

(No Model.)

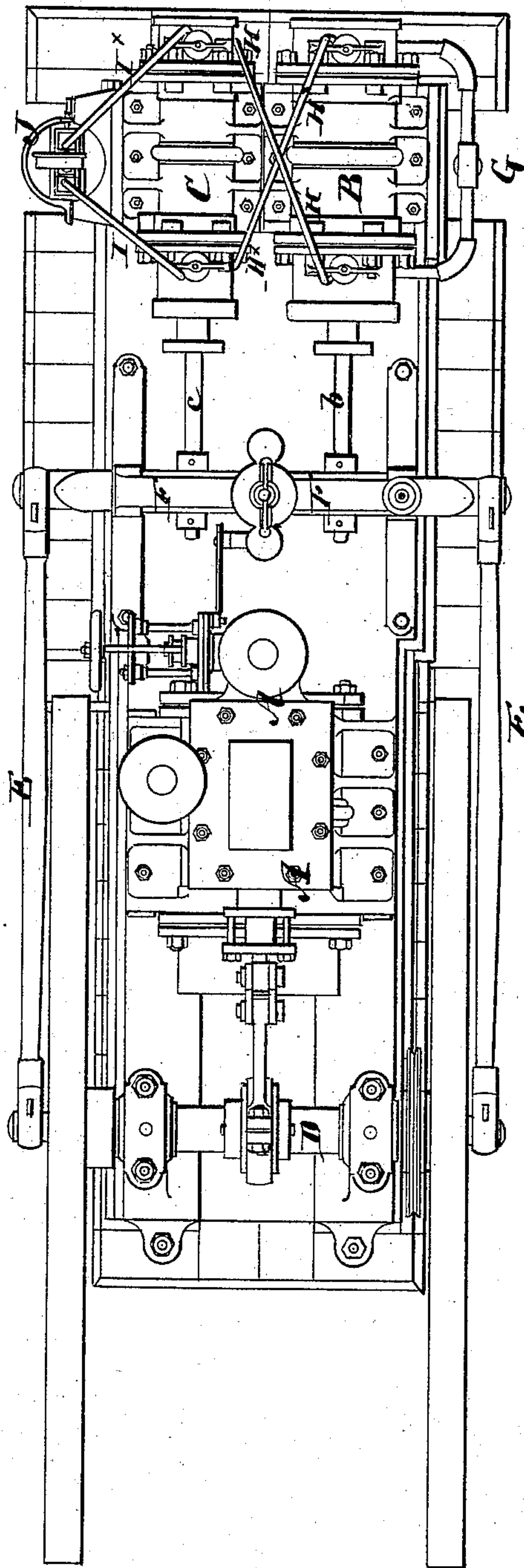
3 Sheets—Sheet 1.

R. J. & J. PINTSCH.
Pump for Compressing Illuminating Gas.

No. 235,646.

Patented Dec. 21, 1880.

Fig. 1



Witnesses:
John C. Tunbridge
Willy H. E. Schütz.

