

April 22, 1947.

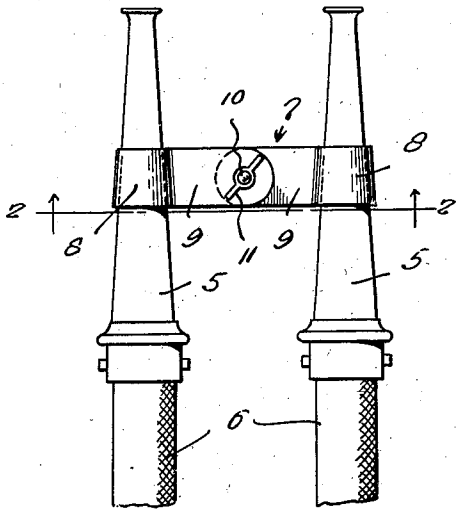
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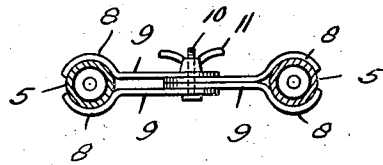
FIRE NOZZLE CONTROL CLAMP

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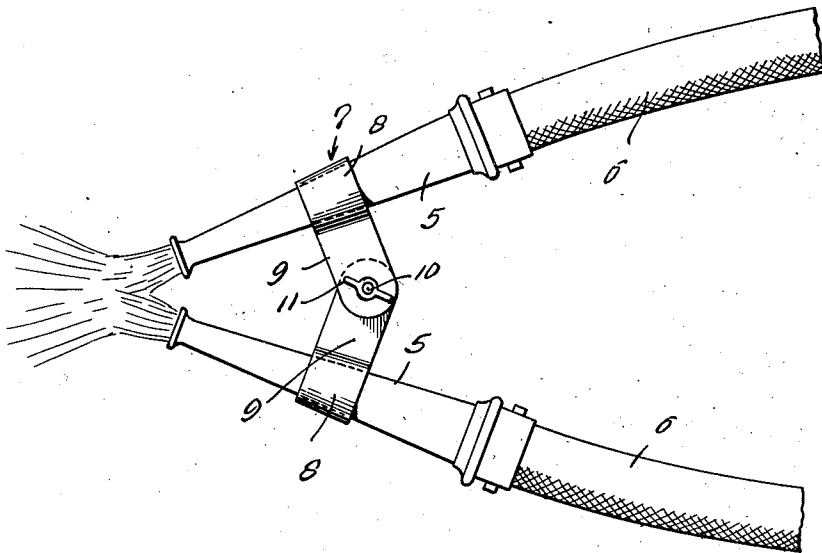
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE

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## FIRE NOZZLE CONTROL CLAMP

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1 Claim. (Cl. 24-81)

This invention relates to a control clamp for nozzles of fire fighting equipment, and has for the primary object the provision of a device which will permit easy and variable control of the high pressure streams of fire extinguishing fluid from the fire fighting equipment or the nozzles thereof, whereby the streams may be easily directed on a selected area separately from each other and at various angles to each other or made to merge with one another with the merging of the streams taking place at various distances from the discharge ends of the nozzles.

Another object of this invention is the provision of a clamp capable of connecting fire fighting nozzles of different sizes and for firmly maintaining the nozzles in parallel relation or at various angular positions with respect to each other and may be employed on portable nozzles or nozzles which have a fixed location of operation.

A further object of this invention is the provision of a durable and compact clamp consisting of a minimum number of parts and including a securing means for adjusting the clamp to different size nozzles and for adjusting the nozzles relative to each other and for retaining the nozzles in the various adjusted positions against movement from the position selected.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts which will 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 drawings, in which

Figure 1 is a fragmentary plan view showing fire extinguishing equipment equipped with the present invention.

Figure 2 is a sectional view taken on the line 2-2 of Figure 1.

Figure 3 is a fragmentary plan view showing the present invention adjusted for the purpose of merging the discharge streams of fire extinguishing agents for the purpose of producing the streams into a mist.

