

Nov. 7, 1933.

R. RZEMINIECKI

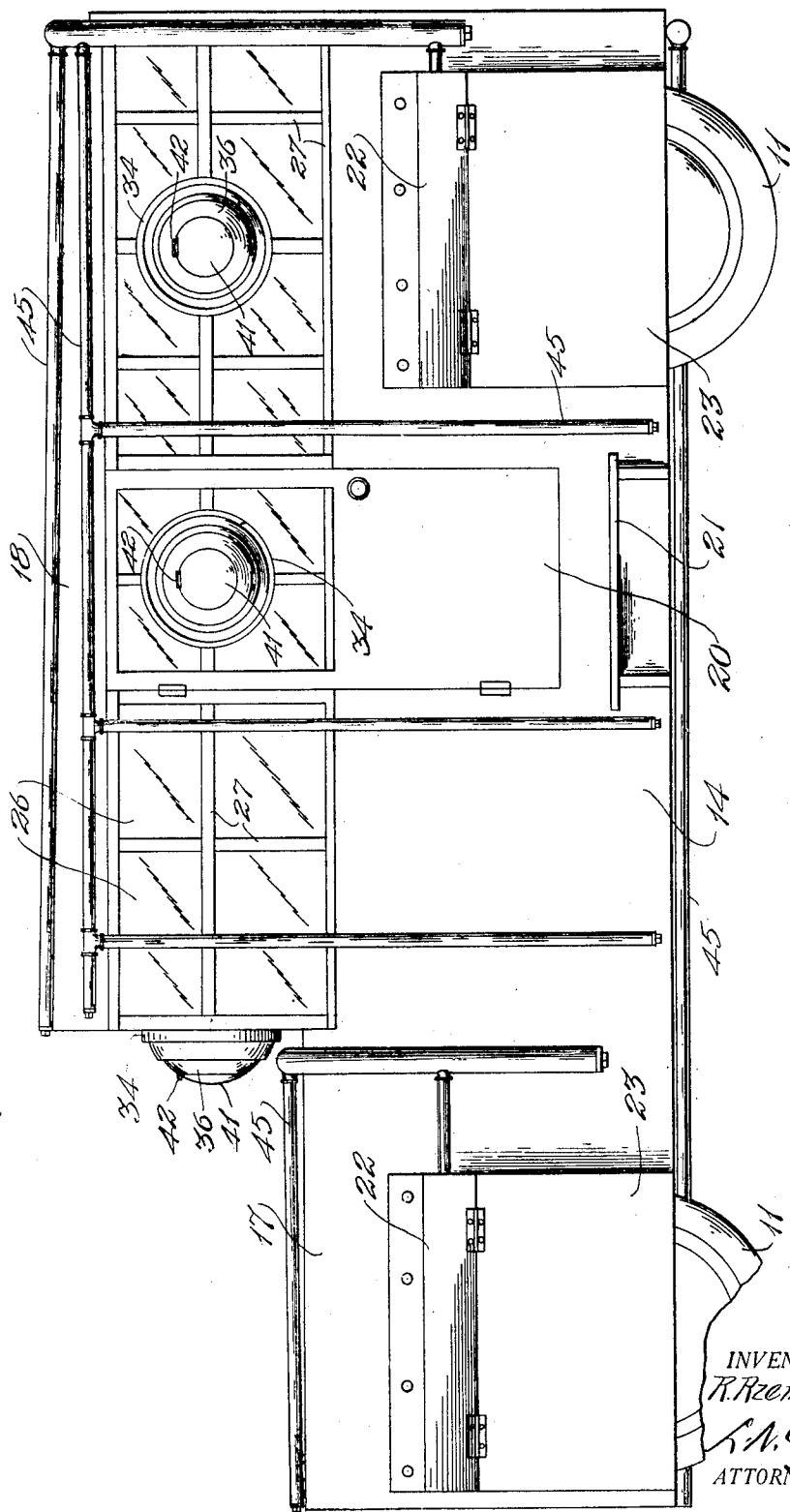
1,934,008

FIRE FIGHTING APPARATUS

Filed Aug. 6, 1927

6 Sheets-Sheet 1

Fig. 1.



INVENTOR.
R. Rzemieniecki
A. N. Collins
ATTORNEY

Nov. 7, 1933.

