April 7, 1931. H. COLBURN 1,799,502

STEAM GUN

Filed June 13, 1929

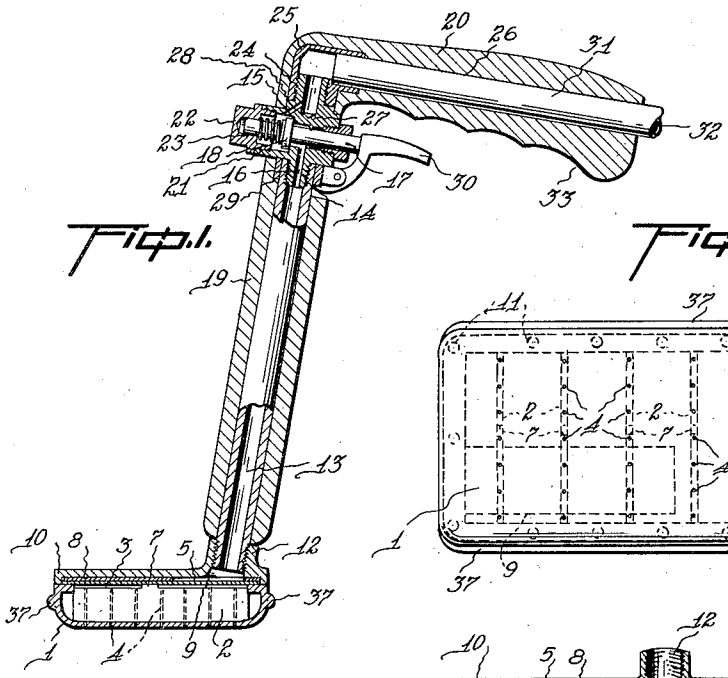


Fig. 1.



Fig. 2.



Fig. 3.

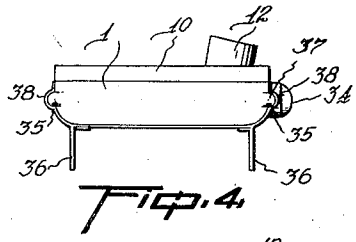


Fig. 4.

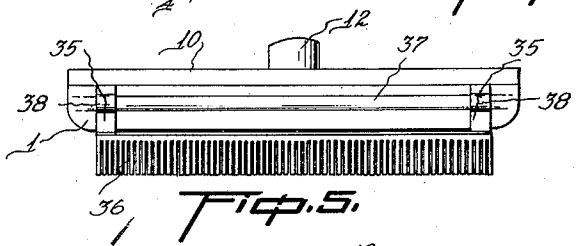


Fig. 5.

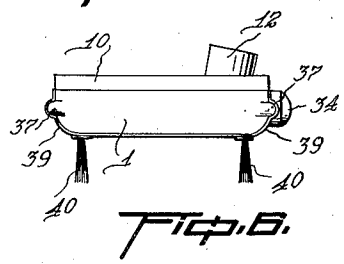


Fig. 6.

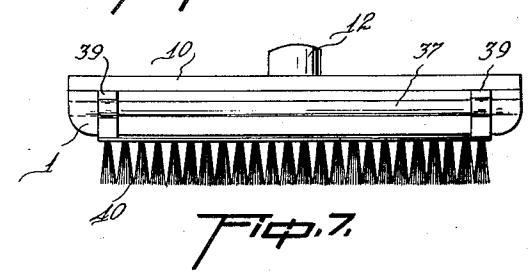


Fig. 7.

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# UNITED STATES PATENT OFFICE

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## STEAM GUN

Application filed June 13, 1929. Serial No. 370,556.

The present invention pertains to a novel steam gun designed for the treatment of furs, velvets and other fabrics or textiles.

The principal object of the invention is to provide a device of this character adapted to separate moisture from the steam, so that only dry steam will reach the work. This object is accomplished by a novel baffle arrangement which is fully described herein.

The invention also provides for the application of attachments to the steam head whereby the work may be combed or brushed while being steamed. These attachments are mounted on spring clips which may be securely fastened to the steam gun and yet easily removed when no longer wanted.

The invention is fully disclosed by way of example in the following description and in the accompanying drawing, in which—

Figure 1 is a longitudinal section of the device, partly in elevation;

Fig. 2 is a bottom plan view of the steam plate;

Fig. 3 is a longitudinal section of the steam plate;

Fig. 4 is an end view of the device, showing a comb attachment applied thereto;

Fig. 5 is an elevation at right angles to Figure 4;

Fig. 6 is an end view similar to Figure 4, showing a brush attachment applied to the steam plate; and

Fig. 7 is an elevation at right angles to Figure 6.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

The steam head or plate which emits the vapor and which is passed over the material to be cleaned is formed in the nature of a dish-shaped member 1 of substantially rectangular configuration in plan and having an open top. This member is formed interiorly with a series of spaced transverse baffles 2 integral with the bottom of the plate and terminating short of the uppermost plan of the plate, thereby leaving a clearance indicated by the numeral 3 in Figure 1. The baffles 2 are each formed with a series of perforations 4 perpendicular to the plane of the bottom of the plate and passing directly through the baffles and bottom plate as illustrated in Figure 3.

