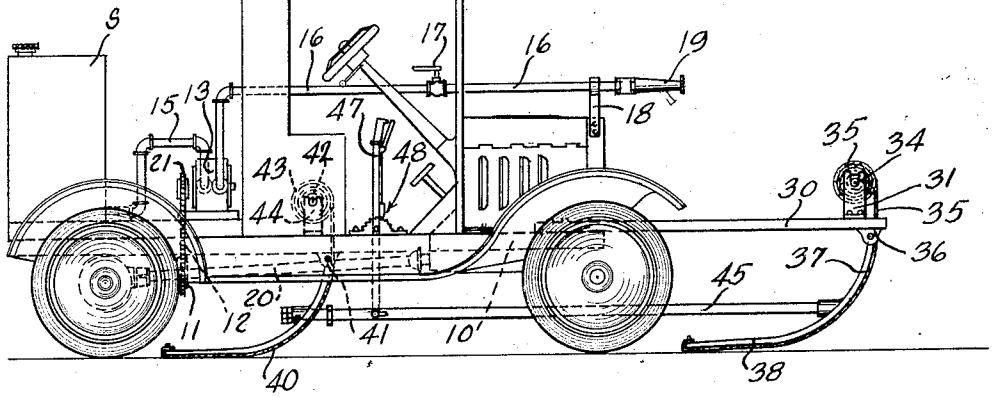
Oct. 22, 1929. C. S. LIVINGSTON 1,732,274

FIRE EXTINGUISHER

Filed Aug. 22, 1927

Fig. 1



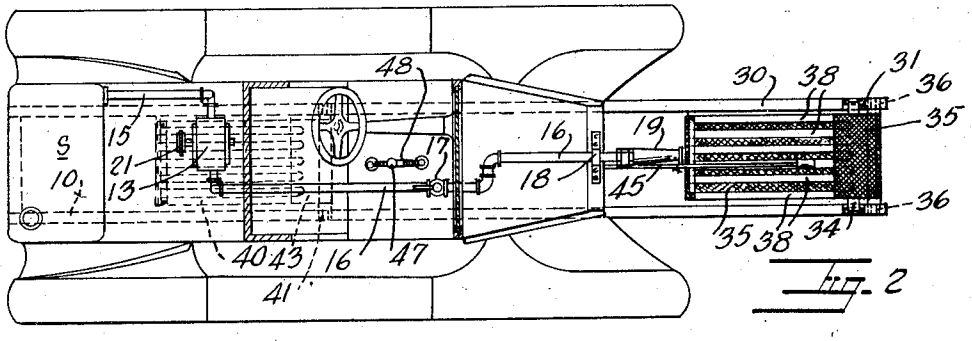


Fig. 2

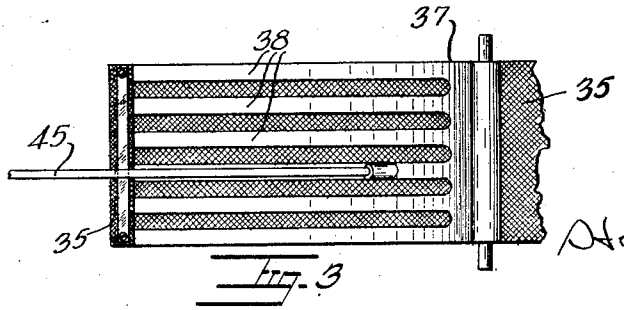


Fig. 3

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FIRE EXTINGUISHER

Application filed August 22, 1927. Serial No. 214,601.

This invention relates to fire fighting apparatus and more particularly to a device that is adapted to extinguish grass or grain fires or, in fact, any field fire. It is a well known fact that thousands of dollars are lost each year due to damage caused by such field fires, and heretofore, to my knowledge, there has been devised no means for extensively combating these fires. The general method of fighting these fires consists in beating the fire lines with wet sacks and the like. This, however, is extremely unsatisfactory and ordinarily involves the services of a great number of men, to say nothing of the dangers encountered by these men working on the fire lines. The disadvantages offered by this method of combating a fire has given rise to this invention.

It is an object, therefore, of this invention to provide a machine that is adapted to travel across the fire line and extinguish the fire as the machine moves. In carrying out my invention, I employ the use of water or chemicals which may be sprayed on the fire lines over the front of the machine. A wire screen, canvas screen or the like is then caused to travel over the fire line while dragging on the ground to smother the fire after the same has been previously moistened. A second drag is employed which effectively takes care of any fire that the first screen has passed up.

A still further object of the invention is to provide a machine which is extremely efficient in its operation and which is inexpensive to manufacture. Convenient arrangement of parts and the consequent advantages derived from such arrangement are further desirable features that have been borne in mind in the production and development of this invention.

Yet another object of this invention is to provide a machine which, when not in actual use for fighting fires, may be operated similar to an automobile, so that the same may proceed to a fire at a comparatively high rate of speed thru city streets and the like. My machine will, therefore, be desirable for use by fire companies, and the same may be kept as an auxiliary part of the regular fire-fighting equipment, so that in the event of a grass fire, or any fire of a similar nature, it will not be necessary for the fire company to proceed to the fire with all of their equipment, as this particular machine I have designed will be effective to accomplish the results sought by itself.

With the above and many other objects in view, which will be readily apparent as this description proceeds, reference is had to the accompanying drawings, wherein I have shown one embodiment of my invention, and in which—

Figure 1 is a side view of a machine constructed in accordance with my invention;

Figure 2 is a top plan view of the same;

Figure 3 is a fragmentary view showing one of the actual drags used in connection with my invention.

