(No Model.)

J. SCHUEHLE.

COMPRESSOR FOR ICE MACHINES.

No. 370,896. Patented Oct. 4, 1887.

Fig. 1.

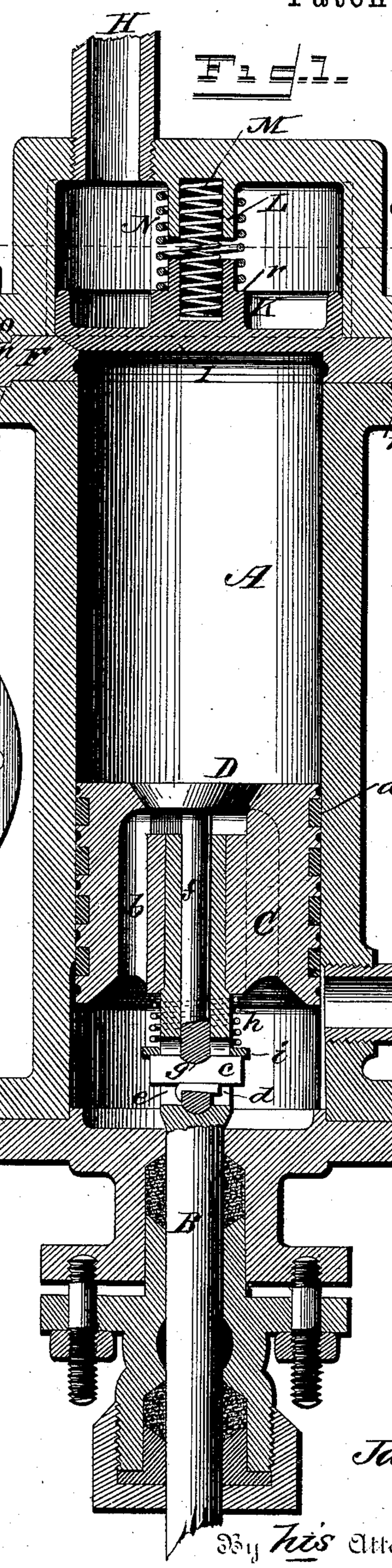


Fig. 2.

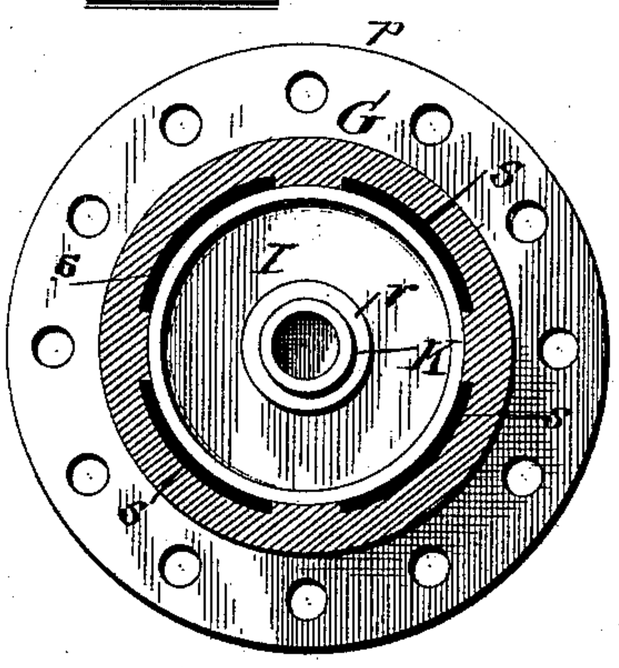
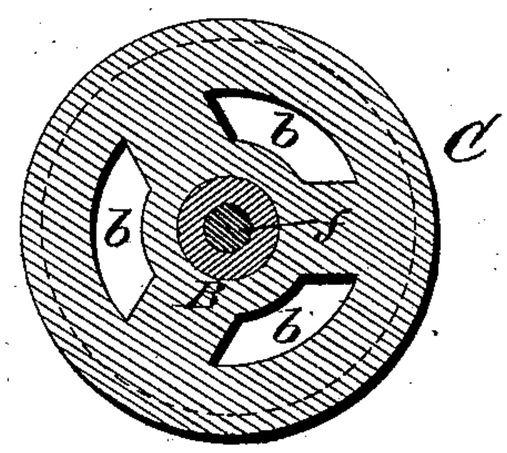


Fig. 3.



