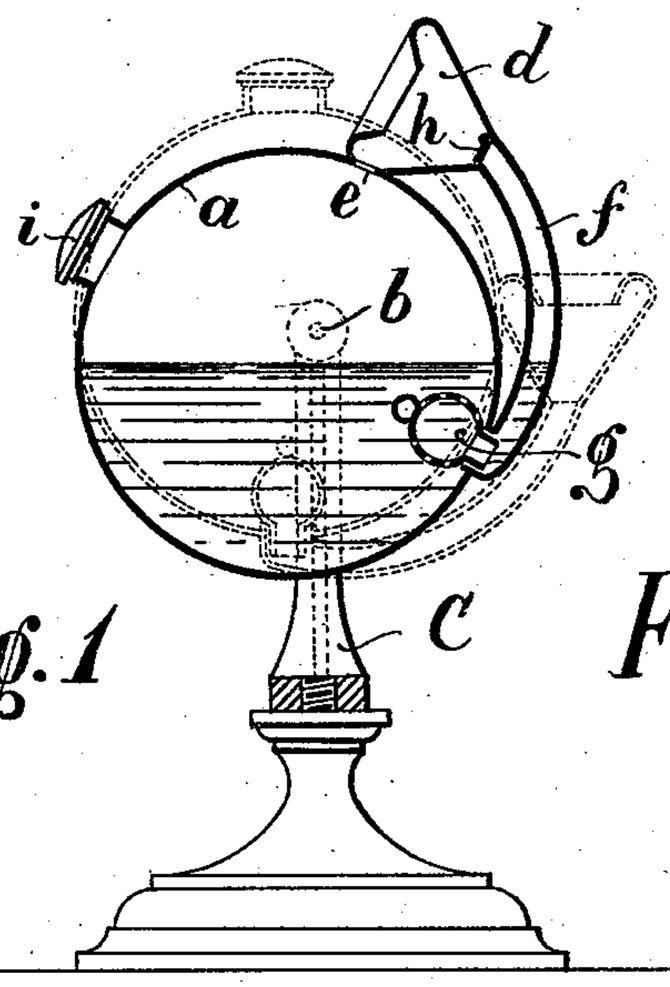


Fig. 1

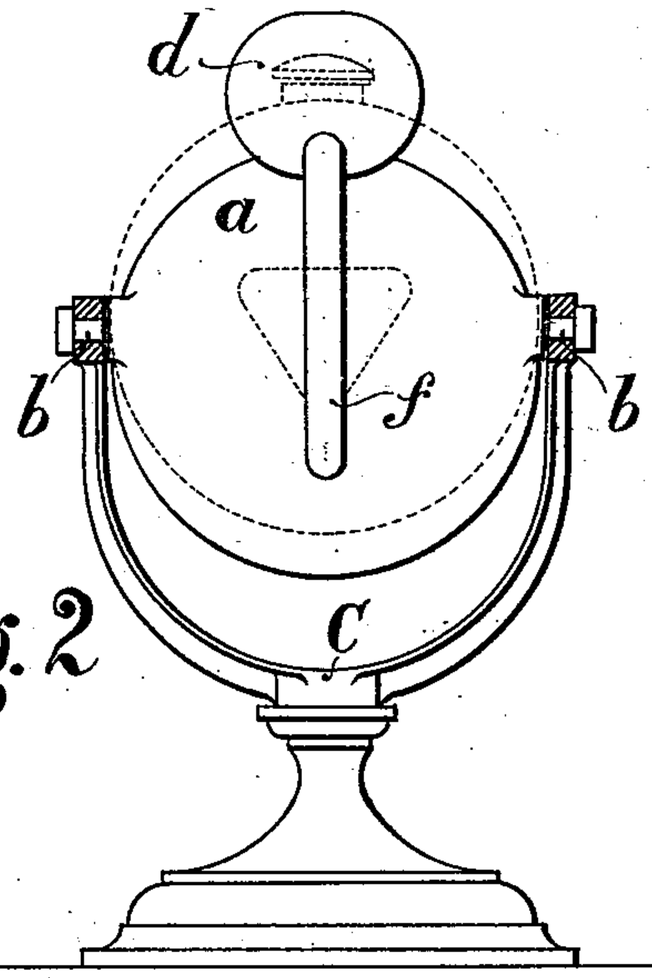


Fig. 2

Fig. 3

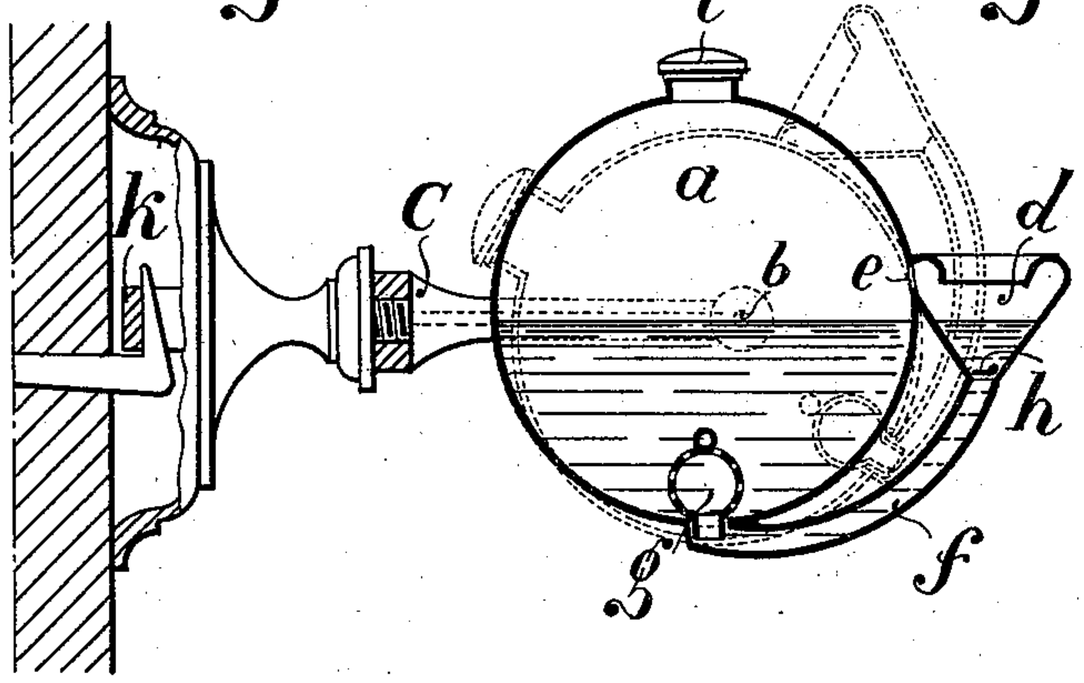
