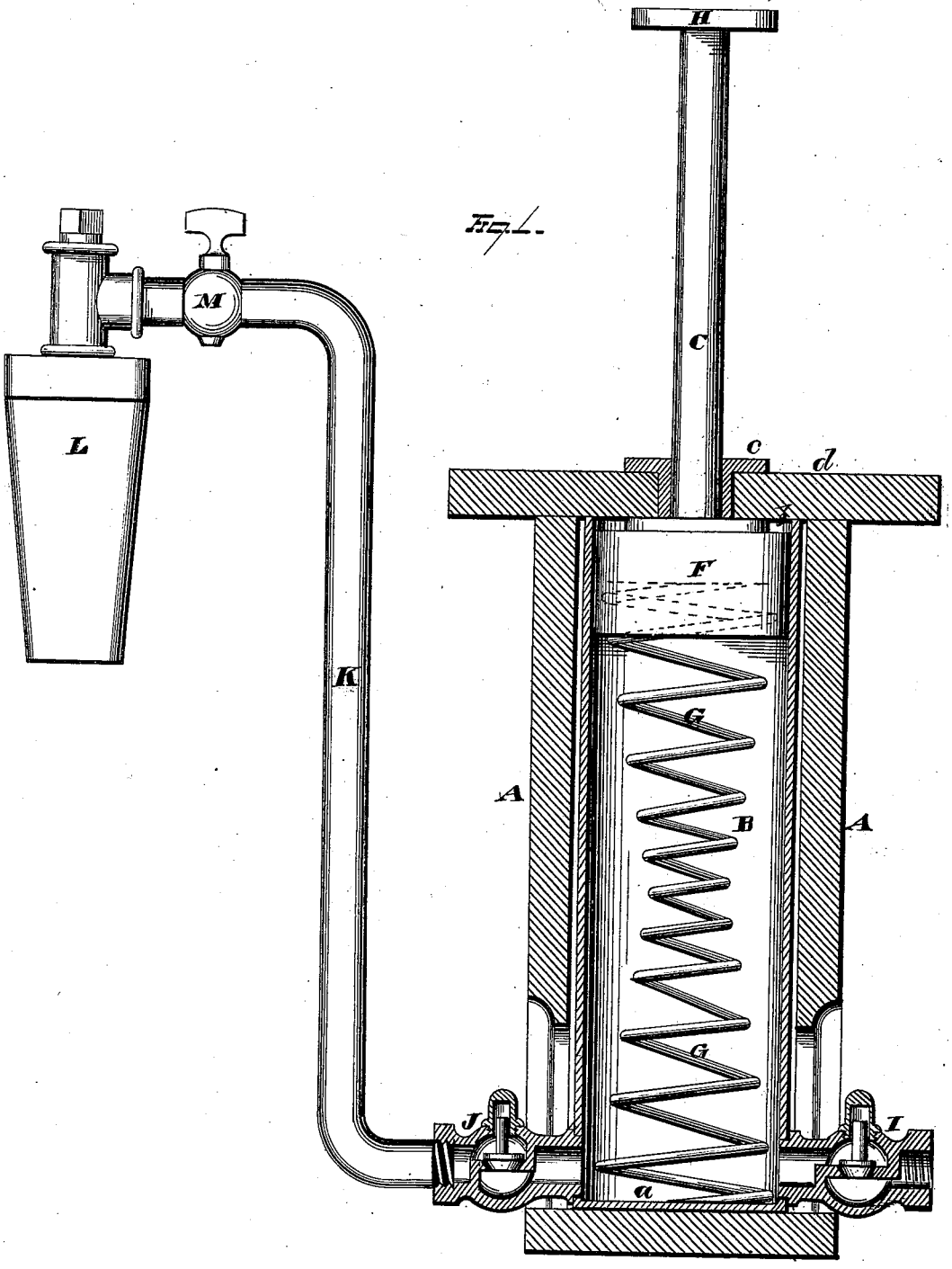
2 Sheets—Sheet 1.