In the above mentioned drawings, like character references designate like parts thruout. The device involves in its general organization a frame or chassis 10 mounted upon wheels and carrying the usual engine, transmission, drive shaft, and the like.

The drive shaft is designated at 20 and is provided with a power take-off, designated as an entirety at 12, and comprising a sprocket 11 and chains 21. This power take-off serves to drive a suitable pump 13. A storage tank S is mounted on the rear of the chassis, and suitable fluid mains lead from this storage tank to the pump, which fluid lines are designated at 15. Designated at 16 is a fluid line having a manually controlled valve 17 therein. This valve is located adjacent the driver's compartment where ready access may be had to the same at all times. A suitable bracket 18 supports one end of this fluid line. The fluid line has a nozzle 19 at the terminal thereof, which nozzle is so arranged that a jet of water may be sprayed over the front end of the vehicle. Extensions 30 on the chassis 10 have brackets 31 mounted on the forward end thereof. These brackets serve to support between them a drum 34 on which there is mounted a wire screen 35. Brackets 36 are mounted on the extensions of the chassis, and these brackets 36 pivotally support between

themselves a curved drag assembly 37 having a plurality of prongs 38 formed integral therewith.

Midway of the vehicle, or slightly to the rear of the central portion of the same, is a second similar drag assembly 40 supported on brackets 41, and a similar drum 42 having a screen thereon, designated at 43, is pivoted between the brackets 44 on the chassis frame. A tie rod 45 serves to connect the two drag assemblies. This tie rod extends completely thru the rear drag assembly and is slidably in engagement therewith. Suitable stops are formed on either side of this rear drag assembly for a purpose to be described hereinafter. A lever 47 is held in place by a ratchet and pawl mechanism 48, and this lever serves to raise or lower the tie rod 45.

The parts thus far described adequately define my invention with the exception of certain minor details of construction that are immaterial, and I will now proceed with the full description of the operation of the device, showing the manner in which the same is used.

The device is primarily designed for use on grass, field, or grain fires, and when such a fire occurs, the vehicle may proceed to the scene of the fire at a comparatively high rate of speed, as the vehicle is geared to travel comparatively fast. Upon arriving at the fire lines, the pump may be thrown into operation by any suitable means, not shown, and the valve 17 may be opened. This will force a stream of fluid forwardly of the vehicle and over the drum 34. The wire screen 35 is then lowered so as to drag beneath the drag assemblies and bear against the prongs of the same. The vehicle then travels slowly over the fire line, and the drag assembly 38, together with the fluid issuing from the nozzle 19, serves to extinguish the fire. Any fire not extinguished by the forward drag assembly will be almost certain to be extinguished by the rear assembly. The two assemblies, it will be noted, are connected together by the tie rod and work in unison. However, if the forward drag assembly encounters any obstruction that would tend to raise the same, the rear assembly will not be affected because of the slidable connection between the same and the tie rod. Only when the lever is completely advanced are the two drag assemblies raised in unison. When the wire screen 35 becomes worn or frayed, additional screen may be let out, and when all the screen is used up, a new screen may be substituted.

It will, of course, be understood that various changes in the details of construction may be resorted to as, for example, I may prefer to use canvas instead of a wire screen as a drag. It is not necessary to employ two drag assemblies, as I may employ more or less, as is desired. The storage tank may be mounted at any suitable point on the vehicle, as may the water pump and other operative parts of my invention, and only in so far as I have particularly pointed out my invention and limited myself thereto do I desire patent protection.

The device may be propelled by an internal combustion engine or may be constructed so that it may be dragged by a horse or other beast of burden. The device may further be modified so as to be propelled by hand in a manner similar to that in which an ordinary lawn mower is propelled.

I claim:

1. A device of the character described comprising a vehicle, a resilient drag mounted on said vehicle so as to bear against the ground to extinguish fire as said vehicle travels, means for elevating said drag so as to cause the same to release its engagement with the ground, flexible means for covering the drag, and mounting means for rolling and unrolling the flexible means.

2. A device of the character described comprising a vehicle, a resilient drag mounted on said vehicle and adapted to bear against the ground, a drum mounted on said vehicle above said drag, said drum having a flexible screen mounted thereon, said screen, when unrolled from said drum, extending below said vehicle, and covering said drag.

3. A device of the character described comprising a vehicle, a resilient drag comprising a plurality of downwardly extending prongs mounted on said vehicle, a drum mounted above said drag, a screen on said drum, said screen extending below said vehicle and covering said drag, as and for the purpose specified.

4. A device as claimed in claim 3 in which means are provided for elevating said resilient drag.

5. A fire extinguishing device comprising in combination a vehicle having a frame, means on said vehicle for spraying a liquid forwardly thereof, a pair of brackets mounted forwardly of said vehicle, a resilient drag pivoted between said brackets, said drag comprising a plurality of curved prongs adapted to extend downwardly below said vehicle and contact with the ground, a drum mounted above said brackets, a screen on said drum, said screen when unrolled extending below said vehicle and covering the forward side of said prongs, and means for elevating said resilient drag, said spraying means being so disposed as to moisten the ground just ahead of the drag.

6. A device of the character described, comprising a vehicle, a resilient front drag, a resilient rear drag, said drags being so mounted on said vehicle as to bear against the ground to extinguish fire as said vehicle travels, means for connecting said drags, and for simultaneously elevating the drags so as

to cause the same to release their engagement with the ground; said connecting means being slidable in the rear drag so as to allow the movement of the front drag relatively to the rear drag.

In testimony whereof I affix my signature.

CHARLES S. LIVINGSTON.