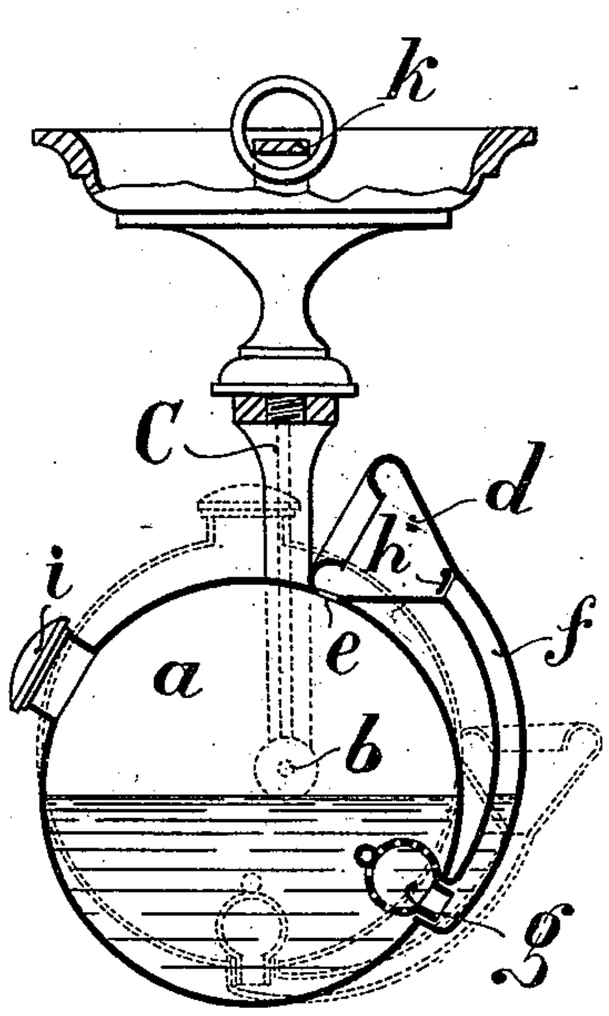


Fig. 4



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(No Model.) 3 Sheets—Sheet 2.

