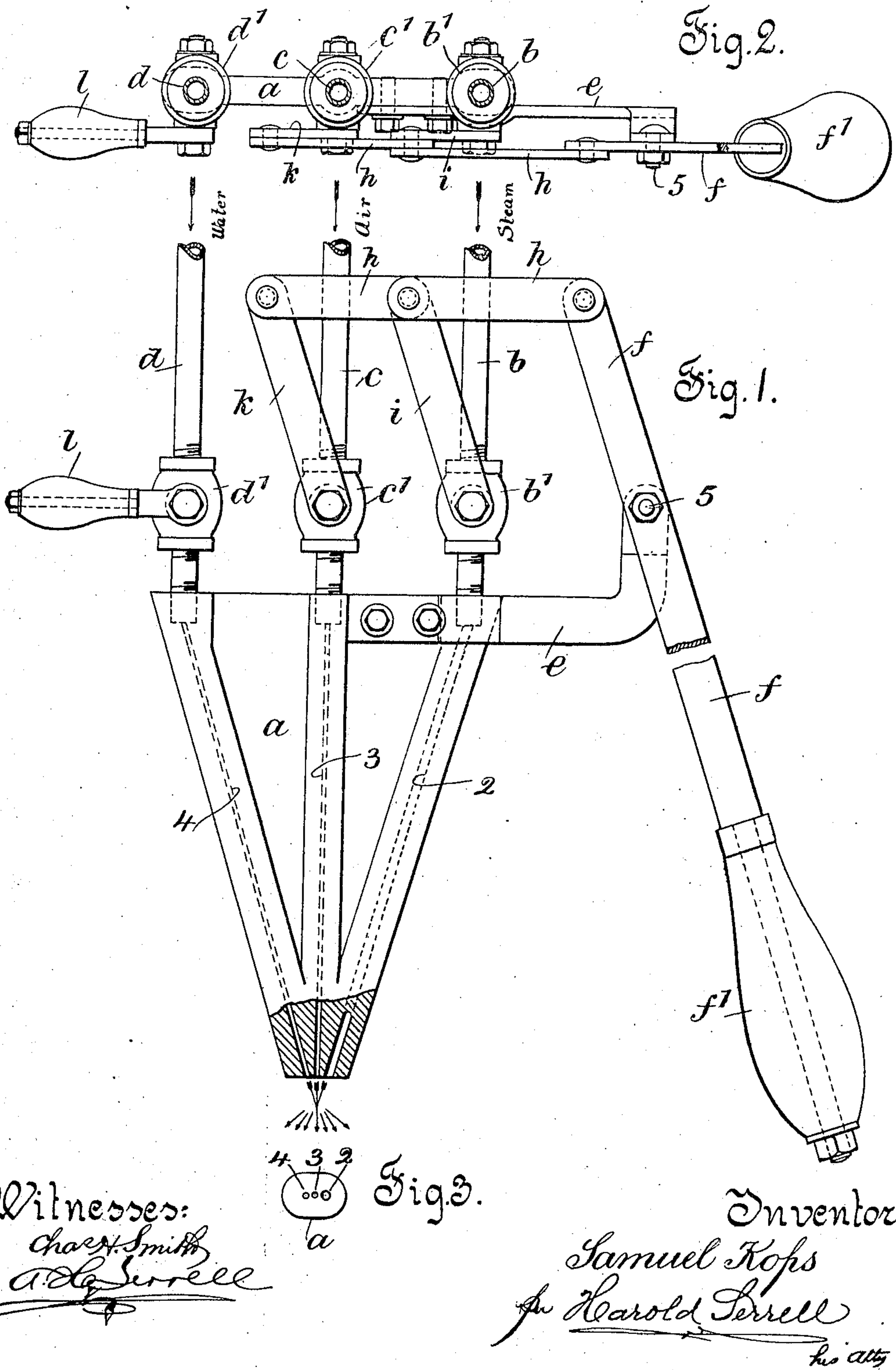


No. 892,741.

PATENTED JULY 7, 1908.

S. KOPS.
 SPRAYING DEVICE FOR DAMPENING FABRICS.
 APPLICATION FILED MAY 13, 1907.



Witnesses:
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UNITED STATES PATENT OFFICE.

SAMUEL KOPS, OF NEW YORK, N. Y.

SPRAYING DEVICE FOR DAMPENING FABRICS.

No. 892,741.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed May 13, 1907. Serial No. 373,434.

To all whom it may concern:

Be it known that I, SAMUEL KOPS, a citizen of the United States, residing at the borough of Manhattan, city, county, and State of New York, have invented an Improvement in Spraying Devices for Dampening Fabrics, of which the following is a specification.

In the manufacture of women's and men's undergarments it is necessary as the last stage, to iron the garment, or in other words, to press the same out smooth and impart a finish for the hot iron, and before this can be done to the best advantage, it is necessary to moisten the garment that the hot iron may the better do its work.

The means heretofore employed for dampening fabrics for ironing the same have not proved fully satisfactory, especially where large quantities of goods are handled, and this is particularly the case in the manufacture of corsets, and the object of my invention is the production of a device for thoroughly, quickly and effectually dampening all fabrics and especially the corsets before ironing.

