

April 9, 1940.

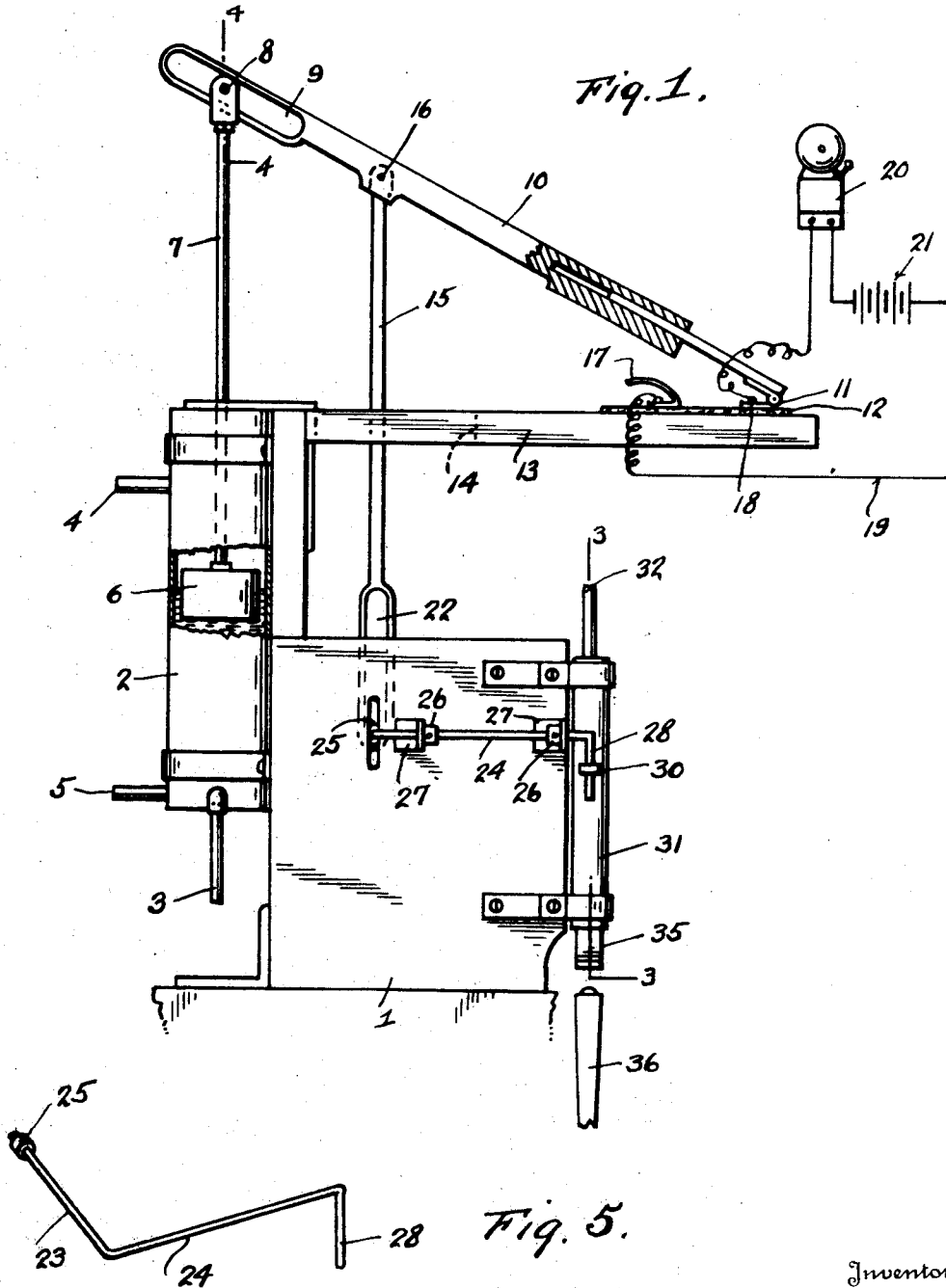
O. E. BUNTYN

2,196,955

AUTOMATIC TRIPPER FOR OIL ENGINES

Filed May 11, 1938

2 Sheets-Sheet 1



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Fig. 2.

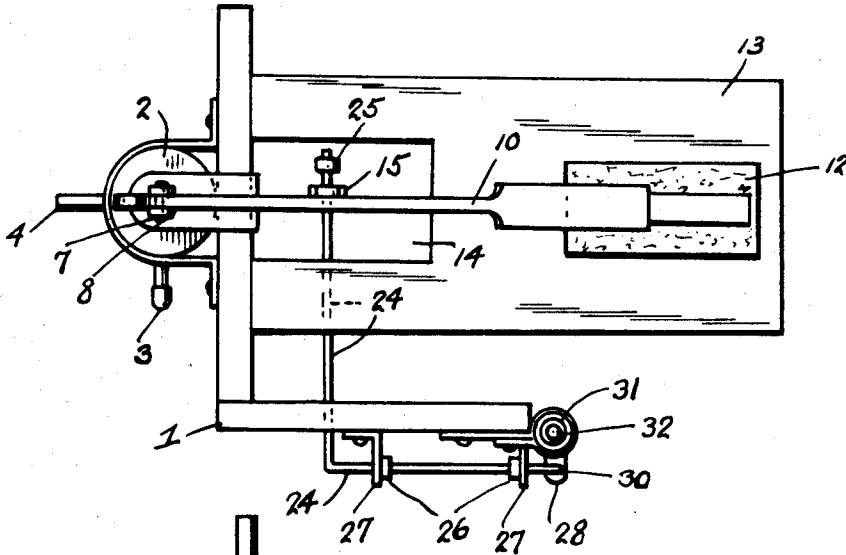


Fig. 3.

