S. S. NEWTON.
Slate-Washers.

No. 219,007. Patented Aug. 26, 1879.

Fig. 7.

Fig. 1.

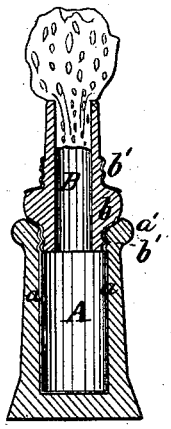


Fig. 2.

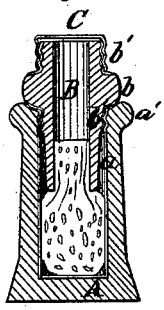


Fig. 6.

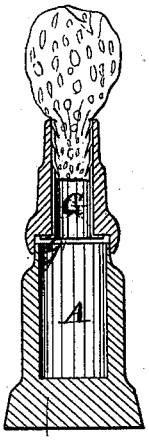


Fig. 3.

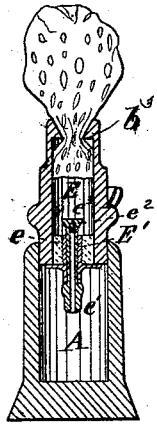


Fig. 5.

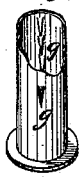
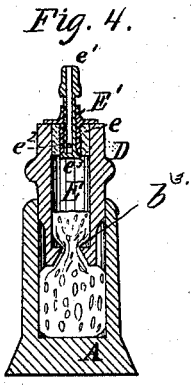


Fig. 4.



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UNITED STATES PATENT OFFICE.

STEPHEN S. NEWTON, OF BINGHAMTON, NEW YORK.

IMPROVEMENT IN SLATE-WASHERS.

Specification forming part of Letters Patent No. **219,007**, dated August 26, 1879; application filed April 23, 1879.

To all whom it may concern:

Be it known that I, STEPHEN S. NEWTON, of Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Slate-Cleaners; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 is a vertical section of one form of my improved slate-washer ready for use. Fig. 2 is a vertical section of the same construction, with the position of the sponge and its support and feeder inverted. Figs. 3, 4, 5, 6, and 7 are vertical sections showing other features of the same invention.

Referring now to Figs. 1 and 2, A represents the body, made of wood, and cylindrical in form. The body is hollow, and is provided with a sheet-metal lining, *a*, fitting closely, and constructed at its upper end with an internal screw-thread. This lining *a* may be screwed within the body A by screw-threading the upper inner end of the body to correspond with the thread of the lining, or by grooving the upper end of the body and spinning the lining into the groove, or by such other method as may be found most convenient.

a' is a bead or rib upon the outside of the body near the upper end. B is the sponge-support or discharging-tube, constructed with a rib or bead, *b*, near its lower end, and screw-threaded for a short distance upon each side of this rib, as indicated at b^1.

In practice I usually make the threads b^1 b^1 of spun metal, in order that they may fit accurately the thread in the upper end of the lining *a*, but shall not become so tight therein when wetted as to interfere with their removal, as will be explained.

The central opening through the sponge-support is of such diameter as to readily receive so much of the sponge as will hold it (the said sponge) firmly in place, and, by preference, I contract the upper end of this opening, as at b^3, Figs. 3 and 4, in order that the sponge shall be more firmly held in place.

In Fig. 1 I have represented the parts in proper working position.

By making this opening circular or tubular in form and of substantially uniform diameter from the inner end to the flange or rib b^3, I insure that the sponge shall be firmly held in place for use, while at the same time it can be readily removed by pushing it through the support and out at the opposite end.

In Fig. 2 the position of the sponge-support is inverted, the sponge being thrust into the body A; and in this figure C represents a threaded cap, which is screwed upon the projecting end of the sponge-support, thus effectually preventing leakage of water from the body, so that the device may be carried in a person's pocket without danger of injury to other articles.

It will be understood that by means of the combination of the metallic lining with a non-metallic outer casing in a slate-washer I accomplish a result not produced by incasing a liquid-receptacle with a jacket or casing of another material, as such combination has hitherto been used, because in my device I secure a tight joint where the sponge-support is attached to the water-receptacle, and one in which contact with water will not cause the parts to swell so as to interfere with taking them apart or putting them together, while at the same time the non-metallic casing prevents the metal from scratching the slate.

In Figs. 3 and 4, the body A and sponge-support D are of substantially the same construction as the corresponding parts in Figs. 1 and 2, except that these parts are not screwed together, but are tapering in form where they are joined and are made to fit each other water-tight.

The opening E through the sponge-support in Figs. 3 and 4 is substantially the same in shape as that in Figs. 1 and 2, except at its upper end.