Inventors:
Richard J. Pintsch
Julius Pintsch
by their attorney
A. Briesen

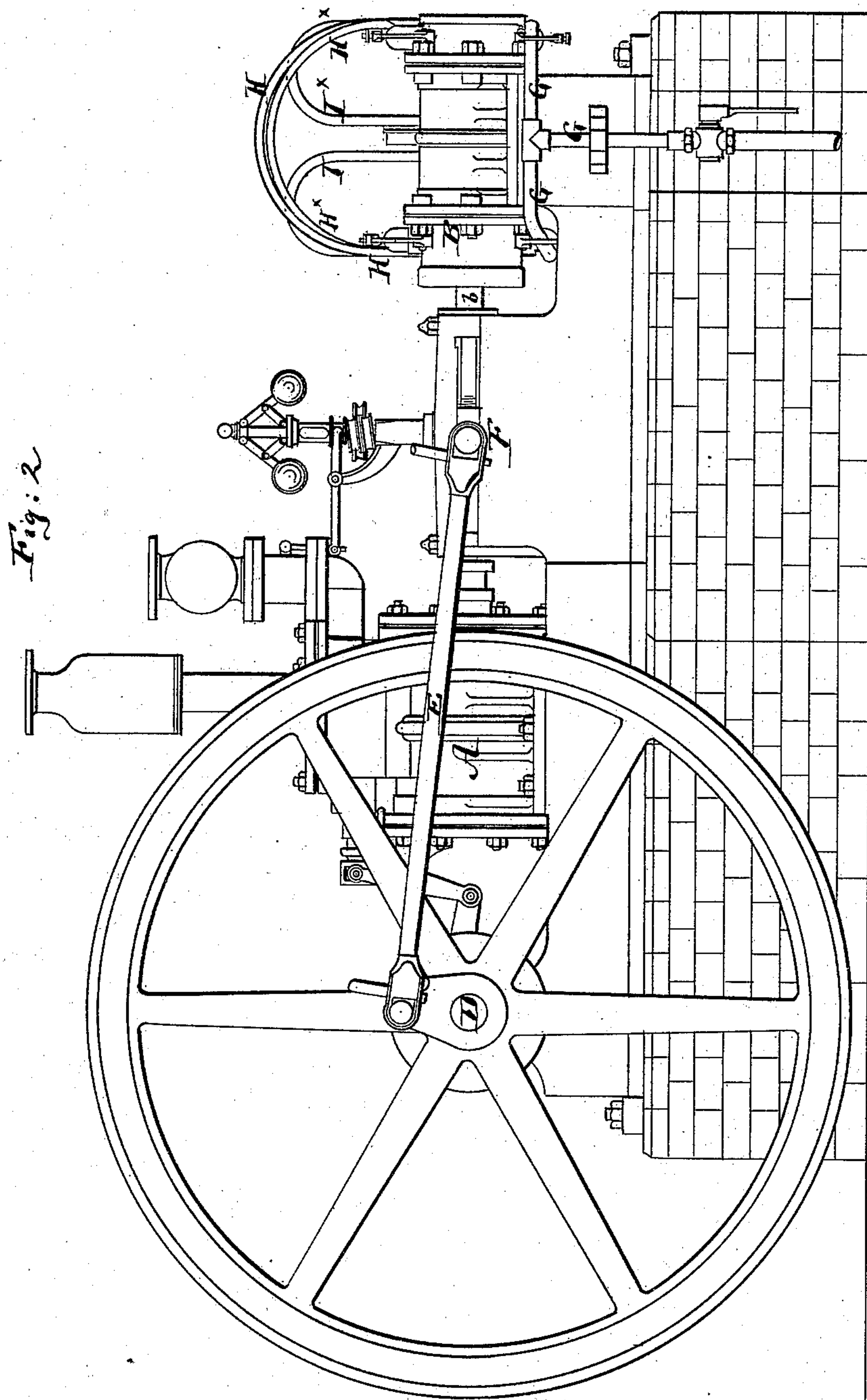
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3 Sheets—Sheet 2.

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John C. Tunbridge
Willy H. E. Schultz

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3 Sheets—Sheet 3.

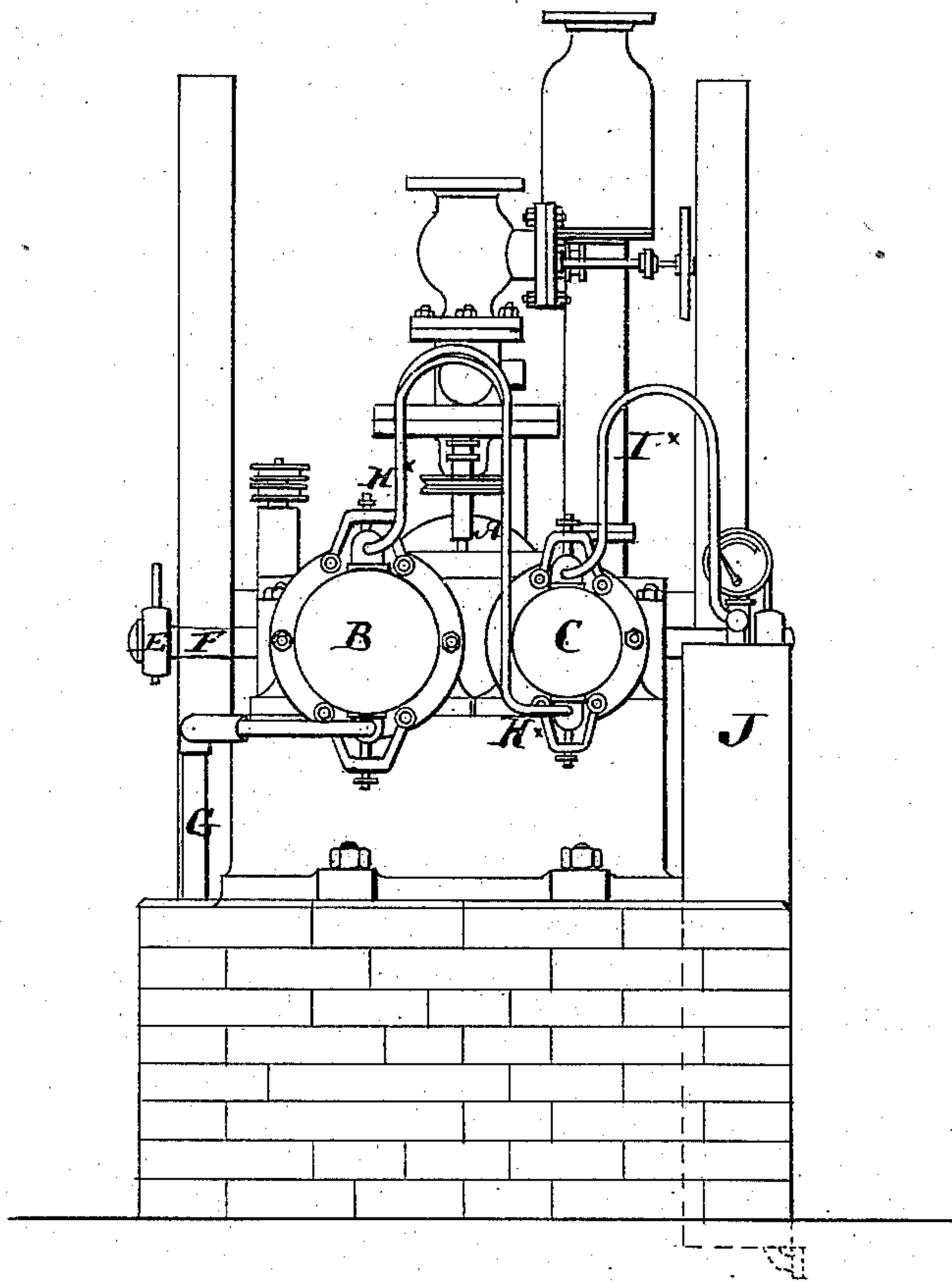
R. J. & J. PINTSCH.

