July 29, 1924. 1,502,750

G. R. SECREST

HEATER

Filed Feb. 1, 1924 2 Sheets-Sheet 1

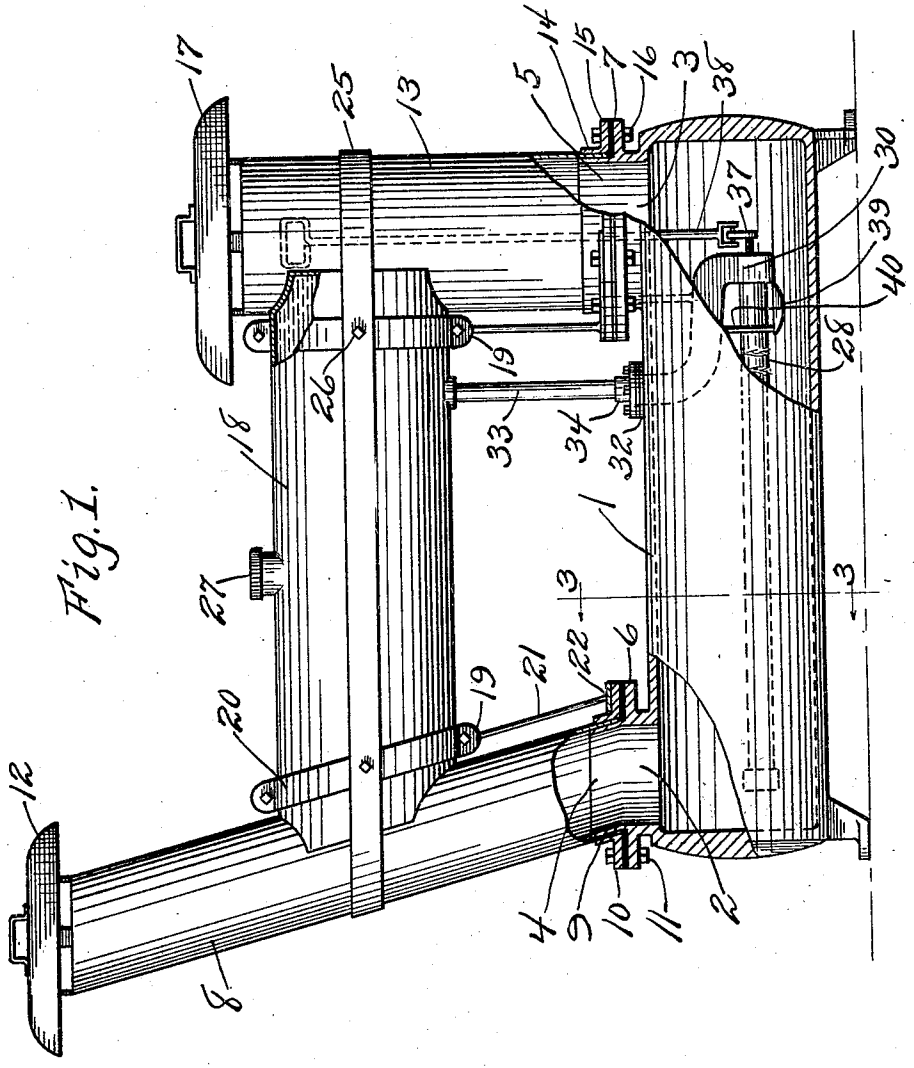


Fig. 1.

WITNESSES

John Donovan

Inventor

George R. Secrest

By Richard B. Owen,

Attorney

July 29, 1924.