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SPITTOON.

No. 561,247. Patented June 2, 1896.

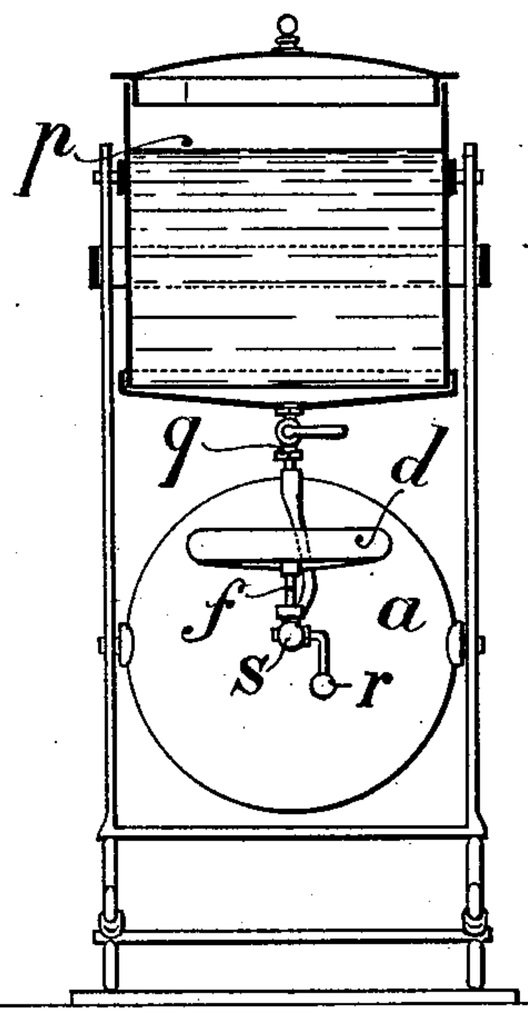

Fig. 8