E. STEWART.
Beer Pump.

No. 201,846. Patented March 26, 1878.

Fig. 1.



WITNESSES
Ed. L. Nottingham
A. W. Bright.

INVENTOR
E. Stewart.
By H. A. Seymour.
ATTORNEY

2 Sheets—Sheet 2.

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Fig. 2.

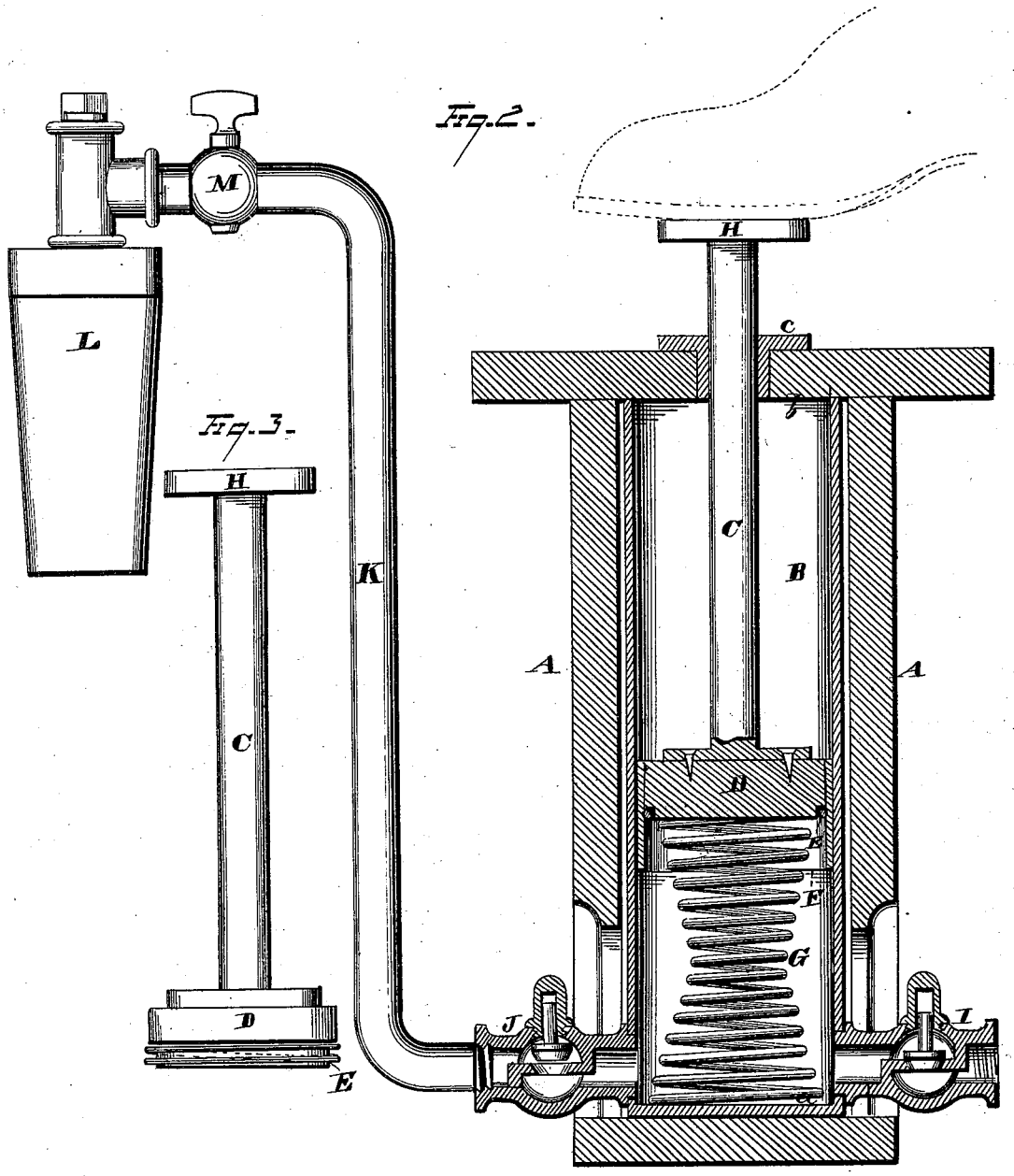

Fig. 3.