Witnesses
G. S. Elliott
L. L. Miller

Inventor
Jacob Schuehle,
By his Attorney
Chas. H. Fowler

UNITED STATES PATENT OFFICE.

JACOB SCHUEHLE, OF SAN ANTONIO, TEXAS.

COMPRESSOR FOR ICE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 370,896, dated October 4, 1887.

Application filed May 27, 1887. Serial No. 239,515. (No model.)

To all whom it may concern:

Be it known that I, JACOB SCHUEHLE, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Compressors for Ice-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a sectional elevation of my improved compressor; Fig. 2, a plan view, partly in section, of the valve-chamber, taken on line *x x* of Fig. 1; and Fig. 3, a longitudinal section of the piston.

The present invention has relation to compressors to be used in ice-machines; and the object thereof is to improve the construction in its several details, whereby its operation is materially improved and its construction simplified, which objects I attain by the construction substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A represents the compressing-cylinder, of any suitable size and construction, which is provided at its lower end with suitable stuffing-boxes and glands for the piston-rod B. To the end of this rod is connected the piston C, provided with suitable packing-rings, *a*, and an opening or openings, *b*.

Within the piston C is seated a valve, D, the stem of which extends down into the end of the piston-rod B, and has a transverse slot in its end, through which passes a key, *c*, held therein by a wedge, *d*. A slot, *e*, is formed in the piston-rod, so as to admit of the valve-stem *f* playing up and down. The transverse opening through the piston-rod may be of any suitable length so that the valve D can move the required distance off its seat, and the lower end of the valve-stem has a convex shoulder, *g*, immediately above the slot, so as to retain the key *c* in position and prevent it from working loose. A spiral spring, *h*, is coiled around the piston-rod B, the lower end thereof resting on a steel washer, *i*, said spring operating to hold the valve to its seat.

The compressing-cylinder A is provided with pipe E, which communicates therewith and with the freezing-coil ordinarily used in ice-machines. The upper end of the cylinder A is provided with an annular flange, *k*, having an annular groove, *l*, upon its upper face to receive a shoulder, *m*, upon the under side of a valve-plate, F. This valve-plate upon its upper side is also formed with a groove, *n*, to receive a shoulder, *o*, upon the under side of a flange, *p*, of the valve-chamber G, said chamber having a pipe, H, which communicates therewith and with the ammonia-condenser coil. The flanges *k p* form clamps between which is held the valve-plate F, the grooves and shoulders above described forming guides by which the valve-plate is centered.

The valve I is seated on the plate F when it is closed, said valve having an upwardly-extending hollow stem, K, a similar stem, L, depending from the upper end of the valve-chamber G. These hollow stems form a receptacle for a coil-spring, M, a similar but larger spring, N, extending around the exterior of the stem K L, the lower end of the spring resting on the shoulder *r*.

The spring M is a light spring, and its purpose is to retain the valve I on its seat, while the spring N is of increased strength, so as to act as a cushion when the valve is raised off its seat by the compressed ammonia.

The valve-chamber G is provided upon its interior with passages *s*, to allow the compressed ammonia to pass into the valve-chamber above the valve.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In an ammonia-compressor, the piston-rod B, having transverse opening *e*, in combination with the valve D, stem *f*, having slot and shoulder *g*, key *c*, held therein by wedge *d*, and the spring *h* and washer *i*, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence two witnesses.

JACOB SCHUEHLE.

Witnesses:

JULIUS SOLGER,

H. C. HUNTEMANN.