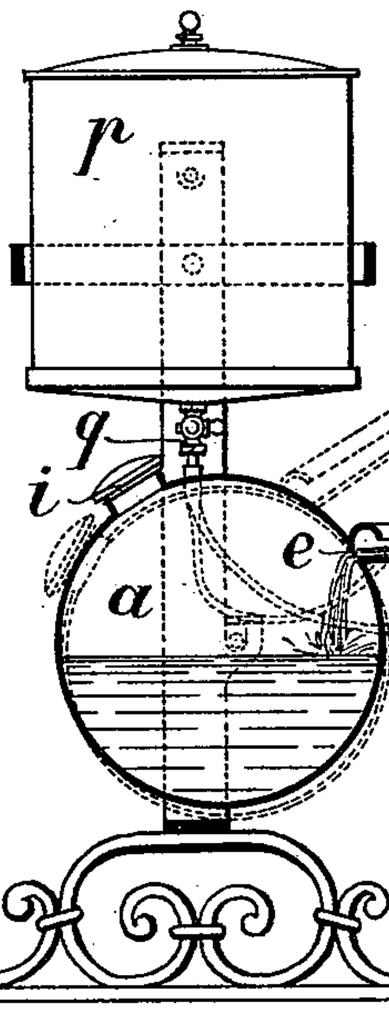

Fig. 9

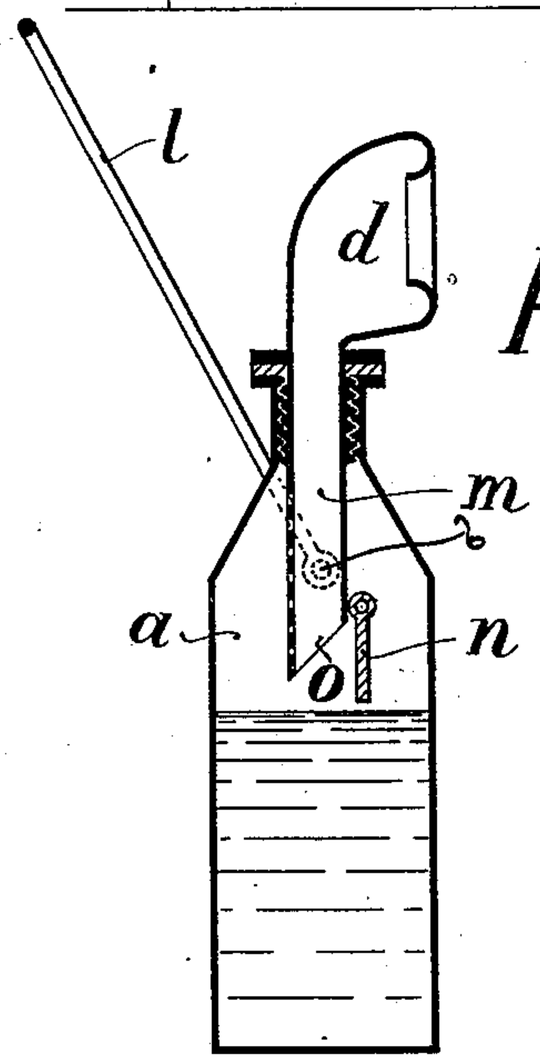

Fig. 5

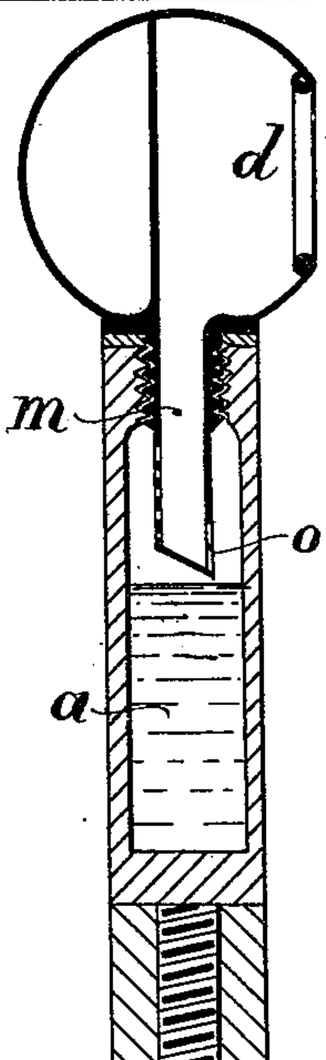

Fig. 7