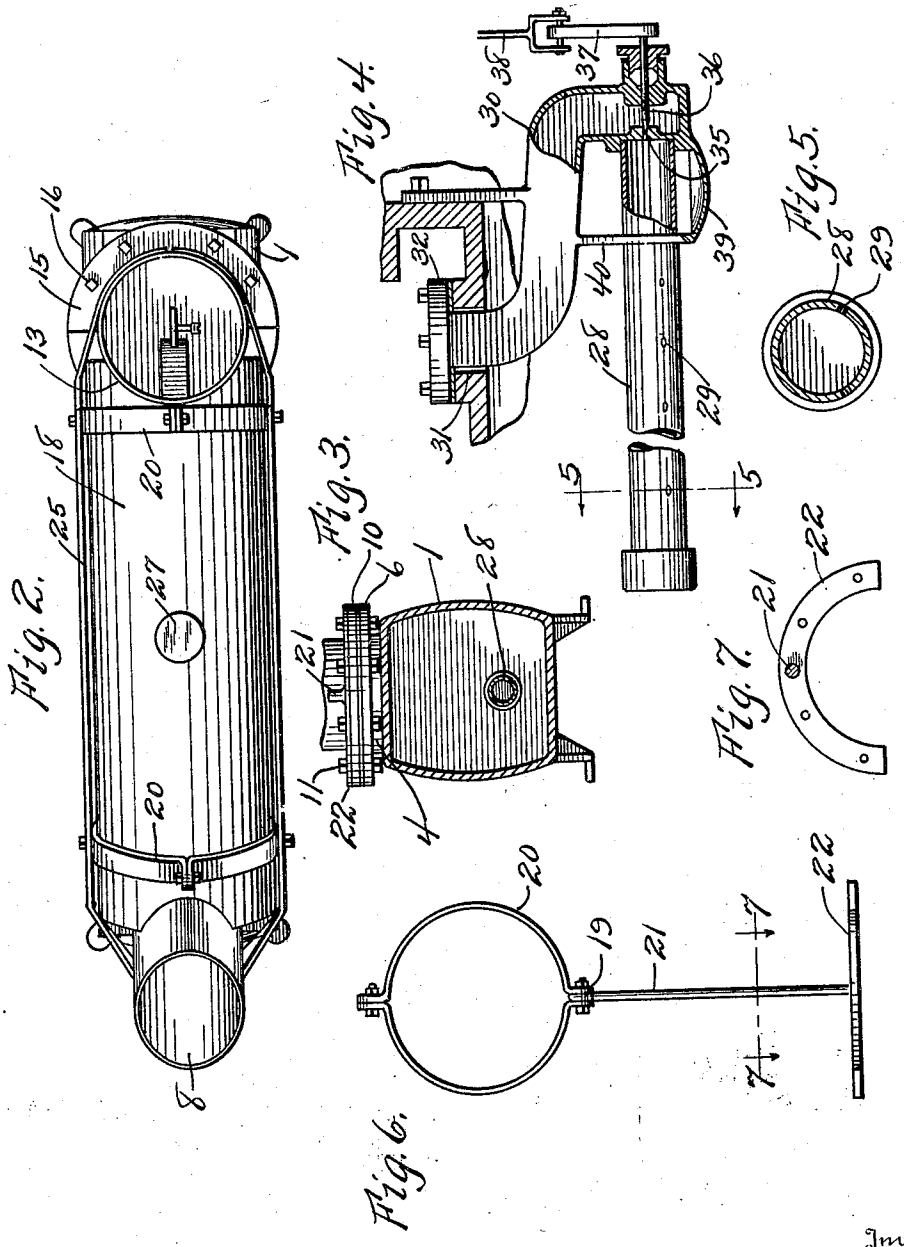
1,502,750

G. R. SECREST

HEATER

Filed Feb. 1, 1924

2 Sheets-Sheet 2



WITNESSES

John Donovan

Inventor

George R. Secrest

By Richard B. Owen.

Attorney

Patented July 29, 1924. 1,502,750

UNITED STATES PATENT OFFICE.

GEORGE R. SECREST, OF McRAE, MONTANA, ASSIGNOR OF ONE-HALF TO JOHN H. KIFER, OF HARDIN, MONTANA.

HEATER.

Application filed February 1, 1924. Serial No. 690,022.

