No. 621,789. Patented Mar. 28, 1899.

G. P. BUMP.

WINDMILL REGULATING PUMP.

(Application filed Sept. 20, 1898.)

(No Model.)

Fig. 1.

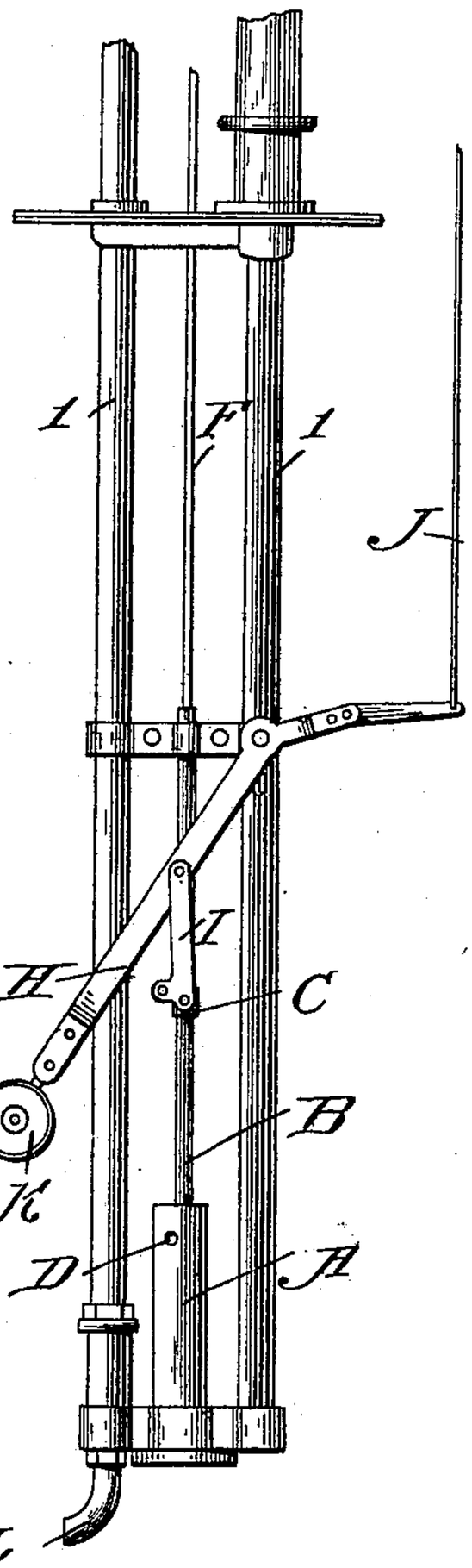
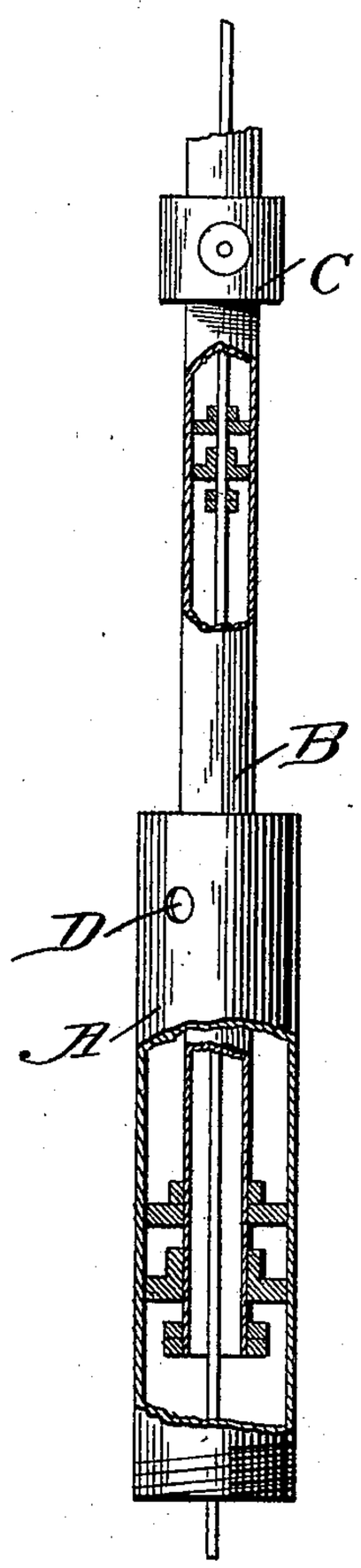


Fig. 2.



