

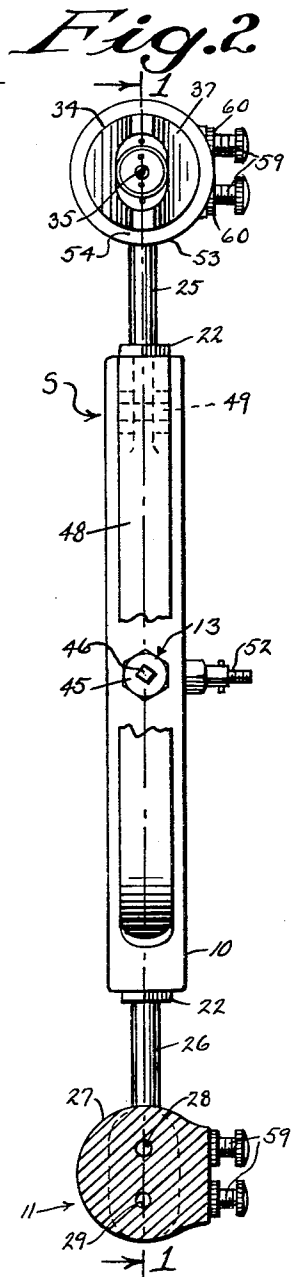
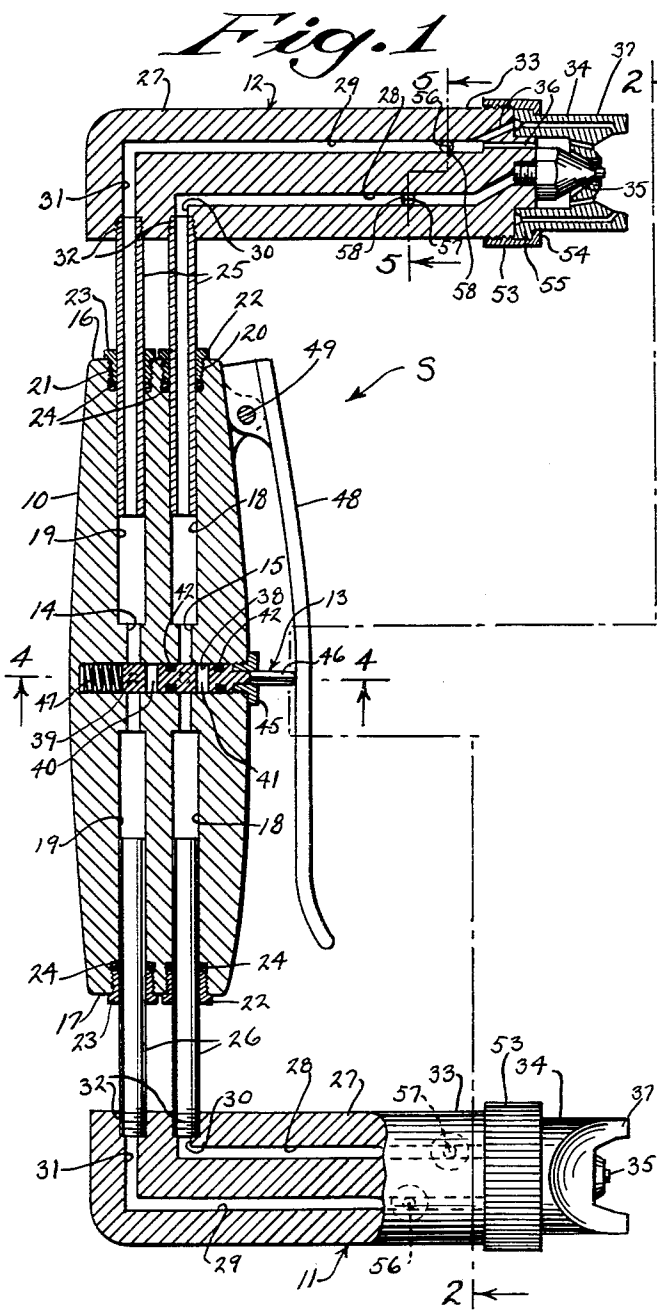
Oct. 31, 1961

H. M. SCHMIDT
DUAL HEAD SPRAY GUN

3,006,559

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2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3

