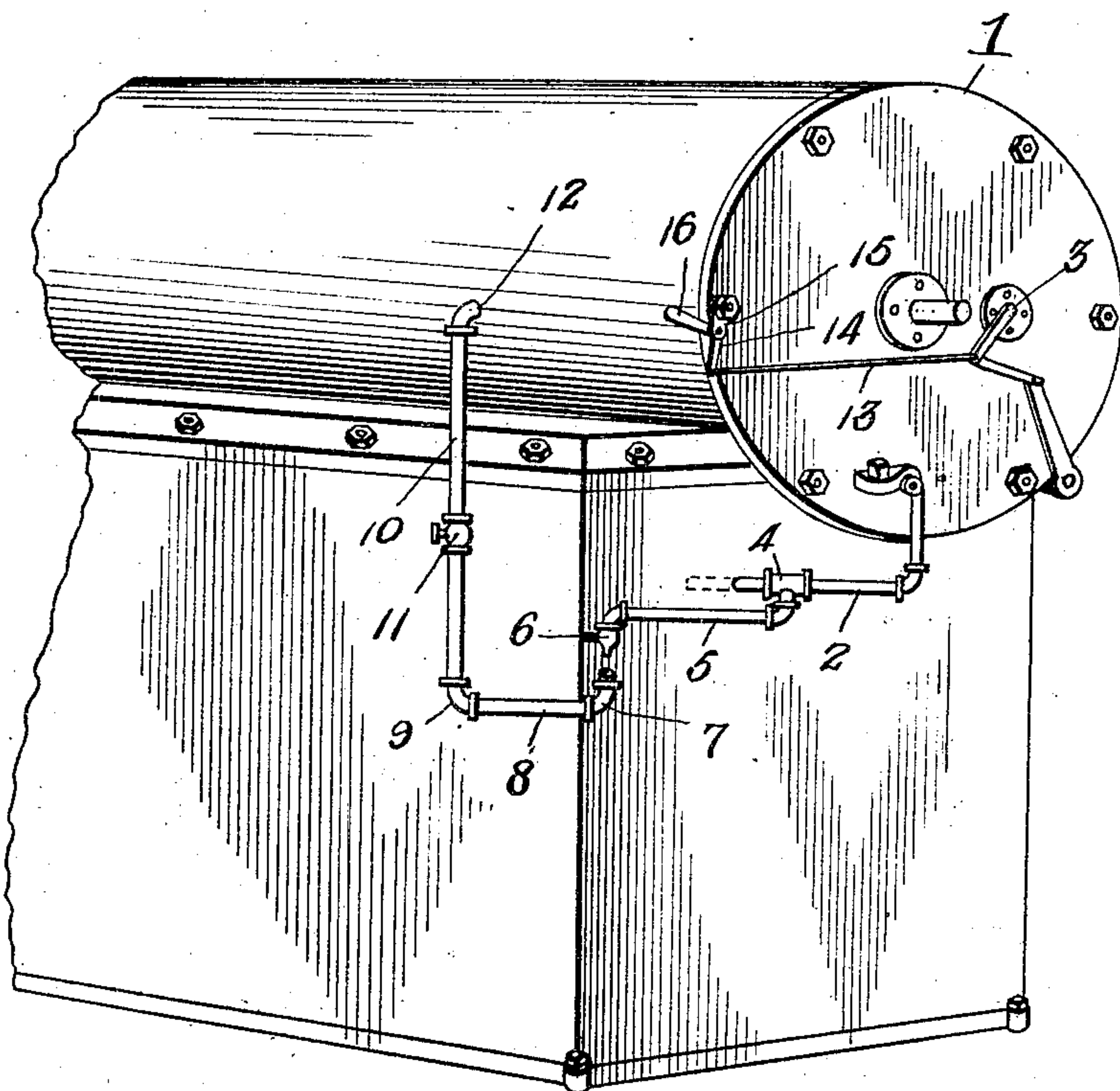


J. L. WHITE & J. B. POLO.  
STARTING DEVICE FOR GASOLENE ENGINES.  
APPLICATION FILED FEB. 8, 1908.

921,769.

Patented May 18, 1909.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN L. WHITE AND JOSEPH B. POLO, OF CLEAR LAKE, SOUTH DAKOTA.

