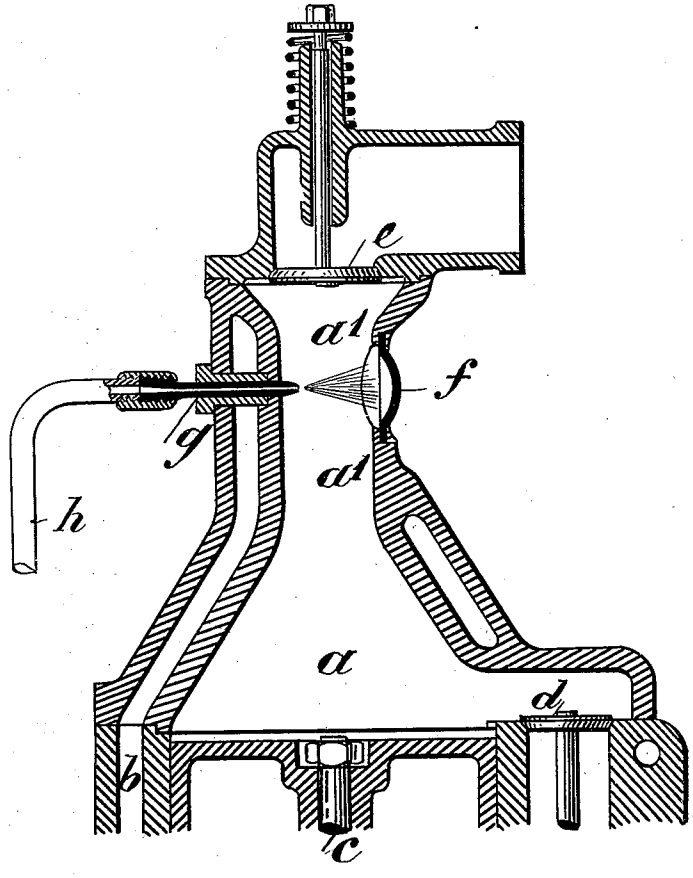
(No Model.)

O. BRÜNLER.

PETROLEUM MOTOR.

No. 507,990. Patented Nov. 7, 1893.



Witnesses:
Theodor Steudel.
Paul Kirschke.

Inventor:
Oscar Brünler
per Gerson and Sachs
his Attorneys.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

OSCAR BRÜNLER, OF EUTRITZSCH-LEIPSIC, GERMANY.

PETROLEUM-MOTOR.

SPECIFICATION forming part of Letters Patent No. 507,990, dated November 7, 1893.

Application filed September 26, 1892. Serial No. 446,977. (No model.) Patented in Switzerland August 19, 1892, No. 5,453; in France August 22, 1892, No. 223,854; in Spain August 23, 1892, No. 13,685; in Sweden August 25, 1892, No. 4,339; in Italy August 27, 1892, No. 32,534/43; in Belgium September 1, 1892, No. 101,208; in England September 13, 1892, No. 16,381; in Victoria October 15, 1892, No. 10,048, and in New South Wales October 19, 1892, No. 4,053.

To all whom it may concern:

Be it known that I, OSCAR BRÜNLER, a subject of the Emperor of Germany, and a resident of Eutritzsch-Leipsic, in the Empire of Germany, have invented a new and useful Improvement in Petroleum-Motors, (for which I have obtained patents in France, No. 223,854, bearing date August 22, 1892; in Belgium, No. 101,208, bearing date September 1, 1892; in Italy, No. 32,534/43, bearing date August 27, 1892; in Sweden, No. 4,339, bearing date August 25, 1892; in Spain, No. 13,685, bearing date August 23, 1892; in Great Britain, No. 16,381, bearing date September 13, 1892; in Switzerland, No. 5,453, bearing date August 19, 1892; in New South Wales, No. 4,053, bearing date October 19, 1892; in Victoria, No. 10,048, bearing date October 15, 1892,) of which the following is a specification.

The object of the present invention is a contrivance as shown by the inclosed drawing, for the gasification of the petroleum, and for the ignition of the petroleum-gas-mixture and of the air in petroleum-motors working with four-stroke cycle.

The cooled compression-space *a* is continued by the passage *a'* in the wall of which a plate *f*, curved to the outside and heated from outside to red heat is inserted. Immediately before, or at the beginning of the suction-period, a pump conveys a measured quantity of petroleum through the pipe *h* and the passage *g* into the passage *a'*, the petroleum being dispersed and immediately evaporated at the red hot plate *f*. The air sucked through the valve *e*, drives the gases to the compression space *a*, without being able—on account of its great velocity—to enter the hollow plate *f*. During the compression, the mixture formed in the meantime, is driven back into the passage *a'* the spaces being proportioned so that at the end of the compression the inflammable mixture reaches the red-hot plate *f*, effecting the explosion which throws down the piston. If the plate *f*, instead of being curved to the outside were curved to the inside, or if it were a straight continuation of the passage-wall, a combustion of the mixture would take place during the suction-period. As it is, the air passes inside, without touching the red-hot plate *f*.

What I claim is—

In a petroleum motor the combination of the compression-space *a* ending in a passage *a'*, having on opposite sides the passage *g* for dispersing the oil and the slightly concaved plate *f* inserted in the wall of the passage *a'* and heated from outside and the air-inlet valve *e*, as and for the purpose specified.

OSCAR BRÜNLER.

Witnesses:
CARL BORNGRAEBER,
ANTON NIEMCZYK.