

(No Model.)

2 Sheets—Sheet 1

F. H. RICHARDS.
SOAP CANISTER.

No. 510,294.

Patented Dec. 5, 1893.

Fig. 1

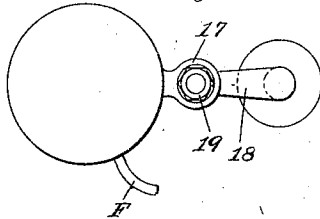


Fig. 3

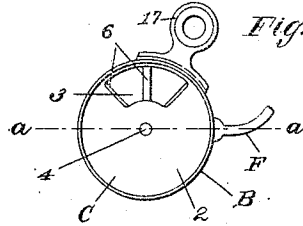


Fig. 2

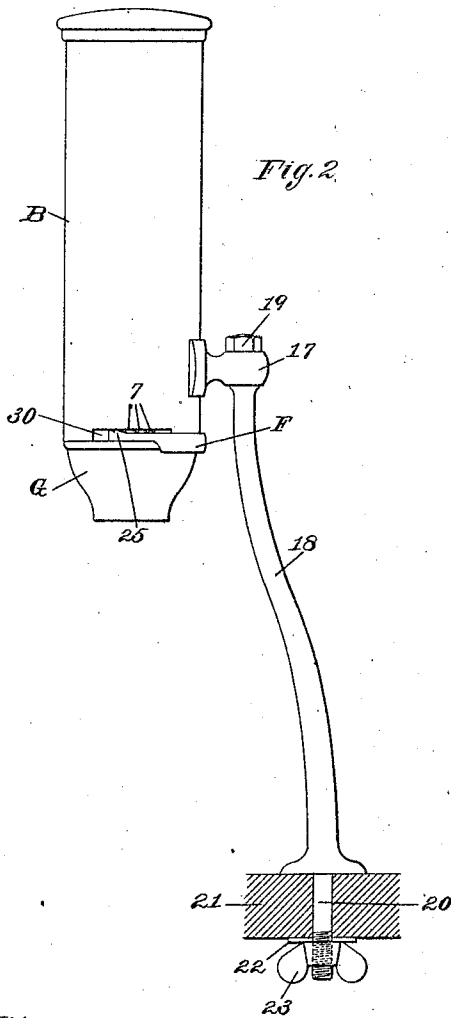


Fig. 4

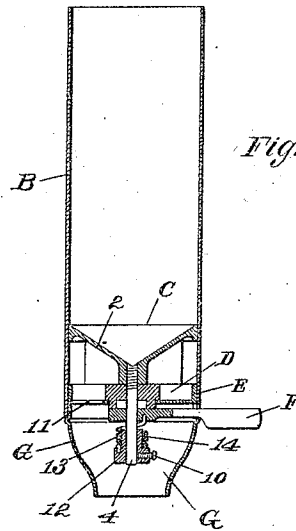


Fig. 5

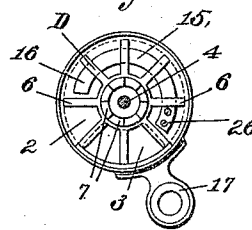
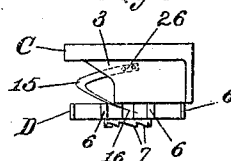


Fig. 6



Witnesses:

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Inventor:

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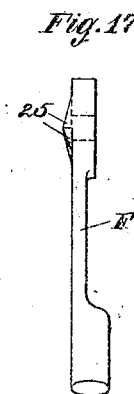
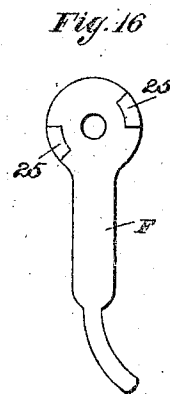
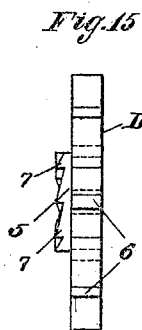
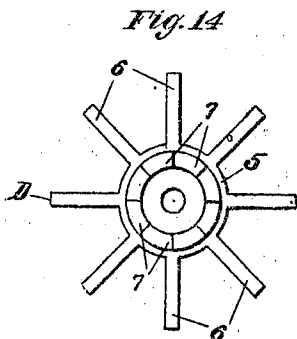
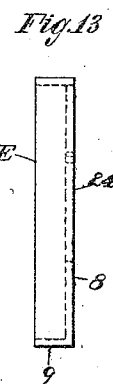
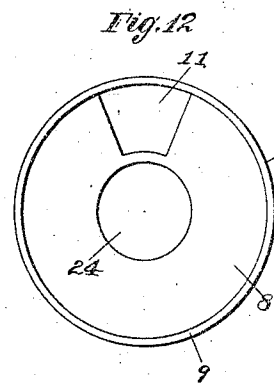
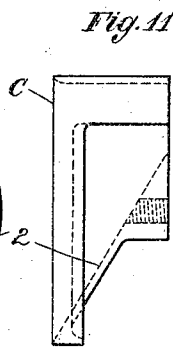
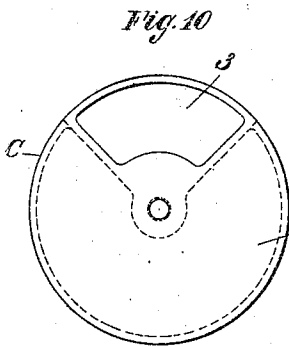
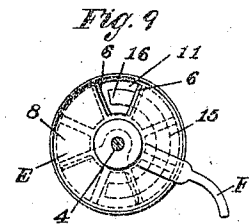
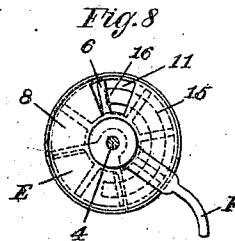
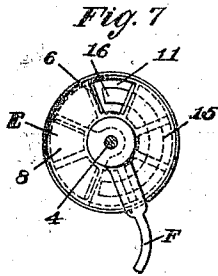
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F. H. RICHARDS.
SOAP CANISTER.