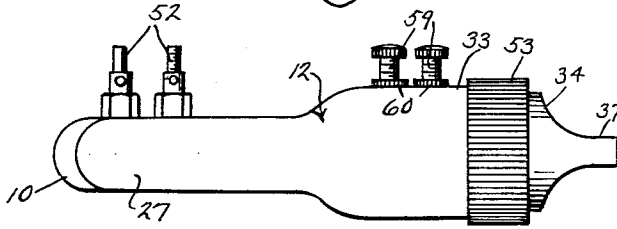


Fig. 4

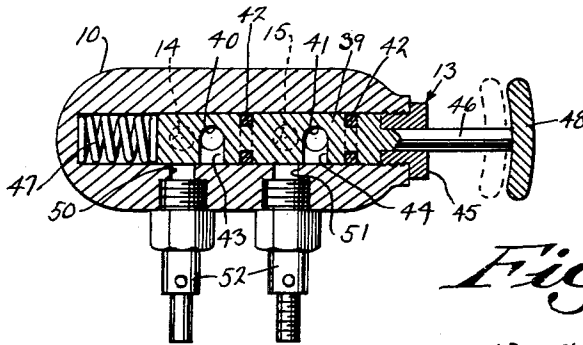


Fig. 6

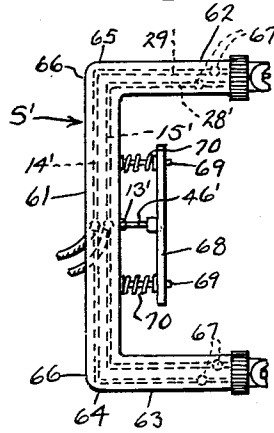
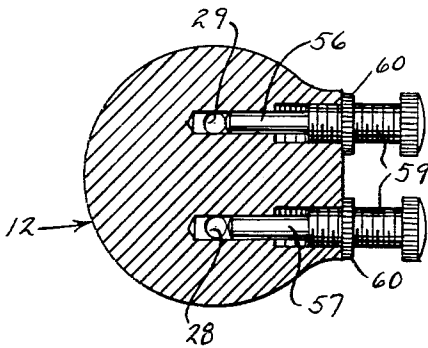


Fig. 5



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1

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DUAL HEAD SPRAY GUN

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2 Claims. (Cl. 239-414)

This invention appertains to spray painting and more particularly to a new and novel spray gun having a dual spray head. In spray painting, particularly where there are long unobstructed surfaces to be painted, it would certainly be desirable to be able to cover a greater area than is possible with the types of spray guns now on the market. While attempts have been made to alleviate this condition by providing dual spray heads, they have not served the purpose, in that, they have been improperly designed and do not feed the paint and air from each head under the same pressure and do not feed the same amount of material at the same time. Thus, runs and sagging resulted, overlapping strokes were necessary and where the paint spray heads overlapped, a thicker coating was had. There is, therefore, a need in the art for a dual spray head designed to cover a greater area but which will give a uniform mixture from each head, thus eliminating the aforementioned difficulties.

It is therefore a primary object of my present invention to provide a novel spray gun having two spray heads.

Another important object of my present invention is to provide a spray gun having two spray heads actuated by a single valve so situated that an even air pressure and the same amount of material will be simultaneously delivered to each spray head.

Still further object of my present invention is to provide a dual spray head for a spray gun, wherein one or the other spray head may be rendered inoperable for situations requiring a single spray head.

A further object of my present invention is to provide a spray gun having two spray heads and providing means wherein each spray head may be adjustable to cover a greater or lesser area as desired.

A salient feature of my present invention resides in the fact that my novel spray gun may, if desired, be cast in one piece providing a spray gun particularly adaptable for use by contractors who do not need the adjustable heads.

A still further object of my invention is to provide a novel dual headed spray gun which is simple in construction, reliable in its operation and not liable to get out of order.

With these and other objects and to the end of attaining any other advantages hereinafter appearing, this invention consists in certain features of construction and combination and arrangement of parts hereinafter described, pointed out in the claims and illustrated in the accompanying drawings.

In said drawings,

FIGURE 1 is a longitudinal sectional view of my novel spray gun showing the adjustable telescoping dual head arrangement, the section being taken on the line 1-1 of FIGURE 2 of the drawings and looking in the direction of the arrows;

FIGURE 2 is a front elevational view, certain parts being broken away and in section to illustrate further details of construction, the section being represented by the line 2-2 of FIGURE 1 of the drawings, looking in the direction of the arrows;

FIGURE 3 is an end elevational view of my novel spray gun;

FIGURE 4 is an enlarged transverse sectional view taken on the line 4-4 of FIGURE 1 of the drawings, looking in the direction of the arrows and illustrating further details in my novel single valve control;