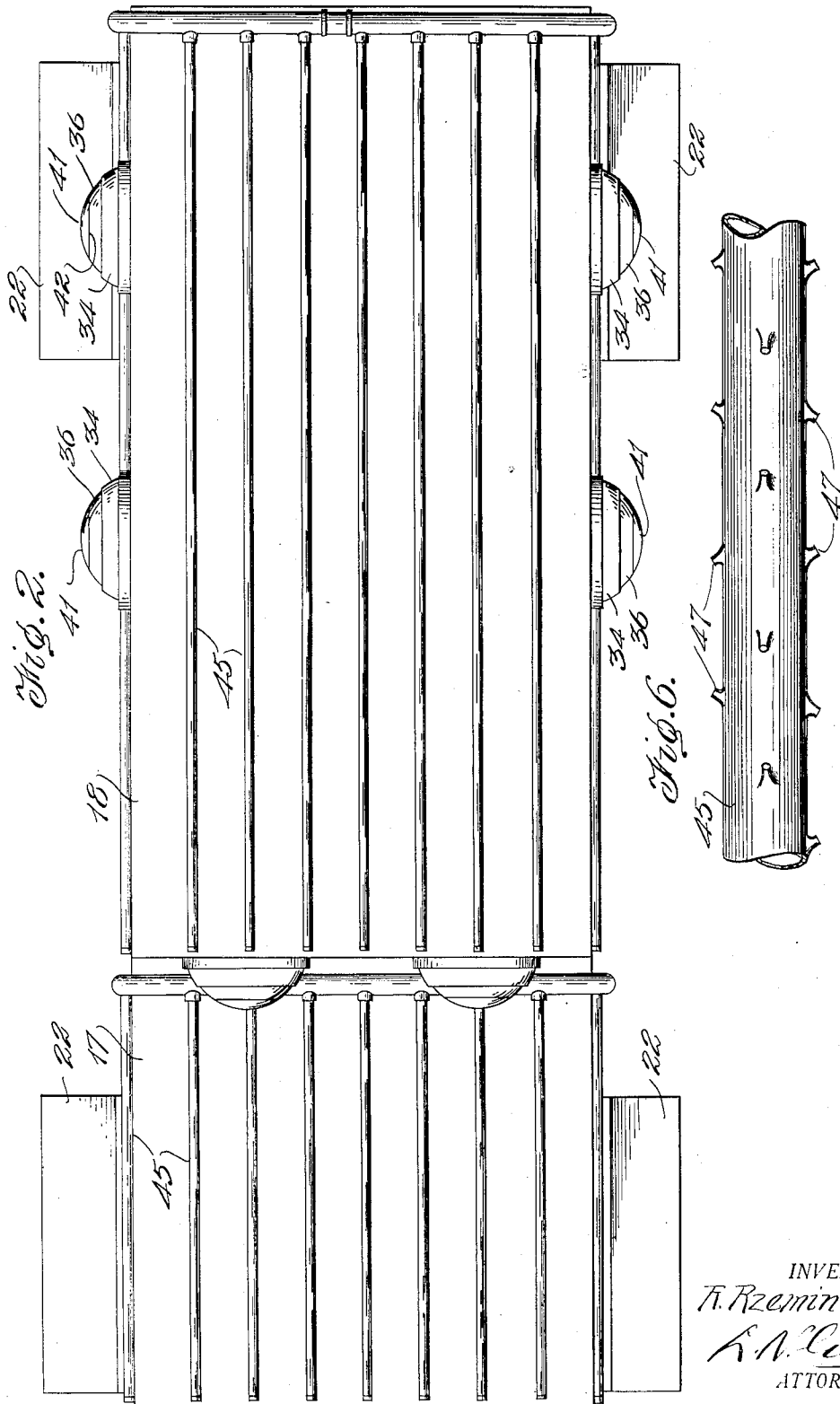
R. RZEMINIECKI

1,934,008

FIRE FIGHTING APPARATUS

Filed Aug. 6, 1927

6 Sheets-Sheet 2



INVENTOR.
R. Rzemieniecki,
A. A. Lacey
ATTORNEY

Nov. 7, 1933.