Over the open top of the steam plate is laid a plate 5 of sheet aluminum which has one of its ends bent downwardly at an angle to form a baffle 6 lying between one of the end baffles 2 and the adjacent end wall of the steam plate. Each baffle 2 has a lug 7 projecting upwardly from its upper edge into engagement with the plate 5 to assist in supporting the latter. Upon the plate 5 is laid an asbestos sheet 8 formed in one corner with a slot 9 extending to the transverse center of the sheet as clearly shown in Figure 2. Finally, a cover plate 10 is mounted upon the sheet 8 and secured to the head 1 by screws 11 which also pass through and retain the members 5 and 8 in position.

The cover plate 10 is formed with an angular and tapped boss 12 at the center of its rear edge and directly over the inner end of the slot 9 to communicate therewith. Into the boss 12 is threaded a pipe member 13 which has a valve body 14 threaded into the upper end thereof. The valve body is formed with a seat 15 which lies in a plane parallel to the axis of the pipe 13 and also has a port 16 establishing communication between the valve seat and the pipe. A valve stem 17 is slidably mounted in the valve body at right angles to the pipe 13 and carries a head 18 adapted to rest on the seat 15.

The pipe 13 is surrounded by a sleeve 19 which also incloses the valve body 14 and is formed with an angular handle 20. The valve body 14 has a boss 21 passing through the wall of the handle, and into this boss is threaded a cap 22 which slidably receives the upper end of the valve stem 17. A spring 23 surrounds the valve stem within the cap and above the valve head and tends to close the latter upon its seat.

The valve body is further formed with still another boss 24 in line with the port 16 and at the opposite side of the stem 17. On this boss is threaded an elbow 25 which reinforces the bend between the parts 19 and 20. The handle has an axial passage 26 in fluid communication with the interior of the

boss 24 through the elbow 25. The boss 24 has a blind end 27 at the valve stem 17, and communication with the valve seat is established by a duct 28. Finally, a ring 29 surrounds the pipe 13 at the upper end thereof and has pivoted thereto a trigger 30 engaging the outer end of the valve stem 17.

A pipe 31 extends from the elbow 25 through the passage 26 in the handle 20 and has its exterior end 32 adapted for the connection of a steam pipe thereto. The handle is formed with grooves 33 adapted to receive the fingers of the hand holding the handle, and the trigger 30 is so positioned that it may readily be reached by the forefinger of the hand and swung towards the handle, whereupon the valve seat 18 will be raised and steam will flow into the pipe 13.

In operation the bottom of the steam plate is moved over the article to be treated, which preferably hangs vertically. The angles between the steaming plate and the pipe 13 and between the pipe and the handle 20 are determined so that the bottom of the steam plate may be passed over the work in a vertical line, while the hand of the operator is in a comfortable and effective working position. On delivery from the pipe 13, the steam is confined to the slot or passage 9 from which it finds its outlet through the space formed by the baffle 6 and the plate 5. The steam then enters the adjacent end chamber between one of the end baffles 2 and the adjacent end wall of the steam plate. The steam now flows successively over the upper edges of the baffles 2 until it reaches the remaining end chamber, from which it is discharged through an exhaust pipe 34 leading from said chamber to a suitable outlet point.

In passing successively over the baffles 2, the steam is relieved of the free moisture therein, so that only dry steam passes through the apertures 4 to the work in conformity with the principal object of the invention. The condensation may be removed from time to time by tipping the steam plate so that the condensation will flow to the exhaust pipe 34.

In the treatment of certain classes of work it is desirable to brush or comb the work while steaming. The comb structure applicable to the steam plate consists of a pair of spring clips 35 adapted to engage the steam plate transversely and having secured thereto a pair of combs 36 running longitudinally along the bottom of the steam plate at the longitudinal edges thereof. For the purpose of attachment, the steam plate is formed with ribs 37 disposed longitudinally on the side walls, and the clips have similarly shaped depressions 38 adapted to receive the ribs. By this construction the clips are securely held on the steam plate and may readily be removed by merely expanding them and then withdrawing them.

Figures 6 and 7 show a brushing attachment applicable to the steam plate. This attachment consists of a pair of spring clips 39 similar to those already described and having attached thereto a pair of brushes 40 running longitudinally along the bottom of the plate at the edges thereof. It will be apparent that either the comb or the brush, as the case may be, is moved over the work while the latter is being treated by steam passed through the steam plate.

Although specific embodiments of the invention have been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention, as indicated by the appended claims.

What I claim is:—

1. A steam gun comprising a hollow head, baffles dividing the interior of said head into compartments, said baffles terminating short of the top of said head, said baffles having apertures extending from the upper edges thereof through the base of said head, a covering structure mounted upon said head, steam inlet means through said covering structure, said covering structure having a passage leading from said inlet means to one of the end compartments, and steam exhaust means from the remaining end compartment.

2. A steam gun comprising a hollow head, baffles dividing the interior of said head into compartments, said baffles terminating short of the top of said head, said baffles having apertures extending from the upper edges thereof through the base of said head, a sheet metal plate mounted over said head to close the same, said plate having an opening at one of the end compartments, an asbestos sheet mounted over said plate, a cover plate mounted upon said sheet, steam inlet means through said cover plate, said sheet having a passage extending from said inlet means to said opening, and steam exhaust means from the remaining end compartment.

In testimony whereof I affix my signature.

HARRY COLBURN.