In carrying out my invention, I provide a nozzle with three channels converging to closely adjacent apertures, pipes connect with the nozzle at the separated ends of these channels and suitable cocks or valves for regulating the flow of the materials are employed. These pipes and channels are for steam and air under pressure and for water under a head. A manually actuated lever is pivoted to a bracket secured to the nozzle and links connect the free end thereof to the levers of the cocks of the steam and air pipes, so that these cocks are simultaneously opened and to a like extent for the delivery of the steam and air to the channels of the nozzles. The cock for the water supply is actuated by a hand-lever to permit the escape through the nozzle of the water in any desired volume to mix with the steam and air according to the moisture of the spray necessary for properly dampening the fabric. This device is under perfect control and while the desired volumes of steam and air are simultaneously admitted to the nozzle, the water is admitted to mix with the steam and air to any desired extent. In this combination the steam imparts the heat and a percentage of vapor, the air gives the atomizing force and the water the moisture.

In the drawing, Figure 1 is an elevation showing the device of my improvement, the lower end of the nozzle being in section. Fig. 2 is a plan of the parts shown in Fig. 1, and Fig. 3 is an inverted plan at the contracted end of the nozzle.

a represents the nozzle which is generally of the form of the letter V, with central and edge channels 2 3 and 4. These are separated at the upper end of the nozzle and converge toward the lower end where they come closely together so that the orifices of these channels in the smaller end of the nozzle come closely together as shown in Fig. 3.

b c and *d* are pipes extending upward from the nozzle to suitable places of support, which pipes at their lower ends are securely screwed into the openings in the nozzle that are in line with these channels. The area of these channels should be predetermined. I prefer to make the channels 2 for steam at least twice as large as the channel for air as an appreciable volume of steam is required to impart the desired heat. The pipe *b* is for steam, the pipe *c* for air and the pipe *d* for water. The nozzle is advantageously supported from the support of these three pipes which is at some predetermined point overhead.

I have labeled the drawing with the words "Steam" "Air" and "Water" and have shown arrows for the direction. In the line of the several pipes and advantageously close to the nozzle I have placed the cocks or valves *b*¹ *c*¹ and *d*¹ and secured to this nozzle is a bracket *e* shown as extending outward and upward from one side of the nozzle.

A hand-lever *f* is connected by a pivot-pin 5 to the free end of this bracket and the lever is provided with a handle *f*¹; the lever being of any desired length so as to be easily reached for manual operation. Links *h* extend between and are pivotally connected to the upper free ends of the handle lever *f* and the levers *i* and *k* of the cocks *b*¹ *c*¹, and *l* is a lever manually actuated and extending from the water cock *d*¹. A single link will be equally operative.

It is to be understood that the steam is under pressure and that the air also is under pressure, and these pressures should be more or less predetermined according to the force desired, and the areas of the respective apertures.

The water in the pipe *d* is under a head of

any desired height or volume and its pressure should be predetermined; it may be of any desired degree of heat.

In the use of the apparatus it will be noticed that the nozzle points downward and is suspended from above so that there is a free space beneath the nozzle that may be occupied by any article that is to be moistened, and in this operation an attendant holds the article to be sprayed and it is preferable to hold the same out flat beneath the nozzle. The levers *f* and *l* are simultaneously operated so as to admit the steam and air under pressure to the nozzle and the water from the pipe *d* to the nozzle, it being preferable to open the steam and air cocks *b*¹ *c*¹ fully and the cock in the water pipe to any desired extent until a spray of the right fineness or coarseness is obtained, according to the article to be moistened.

The device may be left in operation, that is, with the steam and air emerging from the nozzle and the water may be turned on and regulated by each attendant in the work-room according to the article to be moistened.

I have shown and described the cocks or valves *b*¹ *c*¹ and *d*¹ as secured in the lines of the pipes *b c* and *d* but I do not limit myself in this respect as they may be formed in the nozzle or elsewhere as desired and perform the same function equally well.

I claim as my invention:

1. A spraying device for dampening fabrics, comprising a nozzle having three converging channels therein for steam, air and water respectively, pipes connected to the nozzle at the separated ends of the channels, cocks for regulating the flow of the materials and manually actuated devices for operating said cocks for regulating the flow.

2. A spraying device for dampening fabrics, comprising a nozzle having three converging channels therein for steam, air and water respectively, pipes connected to the nozzle at the separated ends of the channels, cocks for regulating the flow of the materials, a unitary structure manually actuated for

opening and closing two of said cocks and a manually actuated device for the separate operation of the other cock.

3. A spraying device for dampening fabrics, comprising a nozzle having three converging channels therein for steam, air and water respectively, pipes connected to the nozzle at the separated ends of the channels, cocks for regulating the flow of the materials, a manually actuated lever, a support therefor, links extending in alinement from the short end of said lever and levers pivotally connected to said links and extending to connections with two of said cocks, whereby with the movement of the said lever, the said cocks are opened and closed to any desired extent and a manually actuated lever connected to the other of said cocks for independent action.

4. A spraying device for dampening fabrics, consisting of a V-shaped nozzle with a wide portion at the upper end and having three channels converging therein, two of said channels converging equally toward the central channel, and the orifices of the said channels at the lower end coming close together, three pipes entering the nozzle in line with the upper ends of said channels for steam, air and water respectively under pressure, a bracket extending out from the nozzle at one side, a hand-lever pivotally connected to the free end of said bracket, cocks for regulating the flow of said materials, levers connected at one end to the steam and air cocks and links connecting said levers together at their other ends and to the hand lever for the simultaneous operation of the said cocks and regulation of the supply of the steam and air under pressure to the nozzle, and an independent hand-lever for regulating the supply of water through the water pipe and cock.

Signed by me this 8th day of May 1907.

SAMUEL KOPS.

Witnesses:

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