

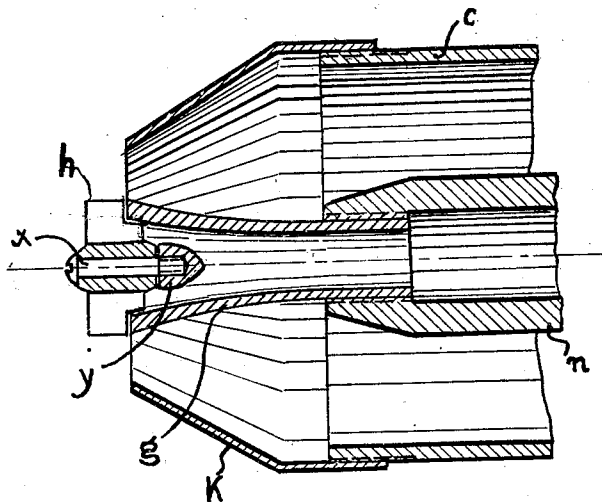
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COLOR PROJECTING AND DISTRIBUTING APPARATUS FOR PAINTERS

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COLOR PROJECTING AND DISTRIBUTING APPARATUS FOR PAINTERS

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This invention relates to a color projecting and distributing means for painters, a so-called color spray pistol having a turbine wheel rotating at the issue of the color nozzle. The known apparatuses of this kind offer the inconvenience that the spray of color issues in the form of a very dense central spray and a very broad surrounding cone consisting of color fog or mist. The consequence is a very irregular distribution of the color, an excess of color wasted and an irregular painting.

According to my invention a homogeneous color spray of medium density without any fog and of very acutely angled conic form is obtained in that the color nozzle is made of approximately the same diameter as the outer diameter of the turbine wheel in front thereof. Hereby the air current which as usual issues around the color nozzle does not act essentially in an axial direction as with the known apparatuses of this kind but acts in an essentially inwardly radial direction thus counter-acting against the centrifugal force of the rotating turbine wheel and ensuring homogeneity and coherence of the spray. It is especially advantageous if not only a smooth hub of the turbine wheel (as already known in the art) reaches into the orifice of the color nozzle but also part of the wings thereof. To this purpose the wings are preferably radially stepped and the thickness of the color nozzle wall is increased towards the orifice thereof so that the difference between the outer and the inner radius of the color nozzle at the orifice thereof is approximately equal to the length of the wings of the turbine wheel so far as the same do no more reach into the interior of the nozzle. Hereby the color is positively caught by the wings of the turbine wheel so that the inner air current having a prevailing axial component as used in the apparatuses heretofore may be entirely dispensed with. According to my improved apparatus a single inwardly ta-

pered air current is sufficient whereby the construction of the air nozzles is much simplified.

In the single figure of the drawing an embodiment of the nozzle system of a color spray pistol according to this invention is shown in a sectional and diagrammatic view.

h is the turbine wheel the wings of which partially reach into the interior of the orifice of the color nozzle g , y being the support of the fulcrum of this wheel in the orifice. The axle x of the wheel is fixed (f. e. screwed) into this support. k is a hollow cone of sheet metal or the like and is fixed at the front piece c of the pistol by means of a screw thread. The color nozzle g is, as usual, screwed into the color supply pipe n . The radial width of the wall of this orifice corresponds to the radial length of the outer portion of the wings of the wheel h so far as the same do not enter into the interior of the said nozzle. The outer diameter of the turbine wheel h is approximately equal to that of the orifice g .

I wish to be understood that the above is only a mode of performance of my invention and I do not wish to limit myself thereto but am desirous to obtain the full protection of the following claims:

What I claim is

1. A color projecting and distributing apparatus of the character described, comprising in combination an air supply line and a color supply line, a color nozzle adapted to be supplied with color from the said supply line and an air nozzle surrounding the said color nozzle and adapted to be supplied with air from the said air supply, a turbine wheel mounted in said color nozzle adapted to be actuated by the air supply through the air nozzle, the outer diameter of said wheel being approximately equal to the outer diameter of the color nozzle.

2. An apparatus as claimed in claim 1 in which the wings of the said turbine wheel

are stepped and, with their inner portion reach into the interior of the said color nozzle.

3. An apparatus as claimed in claim 1 in which the difference of the outer and of the inner radius of the color nozzle wall at the orifice thereof is approximately equal to the length of the outer portion of the wings of the said wheel so far as the same do not reach into the interior of the said color nozzle.

4. An apparatus as claimed in claim 1 in which the air nozzle, the color nozzle and the turbine wheel are so arranged that the contacting of air and color takes place entirely outside the apparatus.

In testimony whereof I affix my signature.

KARL ZECHMANEK.

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