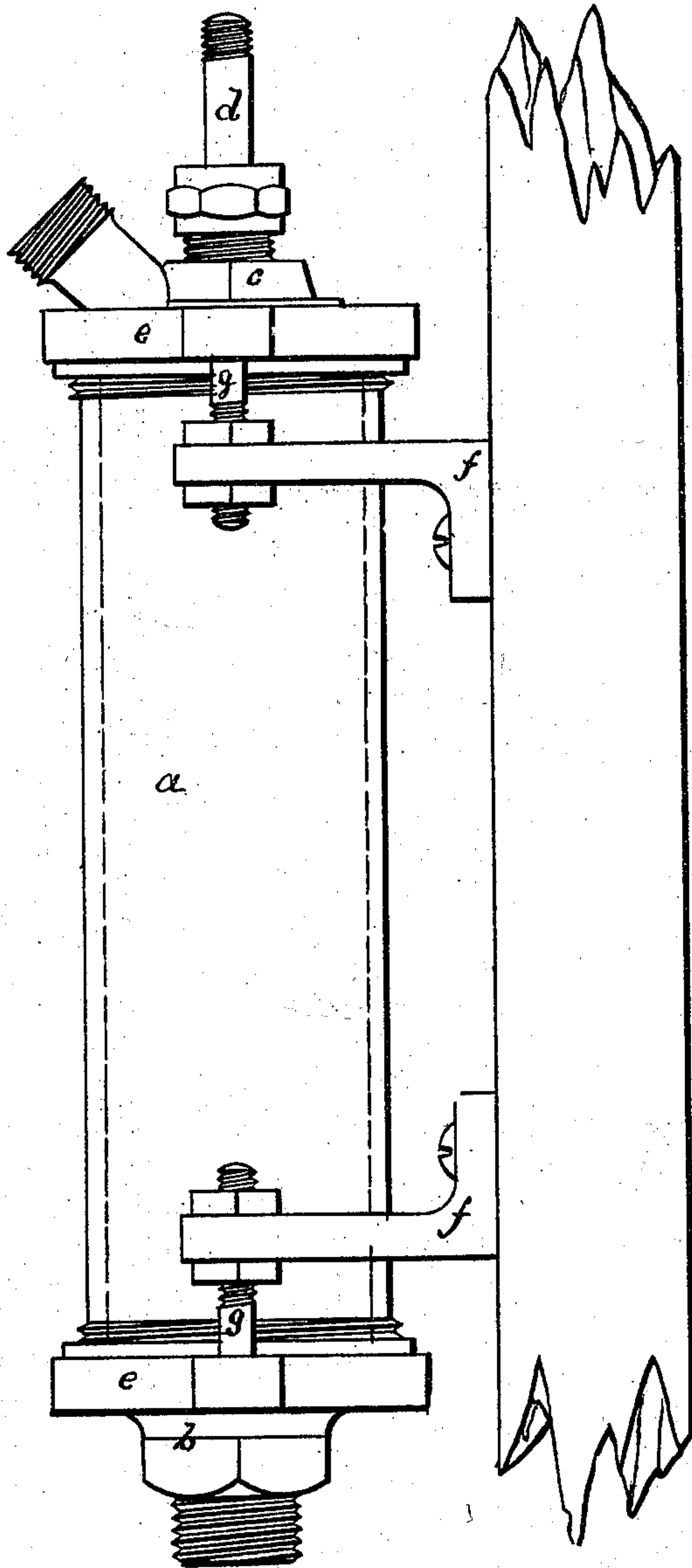


J. Bryan,

Beer Pump.

No. 100595.

Patented Mar. 8. 1870.



WITNESSES.

Wm. J. Day *Wm. Remble Hall*

INVENTOR.

James Bryan

United States Patent Office.

JAMES BRYAN, OF NEW-YORK, N. Y.

Letters Patent No. 100,595, dated March 8, 1870.

IMPROVEMENT IN PUMPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES BRYAN, of New York, in the county and State of New York, have invented a certain Improvement in Ale-Pumps; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, and to the letters of reference marked thereon.

The said improvement relates to pumps that are employed for drawing beer, and may also be used for porter and cider and other liquors in which there is likely to be a development of acid.

When any of such liquors are left standing in an ordinary brass-pump, the formation of verdigris is not only detrimental to health by its contact and solubility in the liquid, but the friction of the piston within the barrel of the pump detaches the poison and causes it to be delivered with the liquor in that highly concentrated form which, if drank, is correspondingly deleterious and perhaps fatal.

The object of my invention is to make a working-barrel or cylinder in which there can be no formation of verdigris, and to make all the internal fittings or working portions of the mechanism with which the liquid comes in contact of metal that is practically incorrodible. For this purpose,

My invention consists in making the working-cylinder of glass, and the other parts that are necessarily affected by and with the fluid that is to be passed through the pump of a composition commonly known as "white metal," and made of tin and antimony, with only sufficient copper to harden it for the purposes for which it may be intended, and in combining the parts so made with iron clamps and brackets, by which the weight and the strain of working the pumps are entirely sustained.

The details of the construction and arrangement of the parts are more fully described in connection with the drawing.

To enable others skilled in the arts to which it appertains to make and use the said invention, I will proceed to describe its construction and operation with reference to the drawing.

The pump-cylinder *a* is made of glass, with screw-threads cut or molded at both ends.

Of the caps which screw upon the glass cylinder,

the bottom *b* is connected with the inlet-pipe, and is made of white metal and fitted with a similar valve.

The upper cap *c* is also of white metal and furnished with a similar stuffing-box and nozzle for the outlet-coupling.

The piston or plunger-box and its valve are made of the same character of metal, and are packed in the ordinary way, but as the metal heretofore described would not have sufficient strength to withstand the strain upon the comparatively small size to which the piston-rod *d* is restricted, I prefer to make it of brass or iron, encased with the white metal, so that it presents a practically incorrodible surface, and yet possesses sufficient strength for the purpose.

To sustain the weight and the force of working the pump without strain upon the white-metal caps, they are encased by iron clamps *e*, which are secured to the brackets *f* by the bolts *g*, that are fitted with nuts on both sides of each bracket, by means of which the position of the pump may be accurately adjusted.

The fastenings of the brackets, the packing, and the other portions of the pump and apparatus may be arranged in the usual manner, as the said improvement only relates to the construction of the glass and metallic portions of the pump that have been described in such a way that they may be made of practically incorrodible material, and possess sufficient strength to be used for the purpose required.

I do not claim simply a glass pump-cylinder, nor the incorrodible fittings, but the said invention consists in combining the pump with such a cylinder and fittings, so made with iron or other similar clamps that take the entire strain, and by which they may be suspended from the brackets by adjustable bolts in the manner described and illustrated in the drawing.

I claim as my invention—

The combination of the glass cylinder with the incorrodible fittings and iron clamps, supported on brackets by adjustable bolts, and constructed and arranged substantially in the manner and for the purpose described.

JAMES BRYAN.

Witnesses:

DANL. J. DAY,
WM. KEMBLE HALL.