2

FIGURE 5 is an enlarged transverse section through one of the spray head bodies taken on the line 5-5 of FIGURE 1 of the drawings and looking in the direction of the arrows, and

5 FIGURE 6 is a reduced top elevational view of a modification of my device, showing the same cast as a single unit.

Referring now to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter S generally indicates one type of my improved spray gun, and referring more particularly to that form of my invention illustrated in FIGURES 1 to 5, inclusive, the same includes broadly a central barrel or handle section 10, the two spray heads 11 and 12 respectively, adjustably secured to the center section, and a control valve mechanism 13. The center handle section 10 is preferably cast from a single piece and is provided with parallel longitudinal bores or ways 14 and 15, respectively, extending entirely through the body 10 from one extremity 16 to the other extremity 17. The ways 14 and 15 adjacent the ends 16 and 17 respectively are drilled to provide for a larger passageway 18 and 19 respectively, and the extreme outer ends are further countersunk, as at 20, and 21, respectively, and threaded to receive the fittings 22 and 23. These fittings are of the expandable and contracting type wherein in one position they tighten about a member and when loosened will spread and allow the movement of the member therethrough. For sealing purposes O rings 24 are provided in each instance. As is obvious, the extremities 16 and 17 are identically formed and received in the enlarged passageways 18 and 19 at each end are a pair of telescoping tubes 25 and 26 respectively. These tubes are received in the ways and extend through the fittings 22 and 23 and as previously explained, when the fittings are threaded inwardly in the position illustrated in FIGURE 1 of the drawings, the tubes are held rigid and immovable.

However, by loosening the fittings 22 and 23 the tubes may be freely slidable within the ways, thus giving an extension or retraction of the tubes as required. The spray head mechanism itself, namely, the spray heads 11 and 12, are identically formed and each includes a cylindrical shaped body 27. Each head is provided with a pair of longitudinal extending ways 28 and 29, and at one end thereof a pair of communicating ways 30 and 31 extending transversely and at right angles to the ways 28 and 29 are provided, and these ways open out to one side of the body 27 adjacent one end thereof. Each way 30 and 31 is countersunk and threaded to receive the threaded ends 32 of the tubes 25 and 26 respectively. The other end 33 of the body 27 is formed to receive a standard type spray head 34 and the way 28 is threaded at the end to receive the paint nipple 35 and the way 29 is further divided to provide connecting passageways 36 with the spreader portion 37. The passageways 29, 36 and 37 are for air under pressure and the aforementioned passageway 28 and nipple 35 receive the material, such as paint.

Extending transversely and centrally in the center section 10 is a bore 38 communicating with the ways 14 and 15. This bore receives the body 39 of the valve mechanism 13 and this body 39 is of a solid tubular construction having spaced centrally and transversely extending ports 40 and 41, respectively, which in one position are adapted to be in alignment with the ways 14 and 15. This valve body is also grooved to receive the O rings 42 utilized to provide the proper sealing. At right angles to each port 40 and 41 and opening out on one side only of the valve body is a pair of ports 43 and 44. The valve body is held in place by means of a fitting 45 threaded into the end termination of the transverse bore and this fitting has a reduced portion through which extends the reduced end portion 46 of the valve body. The

valve body is continuously urged to its closed position by means of the spring 47, as shown, and is moved to a position wherein the ways 40 and 41 communicate with the ways 14 and 15 by depressing the plunger or reduced portion 46 by means of a lever handle 48 which is pivoted at 49 to one end of the central section 10, as shown.

The material and air are fed to the respective ways 14 and 15 by means of the ports 50 and 51, and these ports are provided with the standard type fitting 52 which are adapted to receive the air and paint hoses, (FIGURE 4 of the drawings). Attention should also be directed to the fact that the central body portion 10 is actually formed more in the shape of a flat bar which is rounded at each end and then tapered to barrel shape, as clearly shown in FIGURES 1, 2 and 4 of the drawings. Further, the bodies 27 are reduced and conform to the height of the center section at the inner ends thereof and are rounded as shown by FIGURE 5 near the spray heads ends. The spray heads per se as previously mentioned are of a standard construction and may be removed from the body 27 by turning on the thimble 53. This thimble is threaded to the outer end of the body 27 and is provided with an inwardly directed peripheral flange 54 which fits over the outer peripheral portion 55 of the spreader portion 37 of the head.