In these Figs. 3 and 4 I employ a gate or valve to prevent the passage of water through the sponge-support when desired, as follows: E' is an internal screw-threaded tube, surrounded at one end by a cork, *e*, which fits closely the tube and the opening through the sponge-support. e^1 is an external-threaded delivery-tube fitting within the screw-threaded tube E', and provided at one end with ports e^2 and the flange or stop e^3.

The operation of these last-named devices is substantially as follows: As shown in Fig. 3, when the device is ready for use, the ports

e^2 are opened—that is, they are projected beyond the end of the tube E′, so that water can pass readily from the body A through the sponge-support to the sponge.

In Fig. 4 the ports e^2 are retracted within the tube E′, so that no water can pass through the discharging-tube.

From an examination of the drawings it will be seen that the beads which project from the body A, Figs. 1 and 2, will prevent the contact of the metal parts of the device with the slate.

It will, of course, be understood that a cap like that represented by C in Fig. 2 may be applied to the projecting end of the sponge and support shown in Fig. 4, and when so applied will prevent injury to the projecting end of the valve, and will also prevent accidental opening of the valve.

It is evident that a cap like that represented by C applied to the outer end of a non-reversible sponge-support would not serve the same purpose as it does when applied to the lower end of my reversible support, because, in my construction, it permits the length of the device to be materially shortened when being packed or carried in the pocket without danger of leakage or accidental injury, or displacement of the valve when said valve is used.

Fig. 5 represents a lining of metal or other suitable material for the sponge-support provided with inwardly-projecting barbs or spurs *g*, adapted to engage with the sponge and prevent its accidental displacement or withdrawal.

In this construction it will be found most convenient to remove the sponge by thrusting it through the sponge-support and taking it out at the opposite end, which is ordinarily closed by means of a cork, a gate, or valve, substantially like that shown in Figs. 3 and 4.

By combining the metallic lining, Fig. 5, with a wooden sponge-support, I produce a very desirable construction, because the wood will not scratch a slate, while the metal spurs hold the sponge firmly in place, the cylinder being held in place by either a rim or flange on the inside of the wooden part or on the outside of the cylinder.

I do not wish to be limited to the use of wood as the body of my slate-washer, it being evident that rubber, celluloid, paper-pulp rendered water-proof, or other material capable of being molded into the proper shape may be employed for that purpose; nor do I wish to be limited to any special form of valve for regulating the flow of water through the sponge-support.

In Fig. 7 I have shown a sponge-support made wholly of sheet metal spun into proper shape, with short threads above and below the rib F, and in order to prevent the metal from coming in contact with the slate and scratching it I affix the sponge upon the outside of the tip of the sponge-support, and I also apply the ring or bead F to the sponge-support substantially in the position indicated.

In order to properly retain said ring F in position, I form a groove, *f*, in the metal, which serves as a seat for the ring, and, by preference, I make the ring of rubber or other elastic material, which may be expanded and will contract so as to remain firmly seated in the groove. But I do not wish to be limited to the use of any particular material for this ring, or of making it in one piece, as it may be made in sections and united upon the sponge-support; or the support may be made of a cylinder and the ring placed thereon after one thread has been spun, and then secured in place by spinning the other thread, for which reason I do not wish to be limited to securing the ring in a groove formed specially for its reception.

In Fig. 6 I have shown another construction, in which the sponge-support G is constructed at its lower end to overlap the upper end of the water-receptacle, and I prefer to use with the sponge-support shown in this figure a metallic barbed lining, which may have its lower end turned outwardly, thus forming a lip, *g′*, to hold it in place.

What I claim is—

1. In a slate-washer, a sponge-support having an outer metallic surface, in combination with a rib or bead, F, adapted to prevent the metal portion from coming in contact with the slate, substantially as set forth.

2. The combination, in a slate-washer, of a wooden outer shell or casing, a sheet-metal water-receptacle within the casing formed into a screw-thread at its upper end, a wooden support adapted to carry a sponge at one end and provided at its opposite end with a sheet-metal thread, whereby the outer shell is adapted to be used without scratching the slate, and the two members of the device are united by means of metallic connections, substantially as set forth.

3. In a slate-washer, a water-receptacle, in combination with a reversible sponge-support and a gate or valve which regulates the discharge of water through the sponge-support, substantially as set forth.

4. In a slate-washer, the combination, with a water-receptacle, of the reversible sponge-support, constructed with a tubular internal opening of substantially uniform diameter throughout, and provided with a flange or rib, b^3, to retain the sponge, substantially as set forth.

5. In a slate-washer, a tubular sponge-support, in combination with an internal cylinder having inwardly-projecting spurs, and secured to the outer tube by means of a projecting rim, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

STEPHEN S. NEWTON.

Witnesses:
JOHN S. BARKER,
H. H. DOUBLEDAY.