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UNITED STATES PATENT OFFICE.

EDWARD STEWART, OF FORT MADISON, IOWA, ASSIGNOR TO HIMSELF, HENRY CHARLES SPREEN, AND WILLIAM HEISING, OF SAME PLACE.

IMPROVEMENT IN BEER-PUMPS.

Specification forming part of Letters Patent No. **201,846**, dated March 26, 1878; application filed February 16, 1878.

To all whom it may concern:

Be it known that I, EDWARD STEWART, of Fort Madison, county of Lee, and State of Iowa, have invented certain new and useful Improvements in Beer-Pumps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others to make and use it, reference being had to the accompanying drawings.

My invention relates to an improvement in beer-pumps, the object being to provide a pump of such construction that the piston-packing shall be kept in close contact with the cylinder, and also that the piston shall be quickly raised, in order to readily admit of quick effective downward strokes in forcing air into a barrel or keg of beer; and to that end my invention consists in the combination, with the piston of a beer-pump, of a flexible piston-packing extending below the piston, and a spring, the upper end of which is interposed between the piston and packing for the purpose of keeping the latter snugly against the surface of the cylinder, while the lower end rests against the lower head of the cylinder and serves to raise the piston.

In the accompanying drawings, Figure 1 is a vertical section of my improved beer-pump, having a flexible pipe attached thereto, which connects with a bung. Fig. 2 is a vertical section of the pump, showing the relative position of the several parts of the apparatus when the piston is depressed. Fig. 3 represents the piston with the packing removed therefrom.

A represents a suitable box or casing, within which is inclosed the pump-cylinder B, the latter constructed with closed lower end *a* and open upper end *b*. Piston-rod C is secured at one end to piston D, and passes upward through a guide-ring, *c*, secured to the cover *d* of casing A. When it is desired to repack the piston, the latter is readily removed from its cylinder by simply removing cover *d*, when the piston and rod are readily detached from the pump.

Piston D is encircled by a spiral spring, E, over which is placed a packing, F, consisting of leather, rubber, or equivalent material. Packing F extends below the surface of piston D.

The spring E serves to keep the packing in close contact with the bore of the cylinder, and thus a single packing will preserve a perfectly tight joint between the piston and cylinder until the packing is completely worn out. As packing F extends below the piston, it is kept in an expanded condition on the downward stroke of the piston by means of the pressure of air within the cylinder operating against the interior surface of the same.

G is a double-cone spring, and serves to raise the piston to the upper end of the cylinder, so that the pump may be easily operated by the pressure of the foot on the foot-support H, secured to the upper end of the piston-rod. The spring G, owing to its form, is prevented from expanding and wearing the surface of the cylinder.

Air is admitted and expelled to and from the cylinder B through check-valves I and J.

If desired, a pipe leading to the open air without the building may be attached to the induction-valve I, and thus always insure a supply of pure fresh air to the beer.

A flexible pipe, K, is secured to the eduction-valve J, and leads to the bung L, with which it is connected by any suitable coupling.

M is a stop-cock, which is opened when it is desired to force air into a barrel or keg, and when a sufficient pressure of air has been introduced therein the stop-cock M is closed, thus preventing the escape of the air from the barrel. Instead of placing the stop-cock M in the pipe K, it may be attached to the bung and perform the same results.

A beer-pump embodying my invention is adapted to be placed beneath the floor, under the counter, and be easily operated by pressure of the foot on the upper end of the piston-rod.

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

In a beer-pump, a piston provided with a flexible packing extending below the surface of the piston, and a spring, the upper end of which is interposed between the piston and packing, while the lower end of the spring rests on the lower head of the pump-cylinder, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of February, 1878.

EDWARD STEWART.

Witnesses:
FRED. KORSCHGEN,
WM. WINTERS.