In some instances it may be desirable to utilize only one spray head. Where only one spray head is to be used, two things can be done. One, the fittings 22 and 23 can be loosened and the telescoping tubes 26 of one head may be removed and the ways 18 and 19 thereof plugged. If, however, one head is to be used intermittently with two spray heads, it may be desirable not to remove completely one spray head, but merely to shut off the spray of paint and air to one head or the other. I therefore provide a threaded plunger 56 for each air passage 29 and a threaded and adjustable plunger 57 for each paint passageway 28. These plungers 56 and 57 move in a pair of transversely provided bores 58 and are adjustable by a threaded end portion 59 through the internally and externally threaded fittings 60. Thus it can be seen that I have provided a very versatile spray gun in which one head or the other may be made operable, or both heads made operable and the longitudinal adjustment of the heads may be varied and will only be limited by the length of the telescoping tubes 26 and the capacity of the spray heads and air adjusting valve. Thus, a wide variable spray pattern can be obtained and still provide for good even distribution of paint. My novel dual headed spray gun is unique in that it is the first and only compact, portable, trigger controlled, dual headed spray gun covering more than twice the area previously covered by known types of spray guns. Further, my gun applies materials in such a manner that it will produce a superior finish coat and will apply such finishes in accordance with the correct principles of spray painting.

The above described spray gun is particularly advantageous for use by factories for painting different parts and surfaces of varying areas, but most probably a paint contractor would desire, from the economical standpoint, a spray gun made in a single casting that would give a maximum coverage.

I have, therefore, illustrated in FIGURE 6 of the drawings, a dual headed spray gun S' cast in a single piece. This gun operates identically to that described in FIGURES 1 to 5, of the drawings, the only difference being that the center section 61 and the spray head bodies 62 and 63, respectively, are cast as a single integral unit.

The ways 14' and 15' of the center section are drilled from either end 64 and 65 and the apertures are then plugged. Further, the connecting ways 28' and 29' for the air and paint, respectively, are drilled from the end walls 66 to communicate with the ways 14' and 15' and the end terminations of these ways are then plugged. It is important to note that the body portions 62 and 63 extend forwardly from the center section and are parallel

to one another in the same manner that the bodies 27 of the form of the invention illustrated in FIGURES 1 to 5, inclusive, are parallel to one another. The spray heads per se are identical in this form of the invention to the spray heads illustrated in FIGURE 1 of the drawings, and are likewise provided with adjustable means indicated by the dotted lines and numeral 67 for controlling the shutting off of the flow of air or paint to one head or the other. Further, the control valve structure 13' is identical and the plunger 46' is the same, except that it is operated by a cross-bar 68, the ends of which slide on upstanding pins 69 and are urged out to their outer position by means of springs 70. Thus, it can be seen that I have provided a simple dual spray gun cast in one piece which will be readily utilized by a building contractor.

It should be further understood that I have shown the simplest valve arrangement 13 and simplest construction, merely for convenience, in that, my invention resides primarily in providing the dual spray heads. However, in some standard spray guns various needle valves are found in the ways 28 and 29 which are operable from the main trigger mechanism. Therefore, if desired, I can provide the handle 48 or the handle 68 in the form of an extensible handle to operate the needle valves, as well as the center valve, and to be extensible as the spreader heads are adjusted in that form of my invention illustrated in FIGURES 1 to 5, inclusive.

While I have not shown this modification, it should be understood that a telescoping handle as well as telescoping tubes may be constructed where necessary and within the limits and scope of my invention.

From the foregoing, it is believed that the features and advantages of my invention will be readily apparent to those skilled in the art, and it will, of course, be understood that changes in the form, proportion and minor details of construction may be resorted to without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A spray gun comprising a body of general U-shape having a relatively flat elongated central section and spaced parallel extending end sections, a pair of spaced tubes secured to each end section and telescopically received in a respective end of said central section, means for adjusting and holding said tubes in any given position toward and away from said central section, a spray head positioned on the outer extremity of each end section, ports and ways in said central section and said end section providing communication of said spray heads and said tubes with a source of paint and air supply respectively, and a single valve control for regulating the paint and air supply evenly and simultaneously to both spray heads.

2. A spray gun comprising a body of general U-shape having a relatively flat elongated central section forming a central hand grip and spaced parallel extending end sections, a pair of spaced tubes secured to each end section and telescopically received in a respective end of said central hand grip section, means for adjusting and holding said tubes in any given position toward and away from said central section, a spray head positioned on the outer extremity of each end section, ports and ways in said central section and said end section providing communication of said spray heads and said tubes with a source of paint and air supply respectively, and a single valve control associated with said central hand grip section for regulating the paint and air supply evenly and simultaneously to both spray heads.

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