Referring in detail to the drawings, the numeral 5 indicates discharge nozzles of fire fighting equipment and 6 the hose for supplying the nozzles from a high pressure source with any suitable fire extinguishing agent.

A controller clamp, forming the subject matter of the present invention, is indicated by the character 7 and is employed for the purpose of adjustably connecting the nozzles 5 so that said

nozzles may be conveniently adjusted with relation to each other to either assume parallel relation, as shown in Figure 1, or to assume angular positions with respect to each other for the purpose of merging the streams of fire extinguishing agents discharging from the nozzles at variable distances from the discharge ends of the nozzles. The controller clamp 7 consists of pairs of arcuately curved jaws 8 and connecting strips 9 integral therewith. The connecting strips 9 of each pair of jaws 8 are arranged to be parallel one another and the strips are apertured adjacent their free ends and adapted to be brought into overlapping relation with the apertures aligning to receive a pivot bolt 10 on which is threaded a wing nut 11. The bolt 10 and wing nut 11 extending through the overlapped ends of the strips 9 provide a construction whereby the position of the jaws with respect to each other can be conveniently varied and secured in any of the adjusted positions. The bolt and wing nut extending through the strips 9 also provides a construction for adapting the pairs of jaws to nozzles of different sizes.

It is preferable that the jaws be transversely tapered to conform to the usual taper of the nozzles.

The releasing of the wing nut 11 on the bolt 10 will permit a person to be able to easily position the nozzles 5 in parallel relation so that the streams of fire extinguishing agent escaping from the nozzles will be spaced an equal distance apart for the purpose of cooling large areas that are on fire rapidly and efficiently, or may be employed for washing or flooding purposes. The streams discharged from the nozzles when in parallel relation will take on more or less a solid formation very efficient for the purposes specified.

By adjusting the jaws through the release of the wing nut into angular position will permit the operator to readily merge the streams of the fire extinguishing agents at a desired distance from the ends of the nozzles and on the tightening of the wing nut the nozzles will be made to maintain the angular positions selected so that the streams impinging into each other produce a large volume of vapor or fog for the smothering and thereby extinguishing of fires fed from oil, gasoline, alcohol and other highly combustible materials. Also, the mist or fog will efficiently extinguish by a smothering action electrical fires. The density of the fog or mist thus created can be easily varied by the operator in regulating the distance the streams meet from the ends of the discharge nozzles.

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The present invention can be successfully used on nozzles on fighting equipment of a portable nature or on nozzles associated with fire equipment that has more or less a fixed position. Therefore, fire extinguishing equipment equipped with the controller clamp or the present invention, may be successfully employed for the fighting of different characters of fires either on land or on shipboard. The use of the present invention on nozzles of high pressure hose lines permits the operator or operators to have better control over the nozzles and thereby reduce to a minimum the possibility of injury to the operator or operators by back pressure in the hose lines forcing the nozzles out of manual control.

Also, the present invention will reduce the amount of man power necessary in the control and operation of the nozzles and the streams of fire extinguishing agents discharged therefrom. Further, it will be seen that the present invention is of a simple, durable and compact construction, inexpensive to manufacture and very efficient in use.

The controller clamp when adapted to nozzles fire fighting equipment as described will permit the fire nozzles to be used either horizontally or vertically and conveniently within very limited or small areas.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention claimed.

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Having thus described my invention, what I claim is:

In a clamp for holding a plurality of nozzles of fire hose and the like in associated relation, the combination, which comprises two corresponding pairs of complementary gripping jaws, each element of each pair of jaws comprising a flat band with a bolt hole adjacent one end and with a substantially semi-circular jaw element at the other end, said jaw element shaped to conform substantially to one-half of a frustrum of a cone, a common bolt extending through the bolt holes of the elements respectively with the flat bands of the jaw elements of one pair of jaws positioned between corresponding bands of the jaw elements of the other pair of jaws, and a thumb nut threaded on said bolt adjustably securing said elements in clamping relation.

FRANCIS J. DOYLE.

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