July 28, 1925. 1,547,669

D. B. POWELL

STEAM SPRAYING DEVICE

Filed Oct. 25, 1924

Fig. 1.

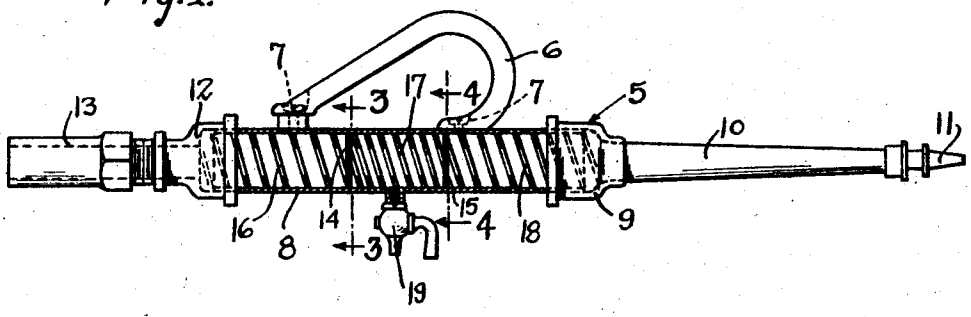


Fig. 2.

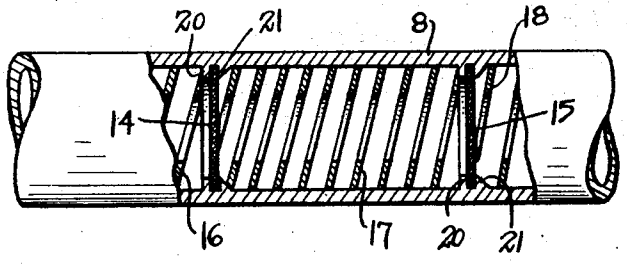


Fig. 3.

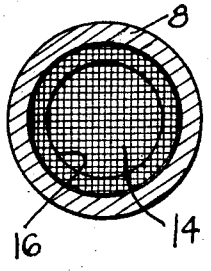
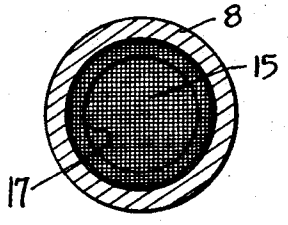


Fig. 4.



INVENTOR
Douglas B. Powell
BY
ATTORNEY

Patented July 28, 1925. 1,547,669

UNITED STATES PATENT OFFICE.

DOUGLAS B. POWELL, OF NEW YORK, N. Y.

STEAM-SPRAYING DEVICE.

Application filed October 25, 1924. Serial No. 745,735.

To all whom it may concern:

Be it known that I, DOUGLAS B. POWELL, a citizen of the United States of America, residing at New York city, Bronx County, and State of New York, have invented certain new and useful Improvements in Steam-Spraying Devices, of which the following is a specification.

This invention relates to steam spraying devices and in particular to one which may be used in clothing establishments for the purpose of quickly treating the cloth or garments to raise the nap thereof and for other purposes.

A particular object of the invention is to provide a spraying device which will catch some of the moisture of the steam during its passage therethrough and which is adapted to throw a jet of steam a considerable distance.

A further object is to provide a device of the character described which will be portable and light and which will offer an impediment to the full pressure of the steam so that its free passage is prevented whereby the same will not carry an excessive amount of moisture from the boiler, with it, into the spraying nozzle.

Further objects and advantages of my invention will be brought out as the specification progresses.

Referring to the drawing wherein I have shown a preferred embodiment of my invention:

Figure 1 is a side elevation, partly in section, of my improved spraying device, a portion of the interior thereof being shown,

Figure 2 is a section of the spraying device shown in cross-section to disclose a modified method of mounting the baffle screens,

Figure 3 is a cross section taken on the line 3—3 of Figure 1 showing the coarse screen; and

Figure 4 is a cross section taken on the line 4—4 of Figure 1 showing the fine screen.

Referring to the drawing in detail 5 indicates in general a spraying device constructed in accordance with my invention comprising a handle 6 attached through the medium of screws 7 to the tubular body portion 8, at the forward end of which is attached with threaded connection the nozzle holding extension 9, a nozzle 10 being threaded thereto and it in turn carrying an auxiliary nozzle 11, the latter being provided for the purpose of ejecting the steam in a thin stream whereby the velocity of the same will be increased to be effective at a greater distance, as is well known where the size of the orifice is decreased through which vapor or liquid under pressure is passed.

The opposite end of the body portion 8 is engaged by a nipple 12, which in turn is connected through the medium of the usual screw threads to a hose carrying plug 13.

The interior of the body portion 8 is divided into three compartments by the spaced wire screens 14 and 15, the screen 14 being of a coarse wire mesh while the screen 15 is of a much finer wire mesh. The screens are held in position by the flat spiral springs 16, 17 and 18, one being located in each compartment, the screen 14 being held between the springs 16 and 17 while the screen 15 is held between the springs 17 and 18. The spring 17 is more closely coiled than either of the springs 16 or 18, so that it will catch more of the moisture in the steam and allow the same to run off through the pet cock 19 when the same is opened for that purpose. The pet cock is located in the under side of the body portion 8 between the screens.

The arrangement described serves to dry the steam inasmuch as the large surface presented by the springs which act in the manner of baffle plates to retain the moisture of the steam which impinges thereon, and also the springs together with the screens impede the progress of the steam and prevent its too rapid emission from the boiler in which it is generated so that it will carry with it only a minimum amount of moisture; this slow emission of the steam preventing the carrying of the moisture in the boiler to the nozzle.

The moisture of course that is collected from the springs and screens is blown out of the body chamber when the pet cock is opened.

The fine mesh screen 15 serves to clean the steam passing therethrough by collecting any sediment, it being understood that the steam is maintained at its initial pressure in the body portion 8, the velocity thereof being increased when it passes through the restricted orifice of the nozzle.

In Figure 2 I have shown a modified method of holding the screens in position

which provides for the casting of peripheral flanges 20 and 21 on the inside of the body portion, the flange 21 being beveled so that the screens can be snapped into position. The body portion can be made in separate pieces if desired and I may use any shape of spring that will serve the purpose most efficiently.

It will be seen therefore that I have provided a steam spraying device which is light and which will effectively dry the steam before it is ejected at high velocity upon the garments to be steamed. Also I have provided a spray which can be made up at small cost and with a minimum number of parts.

Having described my invention what I claim is:—

1. A steam spraying device comprising a body member, coil members in said body member for slightly impeding the progress of the steam, screens disposed between said coil members through which the steam passes, and means for discharging the liquid of condensation from the body member.

2. A steam spraying device comprising a body member having a handle thereon, screens in said body member dividing the same into compartments, spiral baffle members in said compartments, the convolutions of the middle one of said baffle members being closer together than the convolutions of the other baffle members.

3. A steam spraying device comprising a body portion, an inlet thereto, a nozzle on the body portion adapted to increase the discharge velocity of the steam, a plurality of screens in the body portion, one of which is of finer mesh than the other, flat spring members for holding said screens in position, one of the members having its convolutions closer than the other members, said members acting as baffles for the steam, and means for discharging the water of condensation from the body portion.

DOUGLAS B. POWELL.