R. RZEMINIECKI

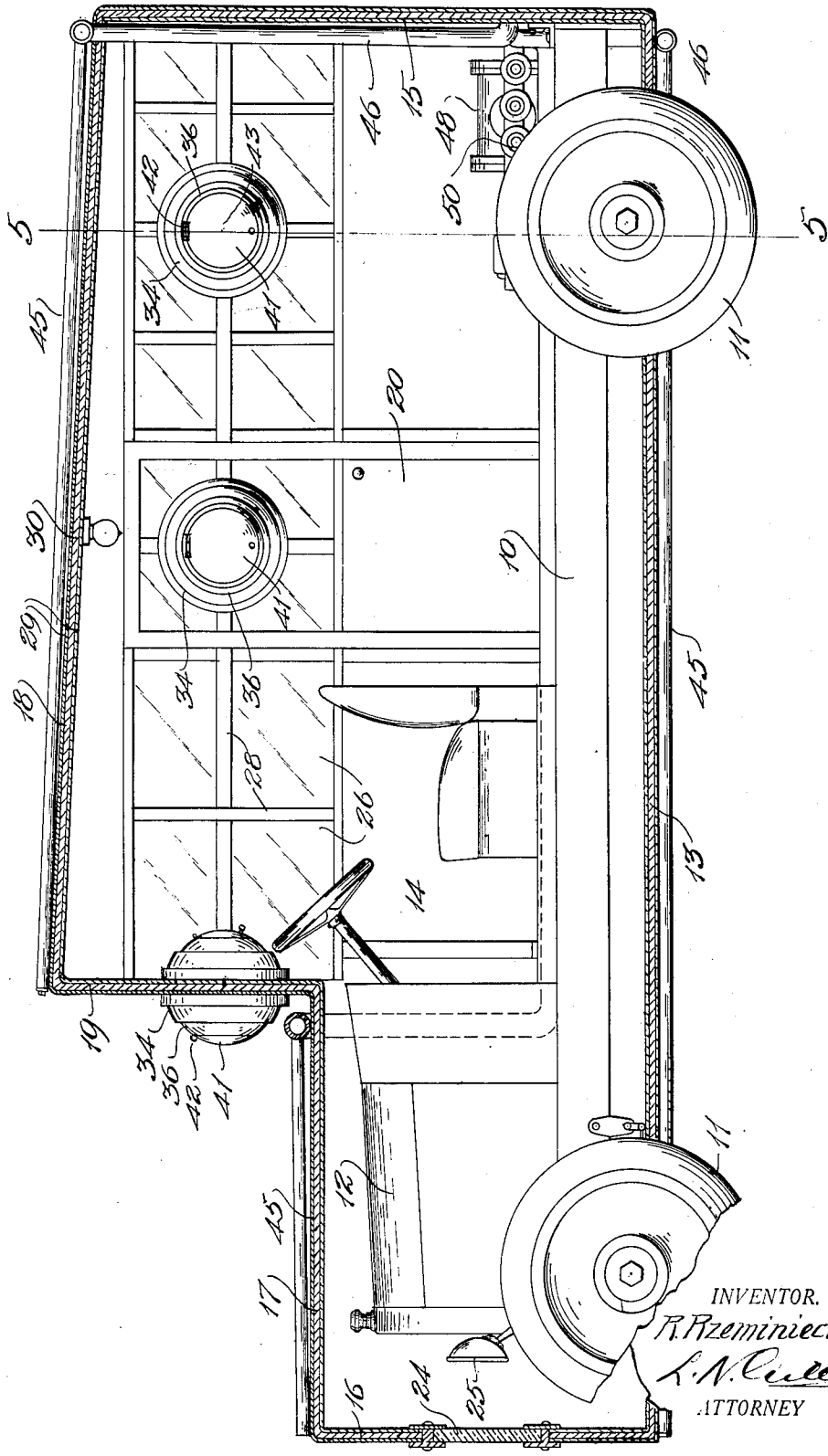
1,934,008

FIRE FIGHTING APPARATUS

Filed Aug. 6, 1927

6 Sheets-Sheet 3

Fig. 3.



INVENTOR.
R. Rzeminiński,
L. A. Cullis
ATTORNEY

Nov. 7, 1933.

