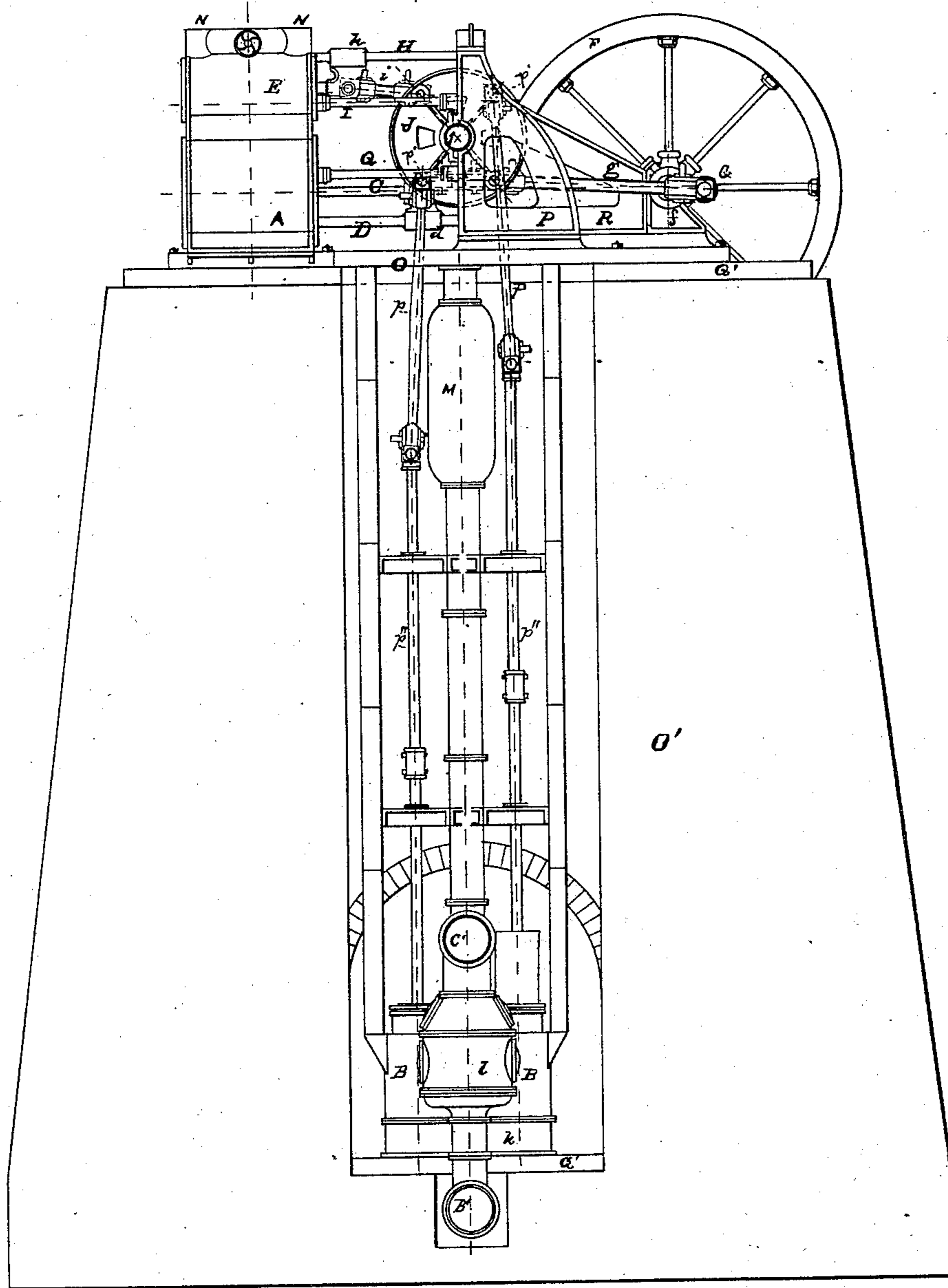


(No Model.)

H. F. GASKILL.
STEAM MOTOR ENGINE.

No. 282,071.

Patented July 31, 1883.



Attest
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Inventor
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UNITED STATES PATENT OFFICE.

HARVEY F. GASKILL, OF LOCKPORT, NEW YORK.

STEAM MOTOR-ENGINE.

SPECIFICATION forming part of Letters Patent No. 282,071, dated July 31, 1883.

Application filed January 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, HARVEY F. GASKILL, of Lockport, in Niagara county, New York, have invented certain Improvements in Steam Motor-Engines, of which the following is a specification.

The object of my invention is to produce a simple, compact, and economical steam-motor.

The invention consists in a certain construction of the frame of the machine, as will be specifically stated in the claim at the end hereof.

The principal elements which go to make up my frame are as follows, viz: two cylinders, one of which serves as a bed for the other; (these cylinders may be high and low pressure, so as to constitute a compound engine;) bearings for a crank-shaft in front of the cylinders; standards for supporting a beam between the cylinders and the crank-shaft; strut-ties or equivalent devices for connecting the standards to the cylinders.

The drawing shows a side view of an engine containing my invention and applied to working pumps in a pit or well.

In the drawing, O is the base-casting of the frame. A is the low-pressure cylinder.

E is the high-pressure cylinder, mounted on cylinder A as a foundation or bed.

P and R are standards to support the bearings of the beam-shaft *j*.

J is a circular beam.

H is a guide on which moves the cross-head

h. D is a similar guide for cross-head *d*.

Links connect these cross-heads and their piston-rods with opposite points of the beam.

Cylinder E takes live steam at its admission-ports at N N and exhausts into cylinder A. As the pistons move in opposite directions, the steam-passages connecting E and A are short and direct and connect adjacent ends, so that there is no loss by condensation and expansion in long passages.

f is a pillow-block or bearing for the crank-shaft G. F is a fly-wheel on shaft G. The inner standard or beam-shaft support R extends to the pillow-block *f*.

I and Q are strut-ties connecting the standards with the cylinders.

g is a rod connecting the crank to the beam and to the same point of the beam to which the low-pressure piston-rod C is connected.

B B are pumps; *l*, the valve-box of one of the pumps; B', the suction; C', the discharge; M, the air-chamber.

p'' are the pump-rods.

p are connecting-rods joining the pump-rods *p''* with points *p'* of the beam. The points *p'* are opposite each other and at right angles to the points of connection of the piston-rods.

What I claim is—

The frame composed of the two cylinders, arranged one above the other, the standards P and R, the pillow-block, and the strut-ties connecting the cylinders and the standards, substantially as described.

HARVEY F. GASKILL.

Attest:

F. H. SEYMOUR,
D. A. DECROW.