

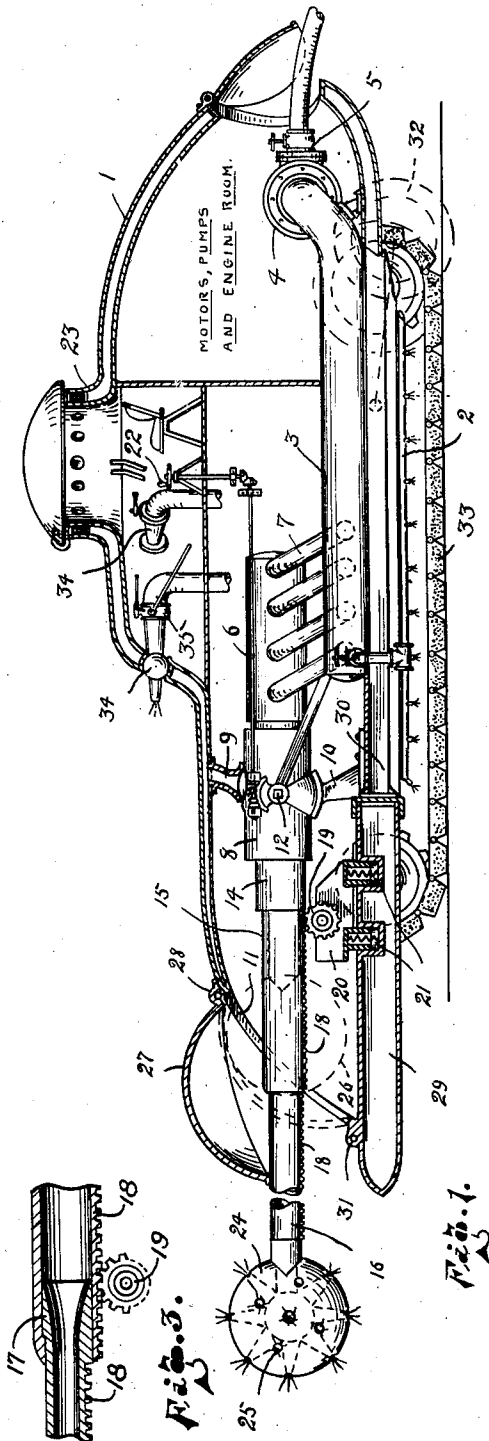
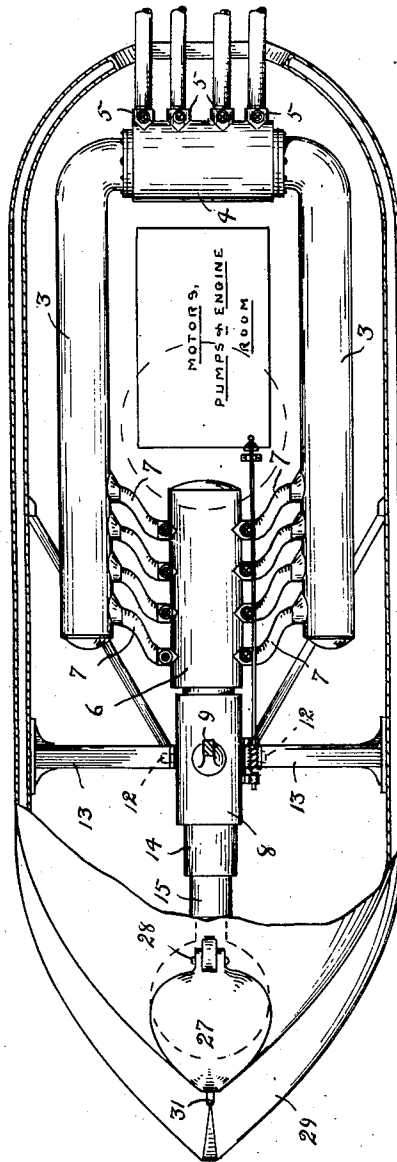
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E. E. CARPENTER

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FIRE FIGHTING APPARATUS

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INVENTOR.
BY *Carl E. Carpenter.*
Stevenson.
att'y.

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FIRE-FIGHTING APPARATUS

Earl E. Carpenter, Superior, Wis.

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2 Claims. (Cl. 169—24)

This invention relates to fire fighting apparatus, and the principal object of the invention is to provide means whereby a fire may be expeditiously reached with the largest volume of water possible.

Another object is to provide such means having inherent power for combatting ordinary obstructions such, for example, as smaller buildings, or possibly a wall of a large building, whereby entrance for water discharged directly upon the fire may be readily had.

Still a further object is to provide such apparatus with adequate protection for the operators thereof, even in very close proximity to heat and fire.

Other objects and advantages of the invention will appear in the following description thereof.

Referring now to the accompanying drawing, forming part of this application, and wherein like reference characters indicate like parts:

Figure 1 is a part elevation and section of a fire fighting apparatus for direct contact with the fire.

Figure 2 is a plan view of the interior arrangement of Figure 1, with portions thereof in section.

Figure 3 is a vertical sectional view of one form of telescopic union of the nozzle sections.

