

C. B. CHAMBERS.
AIR HEATER FOR GASOLENE ENGINES.
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916,999.

Patented Apr. 6, 1909.

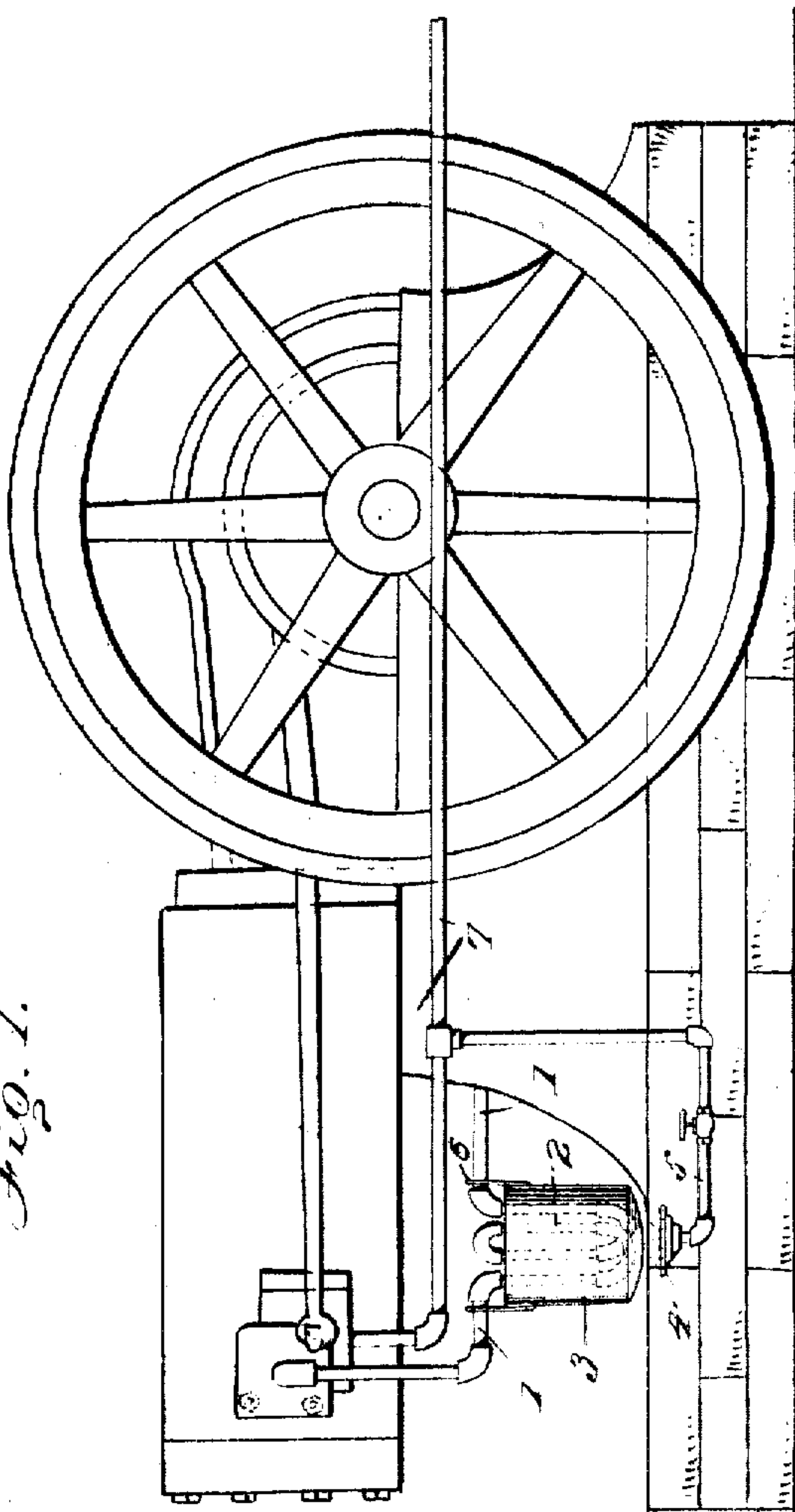


Fig. 1.