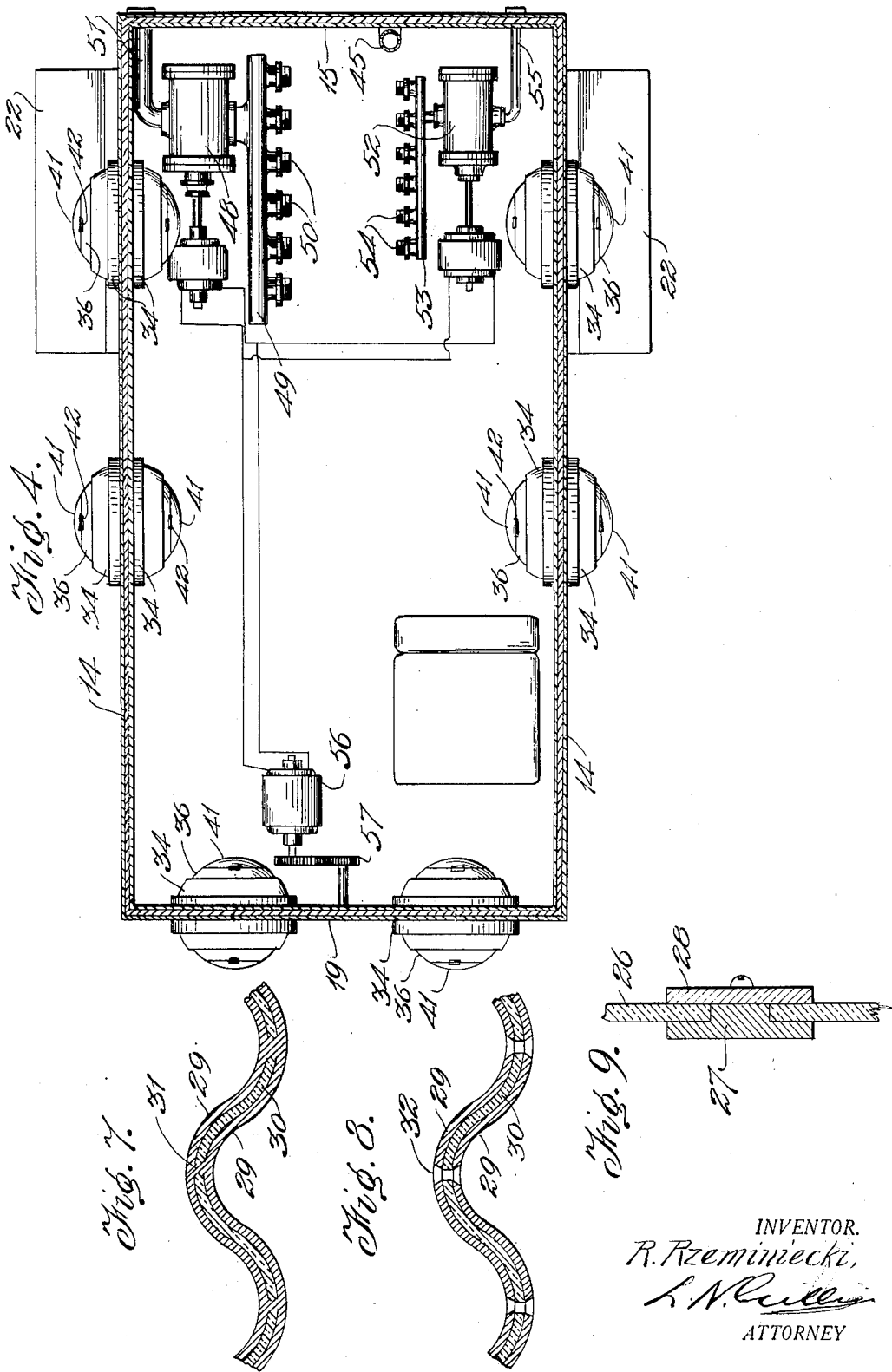
R. RZEMINIECKI

1,934,008

FIRE FIGHTING APPARATUS

Filed Aug. 6, 1927

6 Sheets-Sheet 4



INVENTOR.
R. Rzeminecki,
L. N. Ruzicki
ATTORNEY

Nov. 7, 1933.