Attest
F. L. Middleton
C. Swinnerton

Inventor
Geo. P. Bump
by Ellis Spear
Atty.

UNITED STATES PATENT OFFICE.

GEORGE P. BUMP, OF SOUTH SUPERIOR, WISCONSIN, ASSIGNOR OF ONE-HALF TO WARREN HOWARD, OF MARSHALLTOWN, IOWA.

WINDMILL-REGULATING PUMP.

SPECIFICATION forming part of Letters Patent No. 621,789, dated March 28, 1899.

Application filed September 20, 1898. Serial No. 691,453. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. BUMP, a citizen of the United States, residing at South Superior, county of Douglas, and State of Wisconsin, have invented certain new and useful Improvements in Windmill-Regulating Pumps, of which the following is a specification.

My invention relates to a regulating windmill-pump of that class in which the windmill is thrown into and out of action by the variation of pressure in the pipe system.

The object of this invention is to provide a regulating-pump of which the parts are of cheap, simple, and durable construction and easily assembled, to provide a regulating-pump in which the packing-glands will not leak when heavy pressure comes on them and do not need to be kept so tight as to interfere with the plunger of the pump in which the regulating-cylinder is placed, so that sand or sediment cannot settle in the bottom and clog it and stop its working or break it, and in which the piston and working parts are placed centrally of the pump-stand, so as to avoid side strain on the pump.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the cylinder with parts broken away to show the working parts. Fig. 2 is an elevation showing the regulating device attached to an ordinary three-way pump.

In the drawings, *l l* are the pump members, and A is the regulating-cylinder supported between them.

B is a piston and cylinder combined working in the cylinder A, and C is a coupling attached to a connecting-link I, connecting with a lever H, which is attached to a wire J, which extends up to and controls the mill.

K is a weight to pull mill in gear and hold it while water-pressure is off.

L is the delivery-pipe extending to the ordinary tank, (not shown,) and F is the pump-rod extending through the regulating cylinder and piston to the pump-cylinder. (Not shown.)

D is an outlet-opening designed on the extreme rise of the piston under excessive pressure to permit the escape of the water and prevent bursting.

In the operation of the device when the water ceases to flow through pipe L, with the mill still running, the water-pressure causes combined piston and cylinder B to rise, which being attached to lever H rocks this and pulls down on J and throws the mill out of gear, and as soon as the water-pressure is released weight K forces the water out of the cylinder A and slacks the wire J and lets the mill go back in gear.

By this arrangement it will be observed that the regulating-cylinder is arranged centrally of the pump and is effectively braced by the side members thereof, dispensing with any additional outside castings as are ordinarily used, the strain on the pump is lessened, and a guide is provided for the pump-rod.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent of the United States, is—

1. In a windmill-regulator, the combination with the pump, of a regulating-cylinder connected therewith in line with the pump piston-rod, and a piston working in said cylinder with connections to the windmill, the said pump piston-rod passing through said regulating piston and cylinder, substantially as described.

2. In a windmill-regulator, the combination with the pump, of a regulating-cylinder connected therewith in line with the pump piston-rod, and a hollow piston working in said cylinder with connections to the windmill, the said pump piston-rod passing through said regulating piston and cylinder, substantially as described.

3. In a windmill-regulator, the combination with the pump having the side members of the regulating-piston arranged between the same, the hollow piston working in said cylinder, the weighted rocking lever pivoted to one of the pump members, a connection between said lever and the windmill, and a connection between the lever and the hollow piston, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE P. BUMP.

Witnesses:
JAS. S. HERMANN,
GEO. H. ANDREW.