To all whom it may concern:

Be it known that I, GEORGE R. SECREST, a citizen of the United States, residing at McRae, in the county of Big Horn and State of Montana, have invented certain new and useful Improvements in Heaters, of which the following is a specification.

The present invention relates to a heater particularly adapted to be used among cattle and the like and has for its principal object to provide a strong durable structure which will efficiently withstand the hard usages to which it is subject and which may nevertheless be manufactured at a comparatively low cost and possess a simple and efficient structure, reliable and well adapted to the purpose for which it is designed.

With the above and numerous other objects in view as will appear as the description progresses, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter fully described and claimed.

In the drawing:

Figure 1 is a side elevation of the heater embodying my invention, portions thereof being shown in section,

Figure 2 is a top plan view of the device with the covers removed,

Figure 3 is a vertical transverse section taken through the device substantially on line 3—3 of Figure 1 looking in the direction of the arrow,

Figure 4 is a detail view illustrating the burner,

Figure 5 is a transverse section taken substantially on the line 5—5 of Figure 4 looking in the direction of the arrow,

Figure 6 is a detail elevational view of one of the supports for the fuel tank, and

Figure 7 is a detail section taken substantially on the line 7—7 of Figure 6 looking in the direction of the arrow.

Referring to the drawing in detail it will be seen that 1 designates the body of the heater which is in the form of a tank. This tank is provided with an opening 2 at one end and an opening 3 at its other end. A collar 4 rises from the opening 2 and a similar collar 5 rises from the opening 3. A flange 6 is disposed about the collar 4 and a similar flange 7 is disposed about the collar 5. A draft pipe 8 has one end extended over the collar 4 being held in place by a ring 9 the flange 10 thereof resting on flange 6 and being held in place by bolts 11 or in any other suitable manner. A cover 12 is mounted on the upper end of this pipe 8 so as to prevent rain water or the like dropping into the pipe, it being noted that this cover is suitably spaced above the upper end of the pipe so as to allow the circulation of air into the pipe and also the escape of gases therefrom. A tubular casing 13 is engaged over the flange 5 and held in place by a ring 14 having a flange 15 resting on flange 7 and held in place by bolts 16 or other suitable means. A cover 17 is mounted on the upper end of this casing 13 so as to be spaced therefrom and thus allowing a circulation of air therethrough.

A fuel tank 18 is positioned between the pipe 8 and the casing 13, the ends of this tank being in abutment with the pipe and the casing and shaped to conform therewith. The tank 18 is mounted on supports indicated generally at 19 and shown in detail in Figures 6 and 7. Each support 19 includes a strap 20 disposed about the tank, and a leg 21 terminating in an arcuate foot 22. The feet 22 are adapted to rest on the flanges 10 and 15 and to be bolted thereto. A strap 25 is disposed longitudinally of the tank 18 being attached to strap 20 as at 26 and extending about the casing 13 and pipe 8. It will thus be seen that a strong durable structure is provided wherein the body tank 1, pipe 8, casing 13, and tank 18 are sufficiently braced in relation to each other in a compact manner. The fuel tank 18 may be filled by removing the cap 27 at the upper end thereof.

The burner is disclosed to advantage in Figure 4 and includes the burner proper 28 which is of tubular construction provided with a plurality of apertures 29. The burner proper 28 extends from an S-shape supply pipe 30 which pierces the body 1 at 31 and terminates in a flange 32 so as to be coupled with a pipe 33 depending from the tank 18, the coupling being shown at 34. The burner proper 28 communicates with

the supply pipe 30 through a small opening 35 associated with which is a needle valve 36 threaded into the supply pipe 30 and controlled by a crank 37 connected to a rod 38 extending upwardly through the casing 13. A saucer 39 is mounted below the burner proper 28 being attached to the bottom end of the supply pipe 30 and to a brace member 40.