In the drawing, the numeral 1 represents the body portion of the nozzle and power unit which will hereinafter be referred to as the tank unit, and which is preferably of general stream-line design to make it as invulnerable as possible, and which is preferably of double walled thickness providing a water space or jacket substantially wholly thereabouts except as to the hinged cover of the conning tower 23 which is otherwise suitably insulated, and through which the water being employed for extinguishing fire may be circulated when desired. Throughout the under portion of the tank, it may be equipped with a system of spray pipes, illustrated for example at 2, the same being supplied with water in any desired manner from the general water supply of the tank.

This tank is provided near the rearmost portion thereof with preferably a generally U-shaped installation of normally large pipe mains, the side ones of which are illustrated at 3 and the rearmost enlarged union of same at 4, which extends transverse the rearmost portion of the vehicle.

This rearmost portion 4 is provided with any desired number of fire hose connections such as

shown at 5, to which lengths of fire hose leading from any available supply of water may be attached.

This specific arrangement of a U-shaped enlarged water main pipe within the tank is to provide adequate space in the rear of the tank for the motors and for the driving mechanism, as well as for the inner end of the nozzle when retracted, and which may, of course, vary considerably from the construction here shown without departing from the spirit of the invention.

The nozzle proper is of any desired form of telescopic construction, the rearmost or breach end of same being illustrated at 6 and provided with any desired number of flexible hose like connections shown at 7, a plurality of which extends from either side thereof and are connected with their respective mains 3.

The supporting section of the nozzle is illustrated at 8, the upper and lower walls of which are made slightly arcuate in shape to accommodate the water connection 9 from the armoured water jacket, as well as the support 10 to the frame of the tank, so that the nozzle may be readily raised and lowered, however, to but a comparatively small degree, as movement is limited by the opening 11 in the forward end of the tank. The pivotal support of the nozzle is accomplished as by suitable gudgeons 12—12, one on either side thereof, and these gudgeons are supported by suitable bracing 13 to the sides and bottom of the frame of the tank.

Obviously there may be any desired number of graduated telescopic sections, such as illustrated at 14, 15 and 16, constituting the nozzle, and they may be made water tight in a manner such as illustrated in Figure 3 of the drawing, the innermost end of each section being conical in form as suggested at 17. The lower outer circumferential surface of each section is provided with a rack such as illustrated at 18 for progressive engagement with a suitable spur gear 19 which may be provided with power and control means in any desired manner. The support 20 for such gear and power means is yieldably held in position as by a suitable spring mounting illustrated at 21 to compensate for the slight raising and lowering of the nozzle which may be accomplished by the squaring of the outer end of one of the gudgeons 12 and providing it with operating means terminating in the control 22 within the conning tower 23.

The extreme outer end of the nozzle is preferably shaped in the form of a sphere 24 having any desired number of discharge orifices 25, they

preferably extending in substantially all directions therefrom, and all being capable of discharging water simultaneously, this being deemed a very essential part of the invention so that water will be thrown in all directions from the sphere, and, inasmuch as this entire unit is of the ponderous type of discharge means, and the object is to discharge the greatest volume of water possible simultaneously, it forms an ideal type of terminus or head for the nozzle.

I have illustrated by the dotted lines 26 the position of the nozzle head when fully retracted by the gear 19 and in which event a suitable cover illustrated at 27 may be employed to close the opening in the forward end of the tank through which the nozzle head is moved, said cover being removably hinged at 28 in any desired manner, and thus forms a complete arcuately shaped forward terminus of the tank which may not easily become damaged or be in the way when the tank is being transported or otherwise engaged.

For this bull-dozing action of the tank I contemplate the use of a more or less rigid and strong ram member indicated at 29 and directly abutting the frame member of the tank chassis, such frame member being indicated at 30. A suitable attaching member such as at 31 may be incorporated above or adjacent the ram member which provides suitable means for the device being elevated at its front end and towed at a greater speed than is normally possible on its caterpillar tracks. In the event of the towing of the tank, I propose to utilize a pair of retractable wheels 32; the ordinary caterpillar traction means being suggested as at 33.

As an additional means, readily available for use in discharging water in other directions to that directly in front of the tank I propose to have installed within the upper portion thereof one or more smaller nozzles such as indicated

at 34 which are mounted within the water jacketed wall in a suitable swivel or ball and socket joint and equipped with any desired form of adjusting means as well as valves for the control of same, such as shown at 35, and these jets or nozzles may lead directly from a higher pressure line or piping than that used for the main or spherical nozzle to render them efficient at a greater distance.

Other features, not shown, and which may be employed within the main tank 1, are oxygen supplying means, carbon dioxide absorbing equipment, short wave radio communicating means et cetera, which, together with the water jacket as shown would provide the operators with maximum protection from smoke, gasses, etc. so dangerous to fire fighters, such, however, not forming any part of the present invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. In combination, a fire fighting tank-like wholly enclosed vehicle, a fixed ram carried by said vehicle for assistance in forcing its way into a burning building or the like, a manifold carried by said vehicle and forming a water supply connection therefor and a manually controlled discharge nozzle carried by said vehicle and connected with said manifold for directing water from said vehicle.

2. In a fire fighting self-propelled tank-like vehicle, a ram carried by said vehicle for assisting in forcing its way into a burning structure, a water jacket substantially wholly about said vehicle, a manifold in the rear of the said vehicle, means for connecting water supplying conduits to said manifold, water connections between said manifold and said jacket, and a discharge nozzle communicating with said manifold and adapted to discharge water in substantially all directions.

EARL E. CARPENTER.