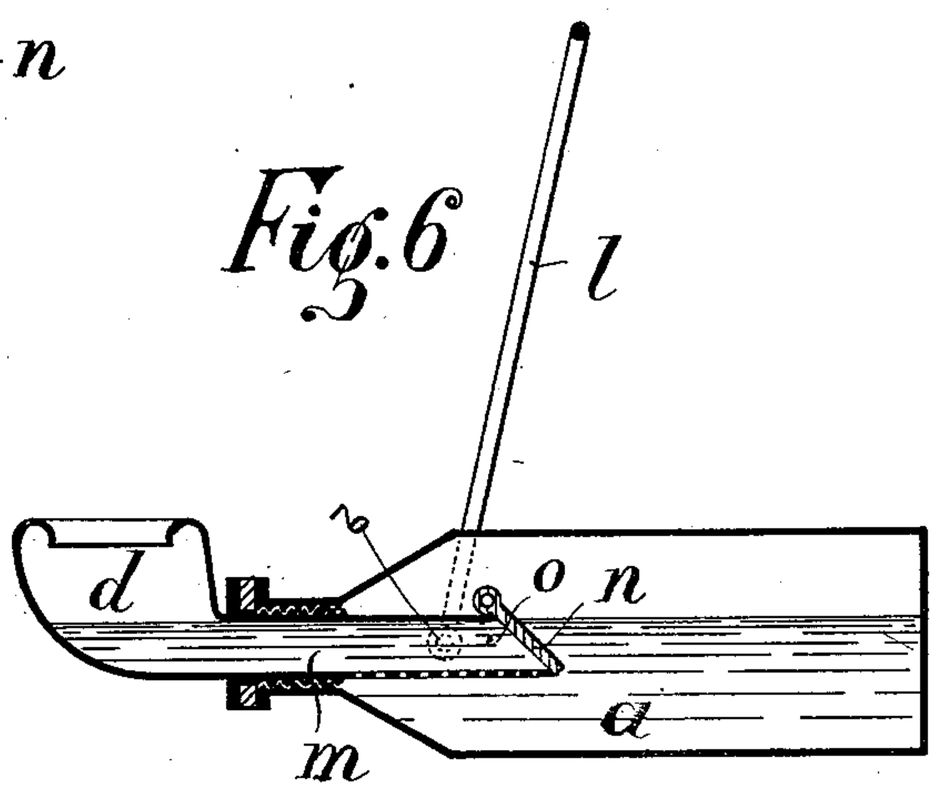

Fig. 6

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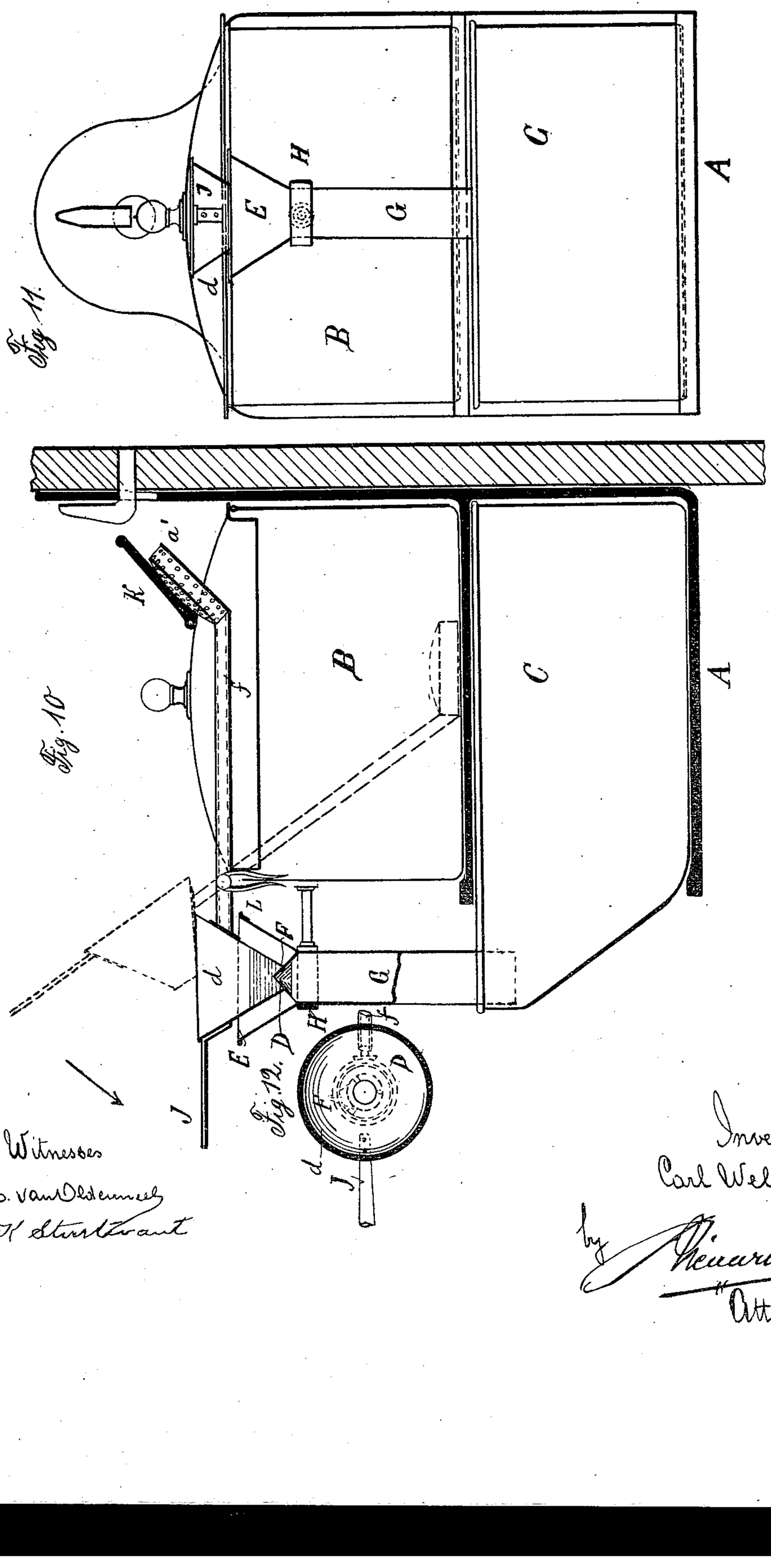
SPITTOON.