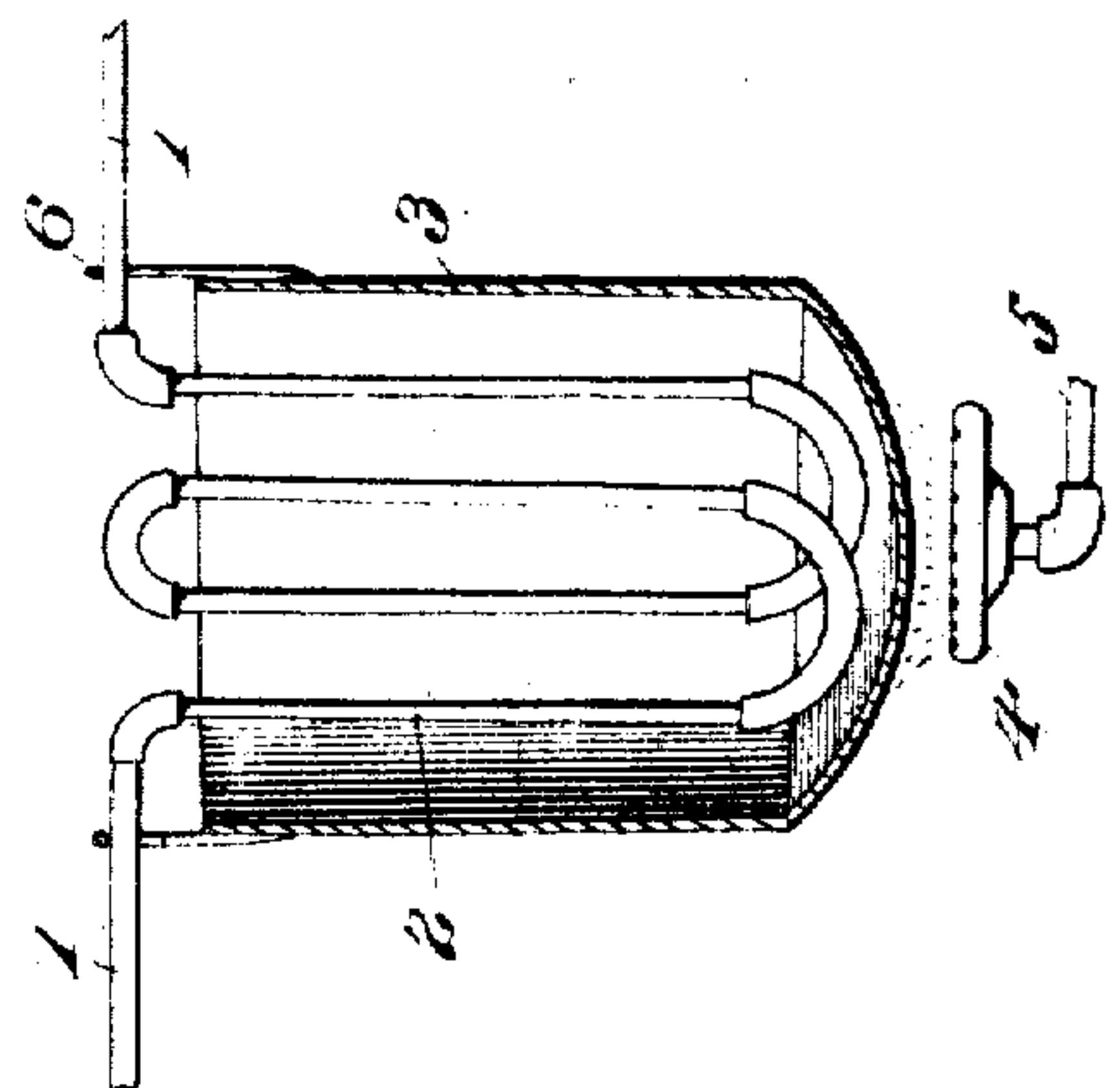


Fig. 2.

Inventor

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Witnesses

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By

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UNITED STATES PATENT OFFICE.

CHARLES B. CHAMBERS, OF MILO, MISSOURI.

AIR-HEATER FOR GASOLENE-ENGINES.

No. 916,999.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed January 25, 1908. Serial No. 412,671.

To all whom it may concern:

Be it known that I, CHARLES B. CHAMBERS, citizen of the United States, residing at Milo, in the county of Vernon and State of Missouri, have invented certain new and useful Improvements in Air-Heaters for Gasolene-Engines, of which the following is a specification.

This invention has for its object a simple and efficient construction of device or attachment for use with internal combustion engines, particularly those that are used on the farm and in other exposed places, where, as is well known, it often becomes difficult to start the engine especially in cold weather, owing to the fact that the air that is fed into the mixing chamber is so cold that it will not generate with the gasolene, a mixture of the proper temperature to effect the proper combustion and explosion.

More specifically my invention has for its object an air heating device designed to properly heat the air before it is fed to the mixing chamber of the gasolene on other internal combustion engine, and the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view illustrating the application of my invention to a gasolene engine, the engine being shown in dotted lines; and, Fig. 2 is a sectional side elevation of the apparatus.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings, by the same reference characters.

In carrying out my invention, I provide an air inlet pipe leading to the mixing chamber of a gasolene engine, the said pipe being provided with an inlet portion 1 for fresh air, an intermediate coil 2 which may be formed of any desired number of bends or convolutions suitably connected together by any desired fittings, such as the elbows, and return bends shown in the accompanying drawings, and a jacket 3 which is designed to inclose the coil 2 so as to protect the same from cold air and at the same time confine to the coil the heat that is gen-

erated by gasolene fed to the burner 4, said burner being connected by the pipe 5 to the gasolene pipe 7 of the engine. The jacket 3 may be suspended from the air pipe 1 by means of bails or ears 6 as shown.

From the foregoing description in connection with the accompanying drawing, it is evident that in the practical operation of my improved air heater for gasolene engines, gasolene may be fed from the pipe 5 through the burner 4, and being lighted, the flame will heat the jacket 3 and the coil 2 so that the fresh air passing through the coil will be properly heated before it is passed to the mixing chamber to produce a warm mixture so that the engine may be quickly and easily started.

It will be noted by reference to Fig. 1 of the drawings that the jacket 3 and the heating coil 2 are located underneath the cylinder of the engine, the inlet pipe 1 opening into the hollow bed of the engine. By this means, it is obvious that the burner 4 may be used for only the initial operation of heating the air for as soon as the engine heats up, the bed itself will become warm enough to properly heat the air as it passes into the pipe 1.

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

The combination with a gasolene engine embodying a bed and a cylinder mounted thereon and projecting at one end over or beyond the bed, the engine also embodying a mixing chamber and a gasolene pipe leading to said chamber, an air inlet pipe extending into the bed and opening therein and leading therefrom into the mixing chamber, said pipe being bent intermediate its ends into coils, a jacket surrounding said coils and suspended from the air inlet pipe at points on either side of said coils, a branch pipe connected to and leading downwardly from the gasolene supply pipe and provided with a horizontally extending portion and a burner secured to said portion and supported underneath the jacket.

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

CHARLES B. CHAMBERS. [L. S.]

Witnesses:

F. FLATS,
W. D. DALE.