## STARTING DEVICE FOR GASOLENE-ENGINES.

No. 921,769.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed February 8, 1908. Serial No. 415,003.

*To all whom it may concern:*

Be it known that we, JOHN L. WHITE and JOSEPH B. POLO, citizens of the United States, residing at Clear Lake, in the county of Deuel and State of South Dakota, have invented certain new and useful Improvements in Starting Devices for Gasolene-Engines, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in starting devices for gas engines and consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed.

The object of the invention is to provide a simple and practical device of this character in the form of an attachment which may be readily applied to gas engines now in use and which will permit them to be quickly and easily started.

The above and other objects of the invention are attained in its preferred embodiment illustrated in the accompanying drawings, in which is shown a perspective view of a portion of a gas engine showing the invention applied.

In the drawings 1 denotes a portion of a gas engine, 2 its gasolene supply pipe and 3 the oscillating arm which actuates the movable electrode of its electric igniting device.

In the practice of the invention we provide in the pipe 2 a T-connection 4 from which leads a gasolene discharge pipe 5 having a pet cock 6 at its outer end. The latter is disposed immediately above the open upturned end 7 of a pipe 8 having a horizontally disposed portion 9 and a vertically disposed portion 10 which contains a stop cock or valve 11 and which opens into the cylinder of the engine 1, as shown at 12.

13 denotes a rod or link between the arm 3 and one arm of a bell crank lever 14 which is fulcrumed at its angle at 15 upon the engine and has its other end or arm shaped to provide a handle 16.

The operation of the invention is as follows: When it is desired to start the engine the crank shaft is first turned on the inside of the outer dead center and then it is turned on the outside of the dead center by catching hold of one of the spokes of the fly wheel with the left hand and at the same time the pet cock 6 is opened with the right hand. When said cock is opened sufficient gasolene

for a charge is allowed to flow into the upturned end 7 and the horizontal portion 9 of the pipe 8, so that as the piston moves through the cylinder such gasolene will be vaporized and sucked into the cylinder through the vertical portion of the pipe, the valve 11 having been previously opened. Said valve 11 is then closed and the motion of the piston is reversed to compress the charge and at the same time the bell crank or lever 14 is grasped and operated to oscillate the sparker arm 6 and produce a spark within the cylinder to ignite the charge.

From the foregoing it will be seen that the invention is exceedingly simple and inexpensive in construction and may be readily applied to various types of gas engines.

Having thus described the invention what is claimed is:

1. The combination with a gas engine, its sparking device and a source of gasolene supply, of manually operated means for actuating said sparking device, a pipe leading from said source of gasolene supply and provided with a cock, and a second pipe containing a controlling valve and having one end in communication with the engine cylinder and its other end disposed beneath the plane of said cock and having an upturned open end disposed immediately beneath the discharge of the latter.

2. The combination with a gas engine, the oscillatory arm of its sparking device and its gasolene supply pipe, of a bell crank fulcrumed at its angle and having a handle at one end, a link connecting the other end of said bell crank to said arm, a pipe connected to the gasolene supply pipe and having at its end a downturned pet cock, a second pipe having vertically and horizontally disposed branches, the horizontal branch having an upturned open end disposed beneath the pet cock and the vertical branch having its upper end in communication with the engine cylinder, and a controlling valve or cock arranged in the vertical branch of the last mentioned pipe.

3. The combination with a gas engine, its sparking device and its source of gasolene supply, of manually operated means for actuating said sparking device, a pipe leading from said source of gasolene supply and provided with a downturned pet cock, a second pipe having an upright portion with its upper end in communication with the engine



cylinder, a substantially horizontal portion  
extending from the lower end of the upright  
portion, and an upturned open portion or  
end at the other extremity of the substan-  
5 tially horizontal portion, said upturned por-  
tion or end being disposed beneath the pet  
cock to receive the discharge of oil there-  
from, the substantially horizontal portion  
of the pipe serving to hold the oil, and a  
10 controlling valve arranged in the second

mentioned pipe, substantially as and for the  
purpose set forth.

In testimony whereof we hereunto affix  
our signatures in the presence of two wit-  
nesses.

JOHN L. WHITE.  
JOSEPH B. POLO.

Witnesses:

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