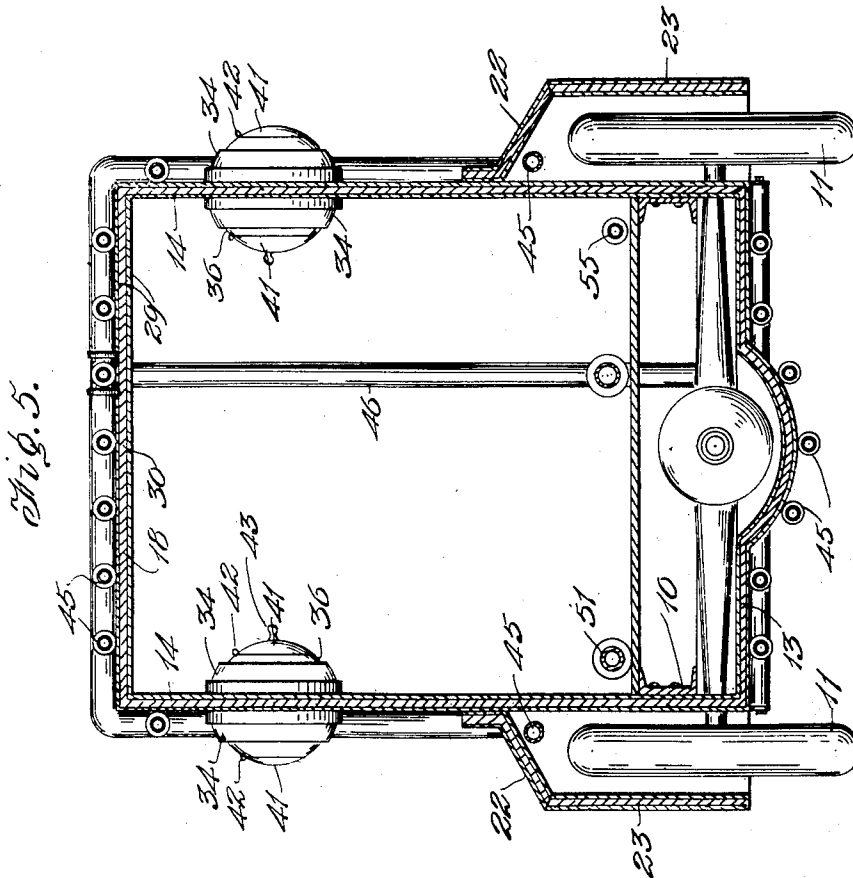
R. RZEMINIECKI

1,934,008

FIRE FIGHTING APPARATUS

Filed Aug. 6, 1927

6 Sheets-Sheet 5



INVENTOR.
R. Rzemieniecki,
L. N. Rulley
ATTORNEY

Nov. 7, 1933.

R. RZEMINIECKI
FIRE FIGHTING APPARATUS

1,934,008

Filed Aug. 6, 1927

6 Sheets-Sheet 6

Fig. 10.

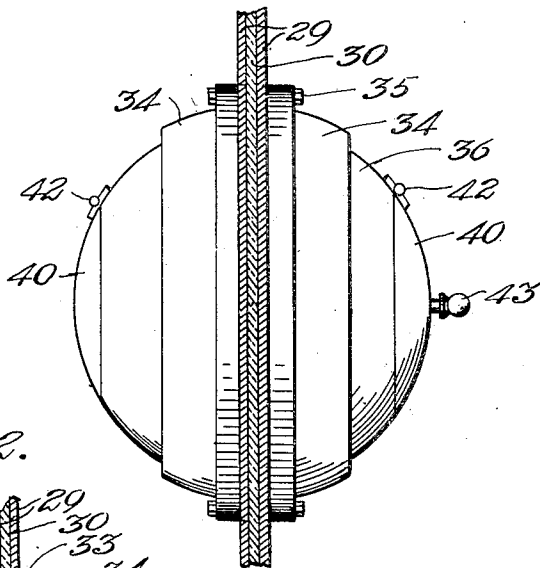


Fig. 12.

