Oct. 26, 1937. W. W. OLIVER 2,097,337

SPRAY DEVICE

Filed Sept. 23, 1936

Fig. 1.

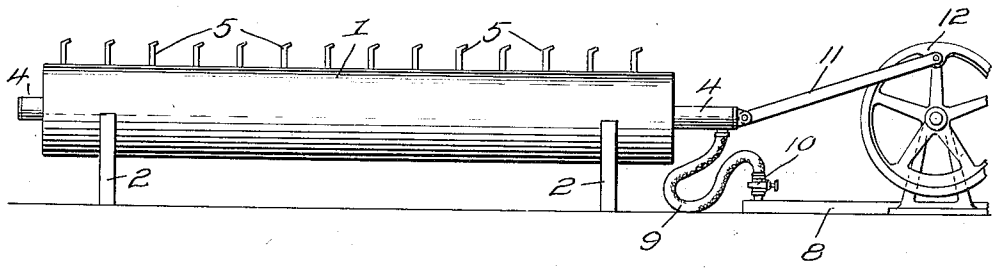


Fig. 2.

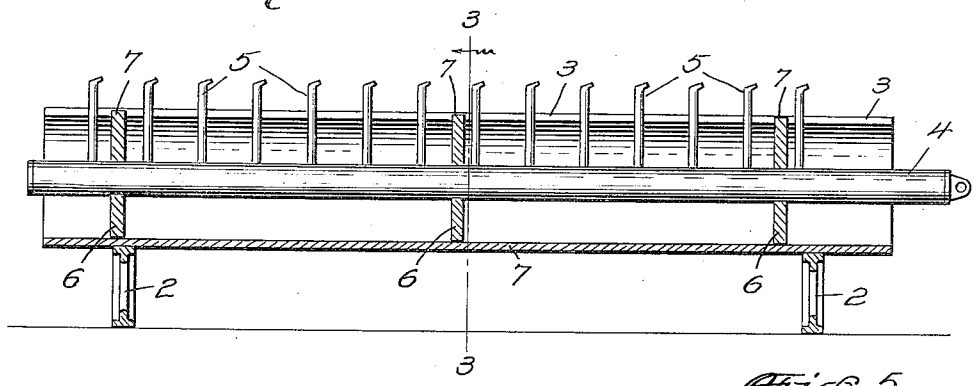


Fig. 3.

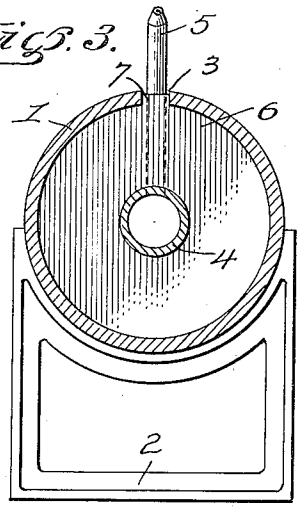


Fig. 4.

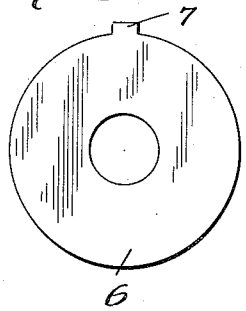
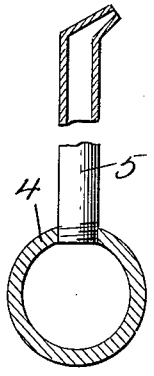


Fig. 5.



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SPRAY DEVICE

William W. Oliver, Bucksport, Maine

Application September 23, 1936, Serial No. 102,183

3 Claims. (Cl. 299—62)

This invention relates to spray devices especially adapted for paper making machines and has for the primary object the provision of a device of this character which is capable of discharging fluid over a larger area than accomplished by a fixed spraying device now in use and permits a fewer number of spray nozzles or jets to be employed so as to conserve fluid and render the operation of the device less expensive and to possess a maximum amount of efficiency.

With these and other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawing, in which

Figure 1 is a side elevation illustrating a spray device constructed in accordance with my invention.

Figure 2 is a fragmentary vertical sectional view illustrating the slidably mounted spray nozzle adapted for reciprocation during the discharge of the fluid.

Figure 3 is a transverse sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a plan view of one of the supporting discs.

Figure 5 is a transverse sectional view illustrating one of the spray nozzles and its connection with a slidable fluid supply medium.

Referring in detail to the drawing, the numeral 1 indicates a tubular guide supported by members 2 and has formed in one wall thereof a slot 3 which extends from end to end of said guide. A fluid distributing pipe 4 extends into the guide and is arranged centrally thereof and is provided with a series of nozzles or jets 5 which protrude through the slot 3. The fluid distributing pipe 4 is adapted for reciprocation and is slidably supported by disc-like elements 6, the latter being fixed thereto and engage the inner walls of the guide 1. The elements 6 have formed thereon projections 7 received in the slot 3 to prevent rotation of the pipe 4 during its sliding movement and to prevent the nozzles or jets from dragging against the walls of the slot 3.

A fluid supply pipe is shown at 8 and is connected to the distributing pipe 4 by a flexible pipe 9. A control valve 10 is located between the flexible pipe 9 and the supply pipe 8. The connecting rod 11 is pivoted to one end of the distributing pipe 4 and is eccentrically pivoted to a power pulley wheel 12 whereupon the rotation of said pulley wheel will bring about reciprocation of the fluid distributing pipe 4 and consequently permit fluid to be sprayed over a comparatively large area by the nozzles or jets 5 sliding back and forth with respect to said area.

Having described the invention, I claim:

1. A slidable spraying device comprising a tubular guide having a slot extending the full length thereof, supporting means for said guide, a fluid distributing member located centrally of said guide, nozzles connected to said member and extending through the slot, discs secured to said member and engaging the guide, projections on said discs and extending into the slot, and means for reciprocating said member, and means for admitting fluid under pressure to said member.

2. A slidable spraying device comprising a tubular guide having a slot extending the full length thereof, supporting means for said guide, a fluid distributing member located centrally of said guide, nozzles connected to said member and extending through the slot, discs secured to said member and engaging the guide, projections on said discs and extending into the slot, a power means connected to one end of said member for the reciprocation thereof, a flexible pipe connected to said member, and a control valve connecting said flexible pipe to a fluid supply pipe.

3. A slidable spraying device comprising a tubular guide having a slot extending the full length thereof, a reciprocal fluid distributing member located centrally of said guide, means for slidably supporting said fluid distributing member in said guide, nozzles connected to said fluid distributing member and extending through the slot, means for reciprocating said fluid distributing member, and means for admitting fluid under pressure to said member.

WILLIAM W. OLIVER.