No. 510,294.

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Witnesses:
H. Mallner.
Henry L. Rickard.

Inventor:
Francis H. Richards.

UNITED STATES PATENT OFFICE.

FRANCIS H. RICHARDS, OF HARTFORD, CONNECTICUT.

SOAP-CANISTER.

SPECIFICATION forming part of Letters Patent No. 510,294, dated December 5, 1893.

Application filed August 6, 1891. Serial No. 401,849. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS H. RICHARDS, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Soap-Canisters, of which the following is a specification.

This invention relates to canisters for holding soap-powder, the object being to furnish a soap-holder adapted to deliver a measured quantity of soap-powder on each full movement of the actuating-lever.

In the drawings accompanying and forming a part of this specification, Figure 1 is a plan view of a soap-powder canister embodying my invention. Fig. 2 is a front elevation of the same. Fig. 3 is a plan view of the canister with the cover removed therefrom. Fig. 4 is a central vertical section of the canister, on line *a a* of Fig. 3. Fig. 5 is a plan view of the under side of the canister, with the parts below the measuring-wheel removed. Fig. 6 is a side elevation of the chute, the measuring-wheel, and the detent-spring carried by said chute. Figs. 7, 8 and 9 are plan views of the under side of the canister, with the parts below the pawl-lever removed, illustrating the operation of the mechanism. Fig. 10 is a plan view, and Fig. 11 a side elevation (drawn on an enlarged scale), of the chute. Figs. 12 and 13 are similar views of the bottom-plate. Fig. 14 is a plan view of the under side of the measuring-wheel, and Fig. 15 is a side elevation of the same drawn in projection therewith. Figs. 16 and 17 are a plan and a side view, respectively, of the pawl-lever.

Similar characters designate like parts in all the figures.

My improved soap-canister consists or may consist of a cylindrical canister having means for limiting the quantity of soap-powder delivered at one discharge, a lever for operating the delivery device, and means for supporting the same in position for use.

The canister-casing or shell, B, preferably formed of drawn metal tubing, constitutes the receptacle for the soap-powder, and is provided with a chute, designated in a general way by C, soldered or otherwise secured within the shell near the bottom thereof. Said chute is shown in plan view in Fig. 3, in section in Fig. 4, in side view in Fig. 6, and in

detail in Figs. 10 and 11; it is of the nature of a hopper, the floor, 2, thereof being funnel-shaped, sloping from all points toward the outlet 3; through which outlet-passage the soap-powder flows into the pockets of the measuring-wheel. A stem or stud 4, is screwed or otherwise firmly fixed in the chute C, and depends therefrom for carrying some of the operative details of the apparatus. Immediately below said chute is located the measuring-wheel, which is designated in a general way by D, and is fitted to turn about the stud 4 as about a pivot. Said wheel consists of the central portion or hub, 5, having the arms 6 radiating therefrom, and having suitable ratchet-teeth, as 7, formed on the under side thereof. Said wheel is fitted for free rotation within the disk-shaped part E, whose bottom-plate 8 forms the floor of the pockets of the wheel D, and whose rim 9 forms the outer wall of said pockets. The plate or floor, 8, of said part E has a central opening, 24, formed therein, through which the ratchet-teeth 7 of the measuring-wheel project. The part E is firmly fixed in place within the shell B, as illustrated in Fig. 4. An opening, 11, which I denominate the discharge-opening, is formed in the floor 8 of the part E, through which opening the loads of soap-powder are discharged in a manner hereinafter more fully described.