Pump for Compressing Illuminating Gas.

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Fig : 3



Witnesses:

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UNITED STATES PATENT OFFICE.

RICHARD J. PINTSCH AND JULIUS PINTSCH, OF BERLIN, GERMANY.

PUMP FOR COMPRESSING ILLUMINATING-GAS.

SPECIFICATION forming part of Letters Patent No. 235,646, dated December 21, 1880.

Application filed October 12, 1880. (No model.)

To all whom it may concern:

Be it known that we, RICHARD JULIUS PINTSCH and JULIUS PINTSCH, of Berlin, Prussia, in the Empire of Germany, have invented a new and Improved Pump for Compressing Illuminating-Gas, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a top view, Fig. 2 a side view, and Fig. 3 an end view, of our improved pump.

This invention relates to a new pump which is to be used for compressing illuminating-gas having the character of gas as usually made, so as to obtain a pressure of about ten atmospheres. The gas thus compressed may be used in floating or other reservoirs, such as are described in Letters Patent No. 190,297.

Our present invention consists in a novel and peculiar disposition with reference to the gas-conduits of the two compression-cylinders, and in other details of improvement, which are hereinafter more fully described.

In the accompanying drawings, A is a steam-cylinder, and B C are the two compression-cylinders, of our improved pump. All of these cylinders are mounted on the same frame. The piston of the steam-cylinder serves to rotate the shaft D, which, in turn, transmits motion by two rods, E E, to a slide, F, which connects with the plunger-rods *b* and *c* of the cylinders B and C, respectively, so that both pistons of the compression-cylinders will move in equal ratio and direction at the same time. The cylinder B has a diameter exceeding that of the cylinder C, the difference being about as five to three. The larger cylinder, B, is supplied with gas through a pipe, G, which is branched to lead into the ends of said cylinder. In the cylinder B the gas is compressed to a certain degree less than that finally desired, and from B the gas so compressed is discharged through the pipes H and H^x into the ends of the cylinder C, whence it is further discharged by the pipes I and I^x to the gas-receptacle J.

The inlet and outlet valves, which are placed at the ends of the cylinders B C, are not shown, and may be of suitable construction.

The pipes H and H^x cross each other, as shown, so that H will lead from the plunger end of the cylinder B to the closed end of the cylinder C, whereas H^x leads from the closed end of the cylinder B to the plunger end of cylinder C. By this means the action of each cylinder is always parallel to that of the other, and while B discharges through the pipe H, C will discharge through the pipe I, whereas when B discharges through H^x, C discharges through I^x.

In order to avoid the injurious heating of the cylinders B and C, we embrace each in a jacket or casing containing water, which jacket or casing, however, is not specially illustrated in the drawings.

It will be noticed that the pipe G is of a diameter as much greater than that of the pipes H and H^x as B is larger than C, or thereabout, so that the reduced diameter of C and the reduced receiving capacity and drawing capacity of its plunger will be, as regards the pipes that supply it, correspondingly less than the diameter of the cylinder B and of the pipe G.

We claim—

In a pump for compressing gas, the combination of the steam-cylinder A, shaft D, rods E, slide F, and plunger-rods *b c* with the compression-cylinders B and C, of different diameters, but of equal lengths, pipes H and H^x, which connect the cylinders B and C, and the pipes G and I and I^x, substantially as herein shown and described.

RICHARD JULIUS PINTSCH.
JULIUS PINTSCH.

Witnesses:

BERTHOLD ROE,
BANCROFT C. DAVIS.