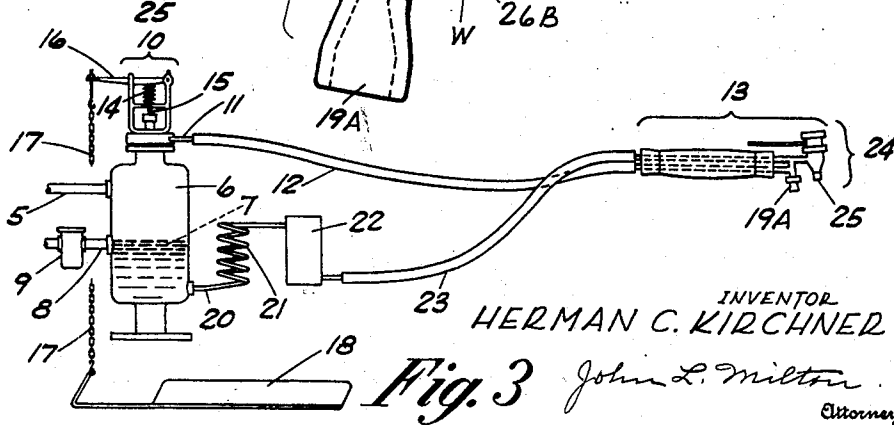
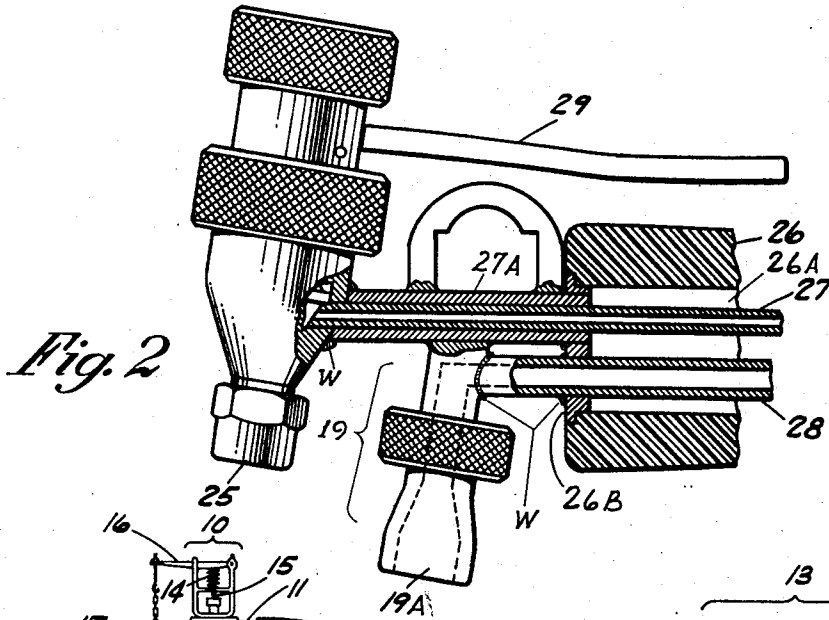
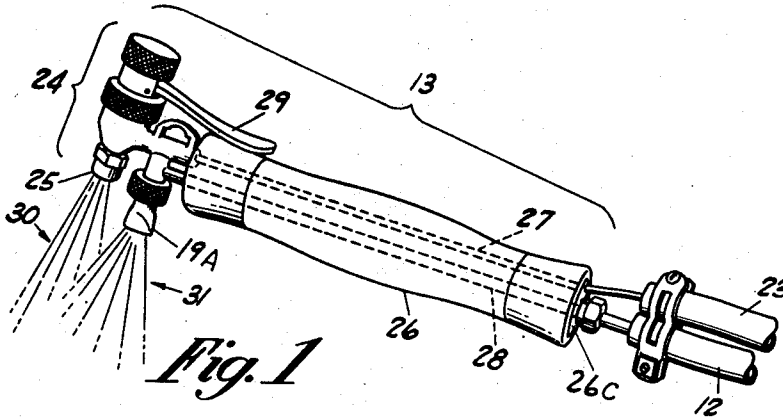


Feb. 2, 1954

H. C. KIRCHNER  
DOUBLE JET SPRAY GUN  
Filed July 7, 1950

2,668,083



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## UNITED STATES PATENT OFFICE

2,668,083

## DOUBLE JET SPRAY GUN

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Application July 7, 1950, Serial No. 172,468

## 1 Claim. (Cl. 299—112)

This invention relates to a combination of related and inter-dependent parts fashioned for assembly and expeditious welding of certain parts into an integral whole to provide a spray gun having two discharge nozzles capable of operation over a longer period of time without fouling.

To provide a sturdy light-weight dependable instrument of the general type disclosed in application, Serial No. 143,858, filed by Frank H. Richterkessing, February 13, 1950, now abandoned, capable of operation through a long period of service without fouling by detergents or other chemicals used by operators is the main object of this invention.

