

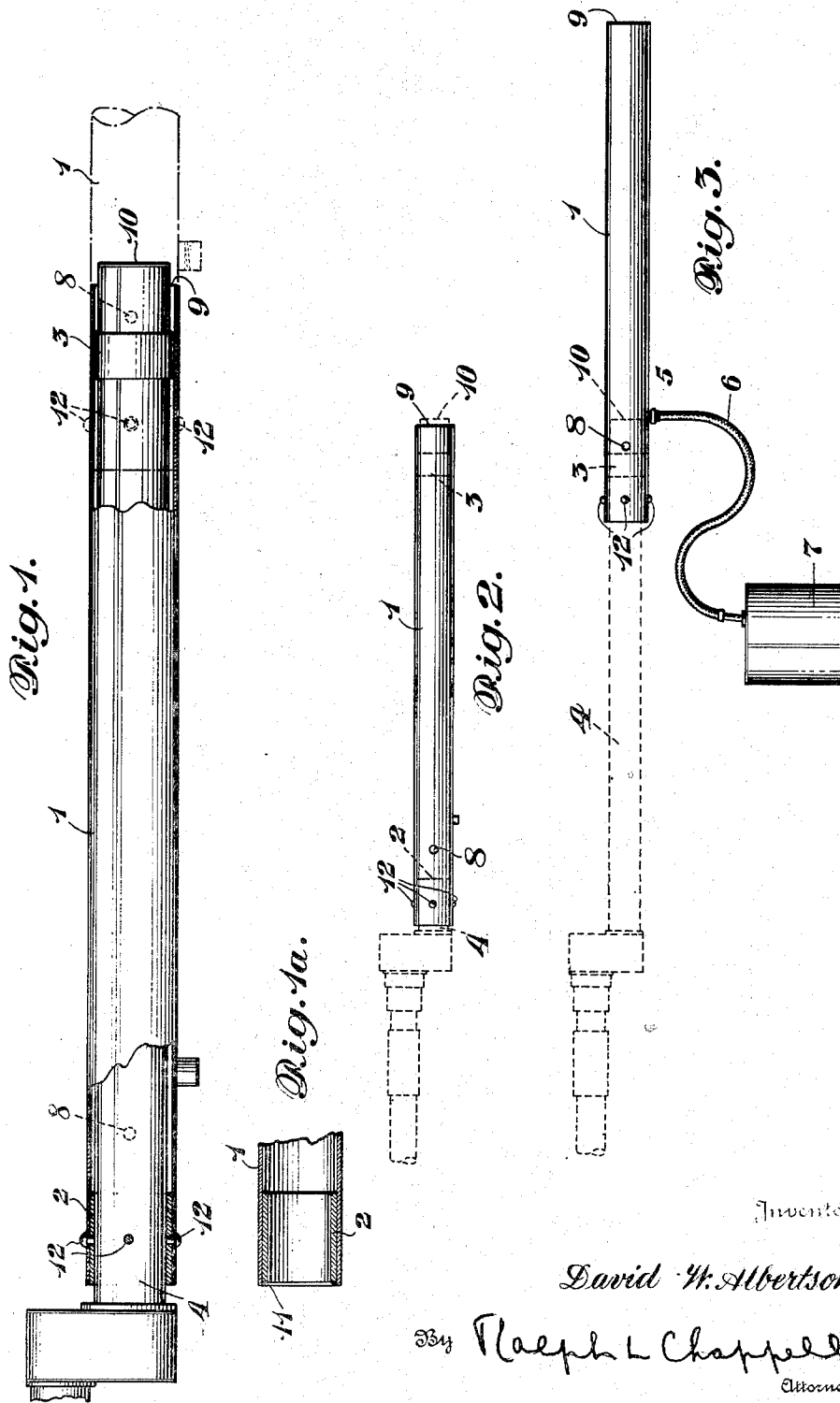
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FOG GUN ATTACHMENT FOR CRASH FIRE AND RESCUE WORK

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FOG GUN ATTACHMENT FOR CRASH FIRE
AND RESCUE WORK

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2 Claims. (Cl. 169-15)

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This invention relates to improvements in fire hose nozzles and is particularly applicable to high pressure water fog play pipes where a quick changeover from the normal fog to a foam discharge and vice versa may be desired; as, for example, in crash fire and rescue work at airfields and elsewhere.