The needle valve 36 should be closed in first starting the heater and the saucer 39 filled with fuel such as gasoline and ignited for the purpose of heating the burner proper 28. When the gasoline in the saucer 39 has practically burned out the needle valve 36 should then be slightly opened by operation of rod 38. Access may be had thereto by removing the cover 17 so as to allow the gasoline in the fuel tank 18 to flow through pipe 33 and pipe 30 into the tubular burner 28. The gasoline will thus be heated by passing through this tube which is being heated by the gasoline burning in the saucer 39 and will be ignited as it comes out on the apertures 29. Continuous draft will pass through the casing 13, body tank 1, and out through the draft pipe 8. This heater will withstand the elements and prove a boon to the cattle men.

While the preferred embodiment of my invention has been described in detail, it will be understood that I do not wish to be limited to the particular construction set forth, since various changes in the form, material proportions, and arrangement of parts, and in the details of construction may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed or destroying any of its advantages.

Having thus described my invention what I claim as new is:

1. A device of the class described including a body tank, a burner in the body tank, a pair of collars rising from the ends of the body tank communicating therewith, a draft pipe engaged with one collar, a casing engaged with the other collar, each collar provided with a flange, rings engageable with the flanges for holding the pipe and the casing in place, a supply tank disposed between the pipe and the casing, a pair of straps about the supply tank, rods depending from said straps and terminating in arcuate feet resting on the rings and bolted to the flanges of the collars and means within the casing for controlling the burner.

2. A device of the class described including a body tank, a burner in the body tank, a pair of collars rising from the ends of the body tank communicating therewith, a draft pipe engaged with one collar, a casing engaged with the other collar, each collar provided with a flange, rings engageable with the flanges for holding the pipe and the casing in place, a supply tank disposed between the pipe and the casing, a pair of straps about the supply tank, rods depending from said straps and terminating in arcuate feet resting on the rings and bolted to the flanges of the collars, means within the casing for controlling the burner, and covers for the pipe and the casing.

3. A device of the class described including a body tank, a burner in the body tank, a pair of collars rising from the ends of the body tank communicating therewith, a draft pipe engaged with one collar, a casing engaged with the other collar, each collar provided with a flange, rings engageable with the flanges for holding the pipe and the casing in place, a supply tank disposed between the pipe and the casing, a pair of straps about the supply tank, rods depending from said straps and terminating in arcuate feet resting on the rings and bolted to the flanges of the collars, means within the casing for controlling the burner, covers for the pipe and the casing, and a strap disposed longitudinally of the fuel tank and about the pipe and the casing.

4. A device of the class described including a body tank having an opening at each end, a collar rising from each opening and provided with a flange, a pipe engaged over one collar and resting on said flange thereof, a ring for holding the pipe in place, a casing engaged over the other collar and resting on the flange thereof and a ring for holding said casing in place, a fuel tank disposed between the pipe and the casing above the body tank, supports for said fuel tank including straps disposed thereabout and legs depending therefrom terminating in feet resting on the rings of the flanges of said collars and bolted thereto, a strap disposed longitudinally of the fuel tank and about the pipe and the casing, a burner within the body tank, a pipe leading from the fuel tank through the body tank to the burner, a needle valve controlling the flow of fuel from the pipe to the burner, and a rod for controlling the needle valve, said rod extending upwardly into the casing.

5. A device of the class described including a body tank having an opening at each end, a collar rising from each opening and provided with a flange, a pipe engaged over one collar and resting on said flange thereof, a ring for holding the pipe in place, a casing engaged over the other collar and resting on the flange thereof and a ring for holding said casing in place, a fuel tank disposed between the pipe and the casing above the body tank, supports for said fuel tank including straps disposed thereabout and legs depending therefrom terminating in feet resting on the rings of the flanges of said collars and bolted thereto, a strap disposed longitudinally of the fuel tank and about the pipe and the casing, a burner with-

in the body tank, a pipe leading from the fuel tank through the body tank to the burner, a needle valve controlling the flow of fuel from the pipe to the burner, a rod for controlling the needle valve, said rod extending upwardly into the casing, and covers for the ends of said pipe and said casing.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE R. SECREST.

Witnesses:
H. W. BUNSTON,
MYRTLE PETERSON.