No. 561,247. Patented June 2, 1896.



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UNITED STATES PATENT OFFICE.

CARL WELLHÖFER, OF HEIDINGSFELD, GERMANY.

SPITTOON.

SPECIFICATION forming part of Letters Patent No. 561,247, dated June 2, 1896.

Application filed February 18, 1895. Renewed February 18, 1896. Serial No. 579,802. (No model.) Patented in England June 9, 1894, No. 15,608; in Switzerland August 16, 1894, No. 9,058, and in Germany May 30, 1895, No. 81,465.

To all whom it may concern:

Be it known that I, CARL WELLHÖFER, a citizen of the Kingdom of Bavaria, and a resident of Heidingsfeld, Bavaria, Germany, have invented certain new and useful Improvements in Spittoons, of which the following is a specification.

Patents have been granted in England, No. 15,608, dated June 9, 1894; in Germany, No. 81,465, dated May 30, 1895, and in Switzerland, No. 9,058, dated August 16, 1894.

My invention includes a receptacle for receiving the expectorations, a tilting funnel having an outlet leading to the same and an independent inlet leading to the funnel protected by a sieve, and other features of novelty hereinafter particularly pointed out and claimed.

Figures 1, 3, and 4 show in sectional views the sputum recipients in different positions and placed in various manners. Fig. 2 is a side view, partly in section. Figs. 5 and 6 are sectional views of a portable spittoon. Fig. 7 is a sectional view of the device in a cane-head. Figs. 8 and 9 show a modification combined with an independent reservoir. Figs. 10, 11, and 12 are views of a further modification.

In Figs. 1 and 2 the vessel is shown resting on the floor, upon a table, or the like. In Fig. 3 it is shown fixed to a wall. Fig. 4 represents it hanging from the ceiling, where it can be raised and lowered and thus put at the desired height by means of a pulley. It can be hung above a sick-bed, and the patient will be enabled to use it when desired.

The recipient *a*, constructed according to Figs. 1 to 4, is spherical, and is held on the upright C by means of the journals *b*, said upright being provided with a suitable foot. The funnel-shaped opening *d* is connected with the recipient *a*, being in connection with the same by means of the opening *e* on top of the tube *f* below. The opening *e* is entirely free, while the extremity of the tube *f* is provided with an exchangeable filter, sieve, or the like *g*, and at the base of the funnel is provided with a valve *h*.

Diametrically opposite the filter or sieve *g* an opening *i* is made in the recipient, which can be hermetically closed by a screw-plug or some other similar device, which serves for emptying or for cleansing the recipient or for exchanging the filter or for filling said recipient with disinfecting liquid.

The position indicated by full lines in Fig. 1 is the position of the apparatus when at rest or not used. As will be seen, the machine is suspended so that its point of gravity is located below the suspension-axle. Therefore after each time the same has been turned it comes back to its original position.

The recipient *a* is almost half-filled with water or with some other corresponding disinfecting liquid.

If it is desired to use the vessel in order to expectorate into it, the recipient, Fig. 1, is turned from the position indicated by the full lines to that shown by dotted lines, while, if desired, said turning movement can be limited by the upright or support by means of a stop fixed to the vessel. In order to effect this turning motion, the user catches hold of the tube *f* or of a handle fixed to the recipient *a* or to the funnel *d*. As a consequence of that turning the liquid will run into the funnel through the valve *h*. (Fig. 3 shows the position of the apparatus when used by the full lines.) The sputa gathered in the recipient are held back by the filter or sieve *g*, so that only water or disinfecting liquid can run into the funnel through the pipe *f*. The expectorating is done into the liquid which is in the funnel and then the recipient is released, so that the same assumes again its original position. The liquid in the funnel is prevented from running back into the pipe *f* by the valve *h*, and, together with the sputum, it will flow back into the recipient through the opening *e*. The inward-bent edge of the funnel prevents the liquid from flowing out and running off along the outside of the vessel.