The actuating-lever F is pivotally supported by the stud 4, and has two pawl-teeth, 25, 25, formed on the upper side thereof to engage the corresponding ratchet-teeth 7 of the wheel D. On the stud 4, below the lever F, there is adjustably fixed (by means of a set-screw 10,) the collar 12, and a coiled spring, 13, is carried upon the stem, 14, of said collar, one end of said spring being fixed in the lever and the other end in said collar. Said spring 13 is for the purpose of normally holding the lever in position at the beginning of its working stroke, and also to return the same to its normal position when released by the user.

Into the lower end of the shell B I have fitted a discharge-spout, G, which covers the operative parts and serves to deliver the discharged load from the center of the canister, without scattering. A suitable curved spring, as 15, is fixed at 26 (see Figs. 5 and 6) by one end to the under side of the floor, 2, of the

chute; the opposite end, 16, of the spring extends downward between two of the arms 6 of the measuring-wheel, normally resting on one of said arms, and acts as a detent to prevent any backward movement of the wheel D on the return movement of the lever F.

As a means for attaching the canister to a convenient point of support, it is usually provided with a suitable bracket, 17, fixed to the shell B and bored to receive the upper end of a rod or standard, 18, which is firmly held in place in said bracket by means of a nut, 19; the rod 18 may have a shank, as 20, which may pass through a hole in a stand-top, (indicated at 21, Fig. 2,) being held in place by the washer 22 and nut 23.

The canister having been properly set up and supplied with dry soap-powder, to operate the delivery apparatus the user grasps the lever F and pulls it forward through the full stroke thereof, and then releases it. The chute C being formed, as set forth, so that all the soap-powder gravitates toward the outlet 3 of said chute, the two pockets of the measuring-wheel D, which are there uncovered, are kept filled. If now the lever F be drawn fully forward, (from the position shown in Fig. 7 to that shown in Fig. 9,) the wheel D will be rotated through the distance or arc of one of the pockets, thus bringing a new pocket underneath the opening 3, which pocket is immediately filled. On the release of the lever by the user, it is immediately thrown back by the aforesaid spring 13; which spring is constructed and adjusted to permit of sufficient vertical contraction to allow the pawls 25 of the lever to pass back over the ratchet of the wheel D the distance of one tooth; the number of said ratchet-teeth 7 corresponding exactly to the number of the arms 6 of the wheel D. This operation is repeated until the first-filled pocket is brought immediately over the discharge-opening 11 of the floor 8, when the load in said pocket is discharged into the discharge-spout G, the user holding his hand underneath said spout to catch the soap-powder as it falls. This discharging operation is illustrated in the three operative views Figs. 7, 8 and 9, said figures being views of the under side of the canister, as hereinbefore stated. Fig. 7 shows the position of the parts when a load has just been discharged; by means of the lever the wheel D may be rotated to bring the next pocket over the opening 11. In Fig. 9, the lever has been drawn fully forward and the next load discharged, when on releasing the lever it is thrown back to the position in Fig. 7 by the torsional tension of the spring 13. Fig. 8 shows the parts in a position intermediate to the positions shown in said Figs. 7 and 9. In Fig. 8, one of the arms 6 is about to pass off the end 16 of the

spring 15; when said arm passes fully off, said spring snaps backward and downward, striking the next succeeding arm with considerable force, giving a sufficient blow to well settle the soap-powder that is within the canister, and at the same time act after the manner of a plunger to effect, or insure, the discharge of the load by driving the same downward from between the arms of the measuring-wheel.

Having thus described my invention, I claim—

1. In a soap-canister, the combination with the canister-case and with the chute therein having a discharge-opening on one side thereof, of a measuring-wheel below said chute provided with ratchet-teeth, a plate below said wheel having therein a discharge opening out of alignment with the opening in the chute, and a ratchet lever mounted upon the shaft of the measuring-wheel and having ratchet-teeth to engage the teeth of said wheel, and a spring, acting upon the inner end of said lever, to impart a rotary and a sliding movement thereto, substantially as described.

2. In a soap-canister, the combination with the canister-case, and with the chute having the outlet 3, of the measuring-wheel having the ratchet-teeth and supported underneath said chute and opening, the lever F supported below said wheel and engaging the ratchet-teeth thereof, and the spring 13 constructed and supported to normally hold said lever in engagement with said ratchet-teeth and also to turn the lever backward to its normal position, substantially as described.

3. In a soap-canister, the combination with the chute having the outlet, and with the measuring-wheel supported to be turned underneath said chute and outlet and having the pockets therein, of the combined detent spring and ejector constructed and arranged to bear at its free end on the measuring-wheel arms and on passing one of said arms to project into the wheel-pocket, substantially as described.

4. In a soap-canister, having therein the slot 30, the combination with the canister-case, of the measuring-wheel supported within said case immediately above said slot and having ratchet-teeth substantially as described, the lever F extending through said slot and journaled at its inner end at the axis of the measuring-wheel and having ratchet-teeth engaging the teeth of said wheel, and a spring acting upon the inner end of said lever to engage the same with the ratchet-wheel and swing back the lever, substantially as described.

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Witnesses:

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