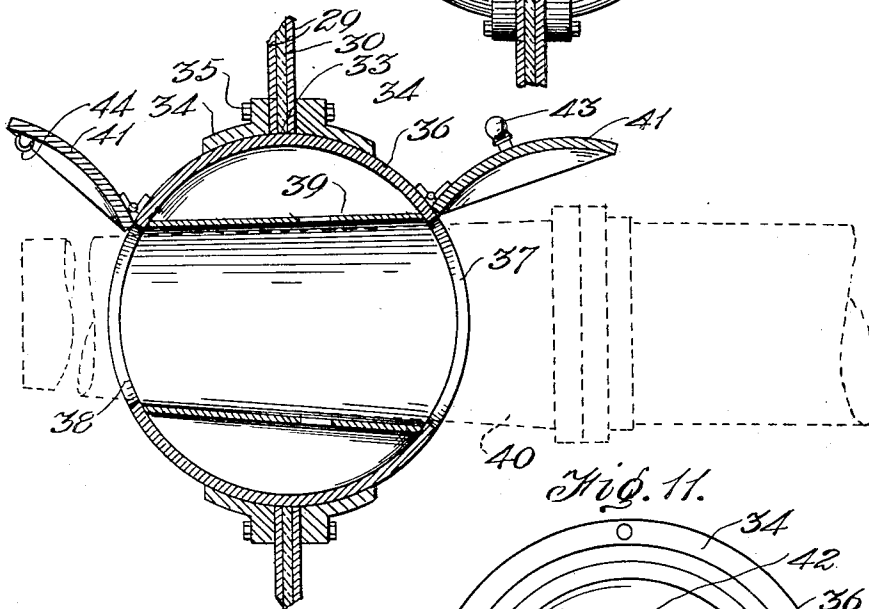
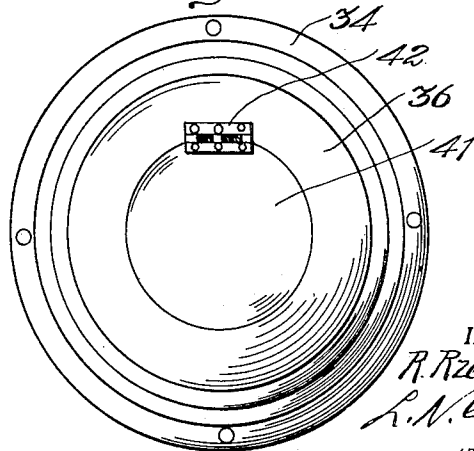


Fig. 11.



INVENTOR.
R. Rzemieniecki
R. N. Ricci
ATTORNEY

UNITED STATES PATENT OFFICE

1,934,008

FIRE FIGHTING APPARATUS

Rudolf Rzemieniecki, Washington, D. C.

Application August 6, 1927. Serial No. 211,165

7 Claims. (Cl. 169—24)

This invention relates to a fire fighting apparatus and has special reference to a fire and smoke proof fire fighting apparatus adapted to be used in fighting fires in places which cannot be entered by the usual type of apparatus employed because of the presence of flames and smoke to such an extent as to prevent men from working.

One important object of the invention is to provide an improved form of fire fighting apparatus which is so constructed as to carry firemen safely through or into zones of flame and smoke and when positioned in such zones will permit the firemen to fight the fire without exposure to the flames and smoke.

A second important object of the invention is to provide a fire fighting apparatus of this character with means whereby the exterior of the apparatus is kept at all times drenched with water so that flames have no injurious effect thereon.

A third important object of the invention is to provide an apparatus of this character so arranged that firemen may project the nozzles of hose from within the apparatus and direct them as desired without danger of flame or smoke entering the apparatus and endangering such firemen.

A fourth important object of the invention is to provide an improved fire apparatus of this character having a closed body equipped with hose nozzle ports arranged for universal movement.

A fifth important object of the invention is to provide an improved form of hose nozzle port or support for such apparatus.

A sixth important object of the invention is to provide an apparatus of this character having a self contained pump by means of which increased pressure can be given the fire fighting streams, the pump being located within a closed working body so that it may be attended to without exposure to flames or smoke.

A seventh important object of the invention is to provide an apparatus of this character with a fresh air pump so that the interior of the apparatus may be constantly supplied with fresh cool air and so that such air may be used to drive away smoke or gas fumes from the vicinity of the apparatus.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the ac-

companying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:

Figure 1 is a side elevation of one form of the invention. 60

Figure 2 is a plan view thereof.

Figure 3 is a longitudinal vertical section therethrough.

Figure 4 is a view showing the floor plan of the interior of the vehicle body. 65

Figure 5 is a vertical transverse section on the line 5—5 of Figure 3, certain parts such as the pumps being omitted from the view in order to show the remainder more clearly. 70

Figure 6 is a detail view of the arrangement of the jet nozzles on one of the sprinkler pipes.

Figure 7 is an enlarged detail section through one form of corrugated side wall.

Figure 8 is an enlarged detail section through a second form of corrugated side wall. 75

Figure 9 is an enlarged detail view showing the manner of securing the transparent panels.

Figure 10 is an enlarged side elevation of one of the nozzle holders or turrets. 80

Figure 11 is an enlarged front or outside view of such turrets.

