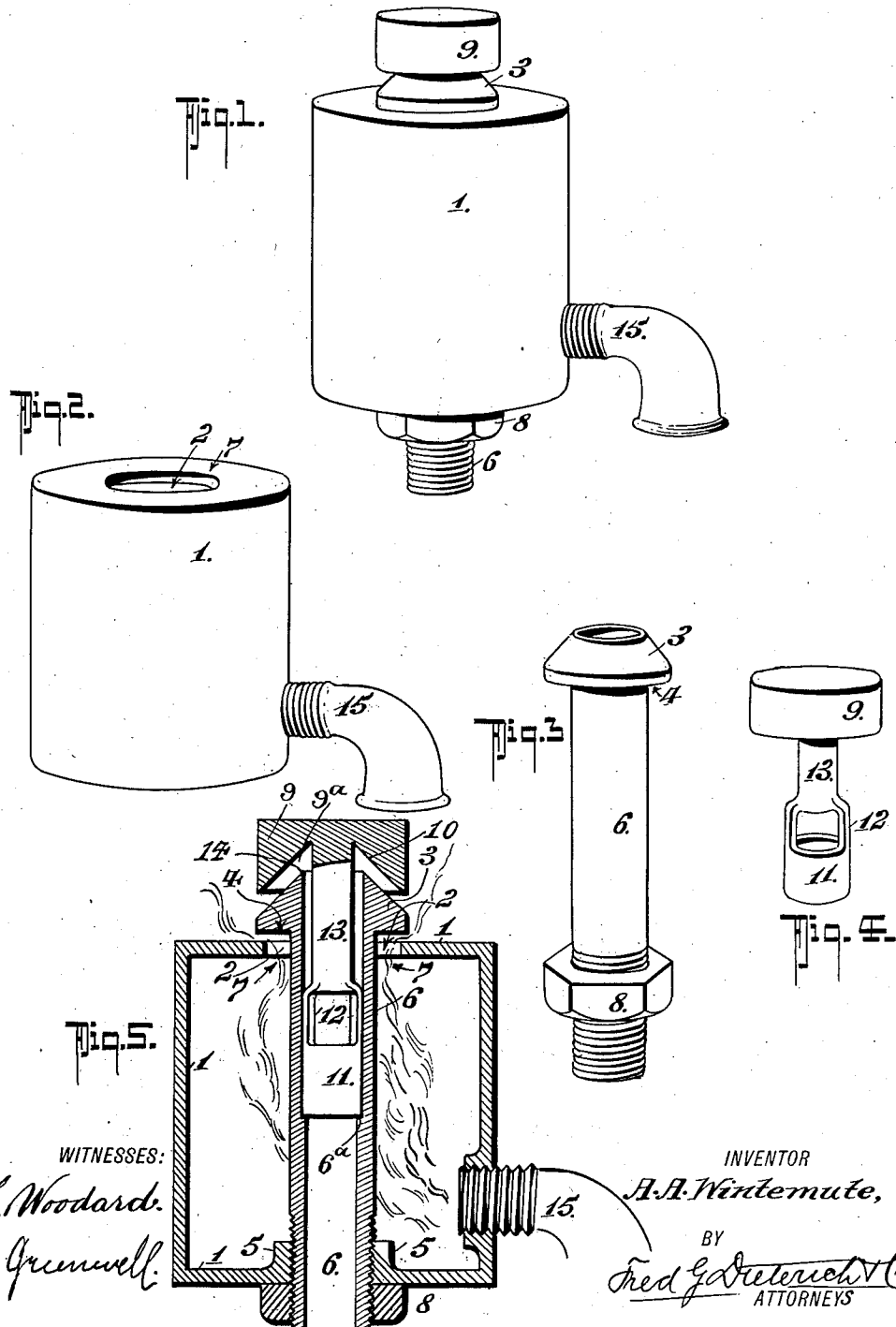


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CRUDE OIL BURNER.
APPLICATION FILED NOV. 25, 1912.

1,062,073.

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UNITED STATES PATENT OFFICE.

AUGUSTUS A. WINTEMUTE, OF FRESNO, CALIFORNIA.

CRUDE-OIL BURNER.

1,062,073.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed November 25, 1912. Serial No. 733,464.

To all whom it may concern:

Be it known that I, AUGUSTUS A. WINTEMUTE, residing at Fresno, in the county of Fresno and State of California, have invented certain new and useful Improvements in Crude-Oil Burners, of which the following is a specification.

My invention is an improved burner for the combustion of crude oil and it primarily has for its object to provide a simple and inexpensive burner of the type stated which can be constructed at a minimum expense, and which will effectively serve its intended purpose.

In its general nature the invention includes a steam drum through which the oil pipe passes, the oil pipe having an integral oil distributing cone at its upper end, over which the baffling head sits, the head having a stem and hollow piston like portion that fits into the oil pipe with sufficient looseness to allow the head to rise and fall if desired, and thereby increase or diminish the area of the oil discharge. The oil pipe is adjustable in the drum to allow for increasing or diminishing the steam discharge passage as may be desired.

More subordinately the invention resides in those novel details of construction, combination and arrangement of parts, all of which will be first fully described, and then be specifically pointed out in the appended claims, reference being had to the accompanying drawing, in which:—

Figure 1 is a perspective view of the burner complete. Fig. 2 is a detail perspective view of the drum. Fig. 3 is a detail perspective view of the oil pipe. Fig. 4 is a detail perspective view of the baffling head and its stem. Fig. 5 is a vertical longitudinal section of the burner complete.