The foot of the upright C is provided with a cross-bar *k* or with a hook which enables it to be fixed to the wall, Fig. 3, or to hang from the ceiling. (See Fig. 4.)

The recipient itself will always swing into its position of rest, (shown by dotted lines in Fig. 3 and by full lines in Fig. 4,) so that

when moved it works as described hereinabove.

A further construction of the invention is shown in Figs. 5 and 6, in which the recipient is portable. The recipient *a*, which is pivotally connected with the handle *l*, is provided with the part *m*, put into the same, which ends outside in the shape of a funnel. Said part *m* is preferably fixed in the recipient *a* by means of a worm or by means of a rubber plug, which enables it to close tightly the opening of the recipient *a* by means of a piece *m*. The inserted piece consists of a tube perforated or provided with a filter at its inside lower side that ends as a funnel for letting pass the disinfecting fluid, and the other side of which is provided with a valve *n*. The latter is open when the vessel is carried in the position shown in Fig. 5. If for the purpose of expectorating the recipient *a* is turned around the pivot *b* of the handle into the position shown in Fig. 6, the valve will be closed first, and then the disinfecting fluid will pass through the perforations or through the filter into the tube *m* and from there into the funnel. After having expectorated in the funnel the handle is released and the recipient is allowed to swing back into the position of Fig. 5, the valve *n* will be open again, and the fluid contained in the funnel *d* and in the inserted tube *m* will run into the recipient; also, in this case only fluid and no sputum will come into the funnel.

The construction of the inserted piece *m* can vary at will—as, for instance, in Fig. 7, where the entire apparatus is introduced in the head of a cane. The outlet-opening *o* is on top in this case, opposite the perforations of the inserted tube. Thereby the valve has become unnecessary. When the spitting apparatus is brought in the position of use, the disinfecting fluid will, as before, run through the perforations of the tube *m* into the funnel, and the contents of the funnel will run back into the recipient *a* through the opening *o* when the cane is used again as a cane. The head of the cane is leaded behind the funnel, so that when the cane is dropped it will always assume such a position that the funnel will be on top.

Further modifications are shown in Figs. 8 and 9. In this case the inlet-tube *f* of the funnel *d* does not run into the recipient *a*, but into a recipient *p*, arranged above the latter. That recipient *p* is filled with water or some disinfecting fluid. Said recipient is provided with an outlet-socket, with a cock *q*, from which an elastic or other flexible tube runs to the inlet-pipe *f* of the funnel. The latter is provided with an automatically-working cock, valve, or other similar device *s*, which opens automatically when the recipient *a* is put in the position of use and closes automatically when the same swings back into the position of rest. This automatic-closing valve can be of any kind. In the drawings it is represented as a cock-plug in rigid connection with the drop-ball *r*, which is in a vertical position, no matter what position the funnel may be in.

If the funnel is changed from the position indicated by dotted lines (position of rest) into the position indicated by the full lines, the cock *s* opens automatically and allows water to run into the funnel. After the expectoration the sputum will be washed away by the constantly-running fluid, and it will run into the recipient *a* through the openings *e*. Thereafter the recipient returns to the resting position and the cock *s* will be closed again. The arrangement can also be made so that the position indicated in Fig. 3 (full lines) is the position of rest. After the expectoration the recipient is raised again until it is in the position indicated by dotted lines and the contents of the funnel run into the recipient *a*. Then the recipient is allowed to return to its original position.

The recipient can be made of metal, glass, earthenware, or any suitable material. I would add that the spit-boxes illustrated by Figs. 1 to 4 and 8 and 9 can be operated not only by hand, but also by some suitable pedal arrangement.