Figure 12 is a vertical section through one of the turrets showing a hose nozzle in position therein in dotted lines. 85

One type of this invention takes a form of an ordinary land vehicle and in this form there is provided a frame 10 supported on the usual wheels 11 and receiving its motive power for transmission from place to place from an engine, not shown, carried under a hood 12 as is common with automobiles and the like. The covering in the frame and the hood is a closed body having a floor 13 extending beneath the frame and from which rises the side walls 14 and rear end wall 15. These side walls extend forwardly along the side of the hood and at the front of the side walls and floor is provided a front wall 16. The hood covering portion of this body is lower than the main portion and over the hood extends a top wall 17 which is connected to the top wall or roof 18 of the main portion by a front wall 19. In this manner the entire structure, except the wheels, is closed in. At each side of the body doors 20 are provided and a step 21 may, if desired, be positioned outside of this body just below each door. In order to provide for protection of the wheels there are secured to the sides of the body the hoods 22 each of which is equipped with a door 23 so that 110

access may be had to the wheels for removal and replacement. In the front wall 16 is provided a transparent panel 24 behind which is located the headlight 25 and in the side walls 5 and wall 19 there may be also provided transparent panels 26 which are secured in rabbeted frame members 27 by means of cover plates 28. The transparent panels are made of suitable material not affected by fire or sudden changes in temperature and for the present it is proposed to use sheets of mica although I do not confine myself to mica sheets since other materials may be used which prove equally useful for this purpose. The body walls are all preferably made of three thicknesses, there being outer metallic layers 29 and an intermediate asbestos layer 30 as shown in Figures 7 and 8, the outer layers being either welded together as at 31, riveted as at 32 or secured in any other suitable manner. Moreover, it is intended that these walls shall be corrugated as shown in said figures but they may also, if found advisable, be plane walls as shown in other figures, it being understood that the walls as shown in any instance being typical of either corrugated or plane walls and it being also understood that the metal may be of any kind found best adapted for the purpose and that the relative thicknesses of the metallic and asbestos layers may be such as will prove most desirable. At suitable places in the walls are provided openings 33 of circular form and around these openings extend flanged socket members 34 which are secured in position by bolts 35, these socket members when thus secured forming a ring having its interior constituting a spherical zone. Fitted in each of the spherical zones is a hollow wall 36 which may thus rotate in any direction and with the socket forms a ball and socket turret member. This ball has a pair of diametrically positioned openings 37 and 38, the latter being somewhat smaller than the former and positioned to the exterior of the body wall. Between the openings within the ball 36 extends a frusto-conical passage 39 for the reception of the tapering nozzle 40 common with fire equipment. Furthermore, each of these openings is closed by a segmental-spherical door 41 hinged to the ball by a spring hinge 42 tending to normally hold the door closed. The inner door is provided with a manipulating handle 43 while the inside of the outer door has at its free edge a roller 44 so that when this outer door is opened and a hose nozzle in position the latter may be withdrawn readily as the roller will permit its free movement.

It can now be seen that by raising the inner door 41 by the handle 43 the nozzle 40 may be pushed outwardly from the interior of the body and will open the outer door 41. Thus the nozzle may be positioned in the turret without flame, smoke or gas entering the body. In the present illustration of the invention I have shown two of these turrets on each side of the apparatus and two in the front wall 19 but it is to be understood that this particular arrangement or number is not essential and that more or fewer of the turrets may be used and their positions may be varied to suit the peculiar requirements in the construction of any specific piece of apparatus made in accordance with this invention.

Extending all over the body and beneath the floor thereof is a net work of sprinkler pipes 75 45 which receive water from intake pipes 46

adapted for connection to hose lines leading to fire plugs or other suitable source of water supply. These pipes run over the roof, down the sides underneath the car and have branches, as shown in Figure 1, extending into the hoods 22 and by means of these pipes the entire exterior of the car is kept wet as are also the wheels within the hoods during the time of fighting a fire so that the fire proof wall of the firemen's chamber or compartment is itself kept cool and likewise the compartment is kept at such proper temperature as to enable the firemen to work in comfort. This piping may either be plain straight piping as shown or more preferably may be of the type known as flexible piping but in any event whether the piping is straight or flexible it is preferred that the pipe be provided throughout with delivery nozzles 47 arranged in double spiral formation and confronting each other in pairs so that as the water issues from these nozzles each jet will contact with the jet from an adjacent nozzle and spread out in a fine spray thus insuring proper disposition of the water.