In the drawing in which like numerals of reference indicate like parts in all the figures, 1 represents the drum which is provided at its upper end with a bore 2, of a diameter slightly greater than that of the oil pipe 6, which passes down through the drum and is threaded into the enlargement 5 at the lower end of the drum, the pipe 6 being adjustably held by a check nut 8 so that the distributing cone 3 may have its flat under face 4 brought closer to or moved farther from the top of the drum 1 to thereby diminish or increase the discharge passage 7 for the steam, it being understood that the

hole 2 is of less diameter than that of the cone 3.

9 is the burner head which has its under face 10 coniform and which is provided with a hollow piston like portion 11, bridged at 12 to a stem portion 13 that carries the head 9. The stem 13, bridge 12, and piston like portion 11, fit into the pipe 6 relatively loosely so that the head 9 may rise and fall if desired to permit the discharge of a greater or less volume of oil between it and the upper edge 14 of the cone 3, as best shown in Fig. 5 of the drawing. In practice oil is admitted into the pipe 6 and steam is admitted into the drum 1 through the coupling 15, the steam heating the oil that flows through the pipe 6 and is discharged between the head 9 and the cone 3. The oil after passing through the pipe 6 will flow down between the head 9 and the cone 3, trickling down the conical baffle 3 and after being ignited it burns with a circular flame. By increasing the oil pressure either through elevation of the tank from which it flows or by positive pressure, the head 9 may be raised accordingly and a greater quantity of oil will pass onto the baffle 3, and by raising or lowering the baffle 3 the amount of steam discharged through the opening 2 may be regulated also.

In order that the discharge space between the head 9 and the cone 3 may not be entirely closed, the pipe 6 may be provided with a shoulder 6^a to limit the downward movement of the member 11. So long as the flow of oil is within the capacity of the space between the cone 3 and the head 9, the said head will of course not be raised, and under normal operative conditions, I may prefer to so locate the shoulder 6^a that the space normally provided between the head 9 and the baffle 3 will be sufficient to take care of the normal flow of oil without raising the head 9.

From the foregoing description taken in connection with the accompanying drawing, it is thought the complete construction, operation and advantages of the invention will be apparent to those skilled in the art to which it relates.

What I claim is:—

1. A heating drum, an oil pipe passing through said drum, said oil pipe having a conical baffle at one end provided with a flat under face, said drum having an open-

- ing surrounding the pipe beneath the baffle to cooperate therewith, means for adjust-
ably securing the oil pipe to vary the distance between said baffle and the head of
the drum, a head having a stem projected
into said oil pipe, said head being spaced
from said baffle to allow the passage of oil.
2. In a crude oil burner a drum, an oil
pipe projecting through said drum, said
oil pipe having a conical baffle with a flat
under face at its upper end, said drum having
a steam passage cooperative with said
under face, a head mounted over said baffle,
and means for mounting said head on said
oil pipe for movement toward and from
said baffle to provide an oil discharge between
said head and said baffle.
3. In a crude oil burner a drum, an oil
pipe projecting through said drum, said oil
pipe having a conical baffle with a flat under
face at its upper end, said drum having
a steam passage cooperative with said under
face, a head mounted over said baffle,
and means for mounting said head on said
oil pipe for movement toward and from
said baffle to provide an oil discharge between
said head and said baffle, said last
named means including a stem carried by
said head of less cross sectional area than
the cross sectional area of the bore of the
said oil pipe, and means for holding said
head with its axis coincident with the axis
of said oil pipe.
4. In a crude oil burner a drum, an oil
pipe projecting through said drum, said
oil pipe having a conical baffle with a flat
under face at its upper end, said drum having
a steam passage cooperative with said
under face, a head mounted over said baffle,
and means for mounting said head on said
oil pipe for movement toward and from said
baffle to provide an oil discharge between
said head and said baffle, said last named
means including a stem carried by said
head of less cross sectional area than the
cross sectional area of the bore of the said
oil pipe, and means for holding said head
with its axis coincident with the axis of said
oil pipe, said holding means including a
hollow piston like portion secured to said
stem and mounted within said oil pipe.
5. In a crude oil burner a heating drum,
an oil pipe passing through said drum and
having a baffle at one end, said drum having
an opening surrounding said pipe beneath
the baffle to cooperate therewith, a
head held over said baffle and cooperative
with the same, said head having a stem projecting
into said oil pipe, said oil pipe having
a shoulder on which said stem is adapted
to rest to maintain a space between said
head and said baffle through which the oil
from the oil pipe may flow in a sheet like
form.
6. In a crude oil burner a heating drum,
an oil pipe passing through said drum and
having a baffle at one end, said drum having
an opening surrounding said pipe beneath
the baffle to cooperate therewith, a
head held over said baffle and cooperative
with the same, said head having a stem projecting
into said oil pipe, said oil pipe having
a shoulder on which said stem is adapted
to rest to maintain a space between said
head and said baffle through which the oil
from the oil pipe may flow in a sheet like
form, said baffle and said head having their
opposing surfaces coniform to direct the
oil down onto the head of the drum in the
form of a hollow cone.

AUGUSTUS A. WINTEMUTE.

Witnesses:

GEORGE PETTIT,

WALTER S. JOHNSON.