Another object of this invention is the provision of novel parts that can be manufactured on a production basis in order to provide the user with the best grade and type of a spray gun of this class at the minimum cost.

To provide comfort and relief of strain for the operator during long periods of continuous operation is a further object of the invention.

Other and subordinate objects are also comprehended by my invention, all of which, together with the precise nature of my improvements will be readily understood when the succeeding description and claim are read with reference to the drawings accompanying and forming a part of the specification.

In said drawings:

Figure 1 is a perspective view of the double jet spray gun, connected to two supply hoses, ready for service.

Figure 2 is a side elevation, on an enlarged scale and partly in section, of the discharged end of the spray gun shown in Fig. 1.

Figure 3 is a schematic elevation of the spray gun connected to apparatus for supplying fluids and the foot control for one of said fluids.

Referring to the drawings by numerals, and first to Fig. 3 illustrating the apparatus as a whole, 5 designates a pipe that conducts steam to chest 6 that stores steam in the top portion under pressure of approximately 100 pounds and collects condensate 7 in the lower portion where it is maintained at the indicated level by means of discharge pipe 8 connected to conventional trap 9. Valve 10 closes the top of the chest and controls the flow of live steam through outlet 11, hose 12 to spray-gun 13. Spring 14 retains the valve head closed through rod 15 except when lever 16 is forced downwardly to the open position by chain 17 that is actuated by pedal 18. When actuated, a jet of steam 31 is liberated from an orifice or nozzle 19A.

Outlet pipe 20 conducts hot water to cooling coil 21 then to cold water storage tank 22 that is connected by hose 23 to thumb operated spray head and valve 24, where a jet 30 or spray of water may be discharged from nozzle 25 at the will of the operator. It should be noted that both fluids are supplied under pressure from the same source, the boiler, however, this is not a prerequisite, since independent sources may be employed.

The spray-gun illustrated in Fig. 1, comprises a handle 26, having conduit 27 for conducting water to spray head 24, conduit 28 likewise is provided for conducting steam to orifice or nozzle 19A. These conduits are disposed interiorly of the handle and project forwardly to the outlets and rearwardly into the hoses, adverted to above. Lever 29 of the water spray-gun extends over the handle for ready actuation by the thumb of the gun supporting hand of the operator for discharge of sprayed water 30 from orifice or nozzle 25, while spray steam 31 may be discharged at will from nozzle 19A by actuation of pedal 18, Fig. 3. The other hand of the operator is free for handling the garment under treatment. Thus, the operator is provided with a double jet spray-gun whereby either fluid or a mixture thereof may be effected instantaneously.

To provide for long periods of continuous all day operation without fag of the operator's muscles of the spray-gun hand, a balanced spray-gun was provided. Weight of conventional spray-guns and spray heads would have defeated this condition. The use of sand and die-castings for these elements was not desirable in order to forestall fouling and/or corrosion since metals alloyed with zinc, aluminum and the like are attacked by many solvents in current use in the dry-cleaning industry. To meet these conditions and provide for occasional service such as cleaning, repairs to damaged parts and substitutions of nozzles to change orifices et cetera the principal elements were made of superior metals on automatic screw machines, assembled and welded as shown best in Fig. 2 in which, as adverted to above, conduits 27, 28 are centrally disposed in air chamber 26A of the handle and are located therein by headers 26B, 26C. Tube 27A telescopes conduit 27, abuts the shell of spray-gun 24 at one end, extends into header 26B at the other end with the central portion disposed over the top portion of spray head 19 in order that all of the contact or near contact portions can be welded. A preferred procedure consists of assembling the next above mentioned elements in a fixture or jig preparatory to unifying

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the same for producing the structure shown herein, this is followed by the application of a suitable flux, heat and a welding medium as well understood in practice.

While dry steam and cold water are chosen for disclosing my invention, it must be understood that other fluids may likewise be expeditiously dispensed with this apparatus and the methods embraced herein.

Manifestly, the invention, as illustrated and described is susceptible of modification without departing from the inventive concept, and right is hereby reserved to such modifications as fall within the scope of the appended claim.

I claim:

In a spray gun, the combination of a spray head having a casing and a spray nozzle, a tubular handle having one end thereof closed by a header member, means mounting said spray head upon said handle comprising a metal tube having one end thereof rigidly secured to said header and the other end rigidly secured to a side-wall portion of said casing, the axis of said tube being substantially parallel with the axis of said handle and the axis of said nozzle being substantially at right angles to the axis of said tube, a

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second spray head secured to said tube at an intermediate point thereon and having its nozzle axis extending parallel with the nozzle axis of said first spray head, a supply conduit for said first spray head located within said handle and passing through said header, through said tube and into the casing of said first spray head, and a second supply conduit located within said handle and passing through said header and being connected to said second spray head.

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