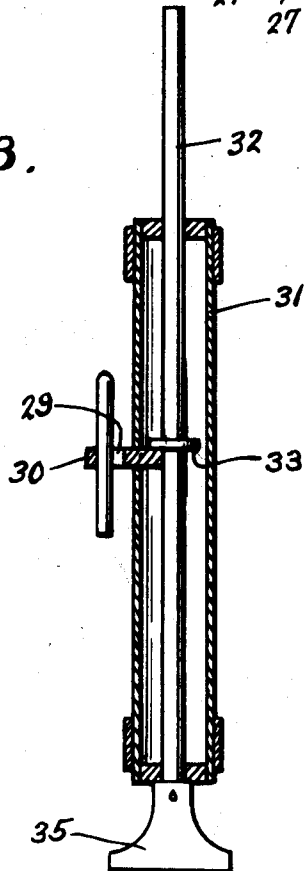
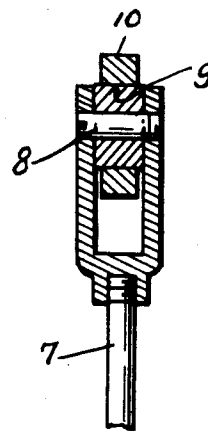


Fig. 4.



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UNITED STATES PATENT OFFICE

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AUTOMATIC TRIPPER FOR OIL ENGINES

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Application May 11, 1938, Serial No. 207,375

1 Claim. (Cl. 137—68)

This invention relates to a safety device for engines, particularly the Diesel type of engine, the general object of the invention being to provide means for stopping the engine and sounding an alarm when the water in the cooling system of the engine fails to circulate for any reason.

The invention also consists in certain other features of construction, combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Fig. 1 is an elevation with parts in section of the invention.

Fig. 2 is a top plan view of Fig. 1.

Fig. 3 is a section on line 3—3 of Fig. 1.

Fig. 4 is a section on line 4—4 of Fig. 1.

Fig. 5 is a view of the trip rod.

In these drawings, the numeral 1 indicates a supporting member, to which is connected a tank 2, a pipe 3 leading into the bottom of the tank from the engine. A discharge pipe 4 leads from the upper part of the tank and a drain pipe 5 is connected with the bottom part of the tank and is provided with a suitable valve for controlling it. A float 6 is located in the tank and a rod 7 has its lower end connected with the float and passes through the top of the tank and has a forked upper end through which a pin 8 passes, the pin also passing through a slot 9 in one end of a lever 10, which has its other end connected by a hinge 11 to a plate 12 of non-conducting material, the plate being fastened to a platform 13 which has an opening 14 therein through which a rod 15 passes, the rod having its upper end pivoted to the lever, as shown at 16. The lever 10 is formed of two parts which are telescopically arranged as shown. A spring contact 17 is attached to the plate 12 and a contact 18 is attached to the lever. A circuit 19 connects the contacts with a bell 20 and battery 21 and the contacts are so arranged that when the lever is lowered by dropping of the float to a point where the lever engages the contact 17, the circuit will be closed and the bell will be actuated. The rod 15 has a slot 22 therein into which extends an end part 23 of a rod 24, a roller 25 being carried by said end part to engage the walls of the slot. The main part of the rod 24 is journaled in the bearings 26 of the brackets 27 carried by the support 1 and the other end of the rod is bent as at 28 and passes through a hole 29 in a trip 30. This trip passes through an opening formed in an intermediate part of a

cylinder 31, supported from the member 1 and a rod 32 passes through the cylinder and has a shoulder 33 thereon with which the trip engages to prevent lowering of the rod under its own weight. Thus when the trip is moved outwardly by the rod 24, the weight of the rod 32 will cause it to move downwardly and thus cause the foot 35 at the lower end thereof to engage a lever 36 which stops the engine. Then in order to start the engine again the rod 32 must be lifted to place the trip under the shoulder.

As will be seen, when the water in the tank drops the float will drop and this will result in the downward movement of the lever 10 which will close the circuit to the alarm and cause the trip to release the rod 32 which will actuate the lever 36 which stops the engine. The sounding of the alarm will notify an attendant that the engine needs attention and the stopping of the engine will prevent damage thereto for lack of water.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction, combination and arrangement of the several parts, provided such changes fall within the scope of the appended claim.

What I claim and desire to protect by Letters Patent is:

In an apparatus of the character described, a tank, means for placing the tank in communication with the water supply of an engine, a float in said tank, a rod extending upwardly from said float and out through the top of said tank, a lever having one end connected with the upper end of said rod, said lever moving downwardly when the float drops, a vertically disposed cylinder, a plunger slidable vertically through said cylinder, means actuated by downward movement of said plunger for stopping an engine, a trip for holding said plunger in a raised position slidably mounted through an opening in a side portion of said cylinder, a crank rod extending horizontally and having a vertically disposed arm at one end and a horizontal arm at its other end, the vertical arm engaging through the outer portion of said trip, and a pitman rod disposed vertically with its upper end pivoted to said lever and its lower portion formed with a longitudinally extending slot through which the horizontal arm of the crank rod passes, said pitman rod when moved downwardly imparting rocking movement to said crank rod to shift the trip outwardly and allow downward movement of the plunger to shut off the engine.

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