In the procedure followed in crash fire and rescue work, normally, the first mission of the fire and rescue crew is to open a path through the flames to the cockpit utilizing, when available, high pressure water fog in order to effect the rescue of the personnel. Further extinguishment of the fire is then undertaken with the high pressure water fog, if practicable, but in the majority of cases, it has been proven that the use of foam is necessary for this purpose. This situation has given rise to the problem of quickly changing from the use of high pressure water fog to foam.

Until recently, it has been necessary to either switch nozzles on the high pressure water fog lines which causes a delay in the fire and rescue work because the discharge of the water fog has to be cut off, or to pour liquid foam into the water tank on the high pressure water fog truck, which also causes a delay in the fire and rescue work because of the lapsed time used in pouring the liquid foam into the tank and for the foam to pass from the tank through the lines to the nozzle.

The object of this invention is to provide a device to be attached to the high pressure water fog nozzle for converting the nozzle from fog to foam and back to fog again, as desired, thus giving the nozzleman a degree of control over the situation never before possible.

A further object is to provide a sleeve slidably attached to a water fog nozzle and having connection to a source of liquid foam supply for instantly changing over from fog to foam, or vice versa, as may be desired, by the simple operation of sliding this sleeve into extended or retracted position on said nozzle.

Further and more specific objects will become apparent as this device is described in more detail, having reference to the accompanying drawing, wherein:

Fig. 1 is a general view, partly in section, showing the attachment applied to a high pressure water fog nozzle;

Fig. 1a is a detail in section of a modified construction;

Fig. 2 shows the attachment in retracted position, and;

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Fig. 3 shows the attachment in extended position for foam operation.

In Fig. 1 the tube 1 is equipped with a bushing 2 at its inner end and a sleeve 3 is attached to the nozzle 4 near its outer end, over which the tube slides into extended position as shown in Fig. 3, when the bushing shoulders against the sleeve. In this position, the water being forced through the nozzle passes through the tube, creating a suction at the point 5 where the tube is connected by a small hose 6 to a source 7 of liquid foam supply and draws this liquid foam in proper proportions into its stream where the foam is formed and is thrown out by the impact of the water behind it. A series of small openings 8 in the tube back of this connection and slightly to the rear of the end of the water nozzle provide a means for admitting air which is necessary to aid in forming the foam within the tube.

When it is desired to change back to water fog, this tube is merely pulled back over the nozzle to its retracted position as shown in Fig. 2. In this position, the end 9 of the tube 1 just clears the end 10 of the nozzle 4, thus eliminating any interference therewith, and the nozzle forms the high pressure water fog without any restriction.

It is desirable to use materials for this tube which will not be affected by the chemicals normally used in liquid foam and by water.

These normally cause rust formations on iron or steel, therefore stainless steel is suggested for the tube. The bushing 2 may be attached in any one of several ways, the preferred form being shown in Fig. 1a where the bushing is welded at 11 to the tube, so that it has no chance to loosen, as it might if screws 12 are used as shown in Fig. 1.

Other changes in the construction and dimensions of this device may be made to suit requirements, without departing from the spirit and scope of this invention, as defined in the appended claims.

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

What is claimed is:

1. An apparatus for producing a fire extinguishing foam, comprising: a nozzle adapted to be connected to a supply of quenching liquid; a sleeve slidably mounted on said nozzle having a port disposed to be uncovered by said nozzle when said sleeve is in an extended position, said port

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being adapted to be connected to a supply of foam promoting agent, and having an opening in the zone of said port communicating with the atmosphere; and means for stopping said sleeve at its extended position, said means including a pair of intermediate bushings between said nozzle and sleeve, one bushing being fixed to the outer end of said nozzle externally thereof and the other bushing to the inner end of said sleeve, said bushings abutting each other in extended position of said sleeve on said nozzle and providing sliding surfaces therebetween for movement from extended to retracted positions.

2. An apparatus for producing a fire extinguishing foam, comprising: a nozzle adapted to be connected to a supply of quenching liquid; a stop collar mounted substantially near the outer end of said nozzle; and a sleeve with a bushing therein slidably mounted on said nozzle and disposed to shoulder against said stop collar when

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said sleeve is in extended position, said sleeve having a port disposed in the zone of the nozzle's outlet when said sleeve is in extended position, said port being adapted to be connected to a supply of foam promoting agent, and said sleeve also having an opening in the zone of said port communicating with the atmosphere.

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