Within the body or firemen's compartment 100 there is provided a water pump 48 having a header 49 connected to its outlet and provided with a series of hose connections 50. The inlet 51 for this pump extends to the outside of the body wall so that a supply pipe may be connected thereto. Similarly there is an air pump 52 having a delivery header 53 and hose connections 54 and this air pump is likewise provided with an intake 55 leading to the outside of the body. Any suitable means may be provided for driving these pumps as for instance they may be motor driven, the power being supplied either through a lead from the outside or more preferably from a generator 56 driven by suitable means such as the gearing 57 from 115 the engine of the automobile.

In this form of the device when a fire occurs the apparatus is driven to the fire in the usual way and on arriving at the blaze the proper connections are made to the intakes 51 and 55. 120 The apparatus is then stationed wherever desired. For instance in a lumber yard or oil fire it can be driven right into the yard, drawing the hose behind it which for this purpose is preferably armored, it being understood that as long as water is flowing through the hose it will be kept from burning up due to the well known physical law that a vessel containing water cannot rise to a temperature much greater than the contents. For instance the apparatus 130 may be driven right between two piles of burning lumber and due to the exterior being constantly wet no danger will be done to the apparatus and the men inside can work in comfort. It is, of course, intended to carry suitable hose 135 and nozzles in the firemen's compartment and when the apparatus is in position the hose is attached to the outlets 50 and 54 and the water nozzles are inserted in the turrets. Then by starting the water pump water is played on the 140 fire wherever needed. In the event that a great deal of smoke exists it is possible that some smoke may find its way into the firemen's compartment in which case the air pump is started and fresh air supplied or, as it is desired, to blow the smoke away from the exterior in order to enable the work to be carried on in better fashion connections may be made to the outlets 54 by hose and nozzles and also led to the proper place. Obviously if occasion arises the 150

firemen may open one of the doors 20 and pass out with the hose to such place as he may desire.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be made in the form and construction of the invention without departing from the material spirit thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described, but it is desired to include all such as properly come within the scope claimed.

Having thus described the invention, what is claimed as new, is:

1. In fire fighting apparatus, a wheeled vehicle having a body, and sprinkler pipes surrounding and carried by said body, said pipes extending longitudinally of the eaves and center of the top and vertically down the sides and each being provided with a multiplicity of jet nozzles arranged at different angles to the pipe.

2. In fire fighting apparatus, a vehicle body, wheels supporting said body, hoods covering said wheels, and sprinkler pipes surrounding and carried by said body and extending into said hoods, said pipes extending longitudinally of the eaves and center of the top and vertically down the sides and each being provided with a multiplicity of jet nozzles arranged at different angles to the pipe.

3. In fire fighting apparatus, a vehicle having a closed body provided with access doors, said body having hose nozzle ports in its walls, hose nozzle holders fitted in said ports and including a universally jointed nozzle receiving member and closures for said nozzle receiving member on the interior and exterior of the member and movable therewith.

4. In fire fighting apparatus, a body wall, a ring mounted in said body wall and having its

interior forming a spherical zone, and a hollow ball mounted in said ring and provided with a frusto-conical tube extending therethrough to fit a hose nozzle whereby the tube is surrounded with a dead air space.

5. In fire fighting apparatus, a body wall, a ring mounted in said body wall and having its interior forming a spherical zone, a hollow ball mounted in said ring and provided with a frusto-conical tube extending therethrough to fit a hose nozzle whereby the tube is surrounded with a dead air space, and doors hinged to said ball at the ends of said opening to normally close the latter to move therewith.

6. In fire fighting apparatus, a body wall, a ring mounted in said body wall and having its interior forming a spherical zone, a ball mounted in said ring and provided with an opening therethrough to fit a hose nozzle, and doors hinged to said ball at the ends of said opening to normally close the latter and to move therewith, said doors being of different sizes and the smaller door being outermost and provided on its interior with an anti-friction roller.

7. In a fire fighting apparatus, a vehicle provided with a fireman's compartment having fire-proof walls, said walls having hose nozzle turrets, means for directing water under pressure through the turrets, an air pump located within said compartment and having hose attaching outlets for supplying air nozzles that can be placed in the turrets and an inlet extending to the exterior of said compartment for attachment of an air supply line, to conduct air to the pump from a distance, and a sprinkler system comprising pipes located along the outside of the top and sides of said compartment to maintain the walls and compartment in a cool condition.

RUDOLF RZEMINIECKI.

45 120
50 125
55 130
60 135
65 140
70 145
75 150