In the spit-boxes shown in Figs. 1 to 7 the contents of the funnel return into the same vessel that contains the water or disinfecting fluid that has been conveyed into the funnel. In the construction shown in Figs. 8 and 9 this is not the case; but such an apparatus is rather complicated and becomes too expensive.

The inconveniences of both constructions have been remedied by the following construction and by a most simple device. The contents of the funnel after expectorating are conveyed into a vessel that is separated from the vessel containing the water or disinfecting liquid. The operation remains essentially the same as in Figs. 1 to 9.

On an upright (Fig. 10, cross-section, Fig. 11, front view) which is suitably attached to the wall or is provided with a suitable foot the two vessels C and B are placed. The sieve *a'*, either open on top or perforated and connected with the spit-funnel *d*, located outside the vessel B, by means of a pipe *f*, plunges in the upper of those vessels. Pipe *f* is pivotally arranged on the edge of the vessel B, and its normal position is that which is indicated by dotted lines, wherein the sieve or pan *a* rests on the bottom of the vessel B and the spit-funnel *d* is in its highest position. The latter is open below, and when the sieve *a'* is lifted out of the vessel B—that is, when the pipe *f* is turned in the direction of the arrow—the funnel rests upon the cone D, so that its (the funnel's) lower part is then closed. Cone D is of suitable material, built into the funnel E, with which it is connected by the braces F. The prolongation of the funnel E is a tube G, which issues into the lower vessel C. The funnel E and the pipe R bear, preferably, in the ring H of the vessel B.

When the spit-box must be used, I take hold of the handle J of the spit-funnel *d* and turn the same, as well as the pipe *f* and the sieve *a'*, from the position shown by dotted lines into the position shown by full lines. (Direction of the arrow.) Thereby the lower orifice of the funnel *d* will be closed by the cone D. Immediately thereafter the water or other disinfecting liquid that has been drawn from the vessel B by the sieve will flow through the pipe *f* into the spit-funnel. There can now be expectoration, and after this the spit-funnel is released. The heavy lever-arm of the pipe *f* carries the same again to the position indicated by dotted lines and its contents will flow over the cone D into the funnel and into the tube G. From the latter they pass into the vessel C, which is emptied from time to time.

The vessel B, in which the sieve or pan *a'* is plunged, is closed by a cover, leaving sufficient space for the upward motion of the pan *a*. It can have various forms. In the drawings I show a cover with a valve K, which is opened by the sieve or pan *a'* when lifted and closes again either by its own weight or by means of a spring.

The bearing of the pipe *f* is made so that it can be removed from the vessel B, and for this purpose the bearing is provided with clamps, as seen in Figs. 10 and 12, which are fixed upon the edge of the vessel B.

Both vessels B and C can eventually be only formed of one vessel and divided by a partition.

I claim—

1. A spittoon comprising a receptacle for receiving the expectorations, the tilting funnel having an outlet leading to the said receptacle and an independent inlet leading to the funnel protected by a sieve, substantially as described.

2. A spittoon having a receptacle to receive the expectorations, the independent receptacle for the disinfectant or washing fluid, and the funnel connected therewith and arranged to receive a supply of disinfectant when tilted, substantially as described.

3. A spittoon having a receptacle, the tilting funnel, the intermediate tube or conduit and means for closing the passage through the said funnel when the same is in one position, substantially as described.

4. A spittoon having a receptacle to receive the expectorations, the tilting funnel, the seat D to close the opening therein when the funnel is tilted, the passage from said seat to the receptacle, and the fluid-receptacle for the funnel, substantially as described.

5. A spittoon comprising the receptacle for holding the expectorant, the tilting funnel, the fluid-receptacle B, the sieve *a'* and the connection from the same to the tilting funnel, substantially as described.

6. A spittoon comprising a receptacle for the expectorated matter, a funnel arranged to discharge into said receptacle, a tube through which the funnel is supplied with fluid, and a sieve controlling the inlet to the said tube or conduit, substantially as described.

7. In a spittoon, the combination of the receptacle for receiving the expectorations, the funnel, the inlet-conduit leading to the funnel at one point to supply washing fluid thereto and the discharge from the funnel independent of the inlet-conduit for discharging the disinfectant and expectorations into the receptacle, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CARL WELLHÖFER.

Witnesses:
EMIL STEIN,
OSCAR BOCK.