C. HILDEBRAND.

MEASURING PUMP.

No. 188,905. Patented March 27, 1877.

Fig. 1.

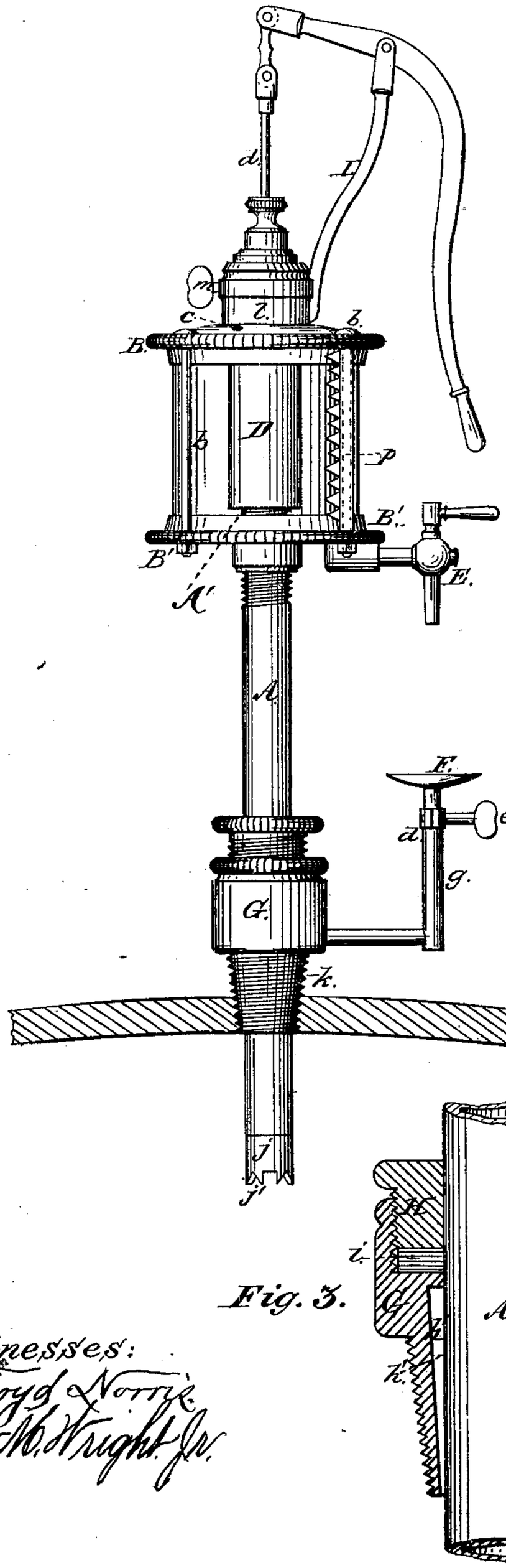

Fig. 2.

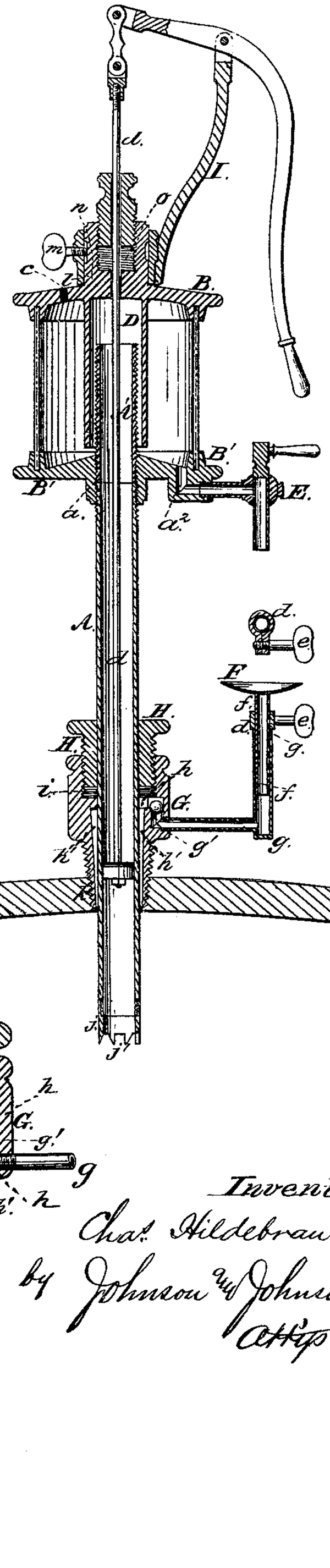

Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES HILDEBRAND, OF YOUNGSTOWN, OHIO.

IMPROVEMENT IN MEASURING-PUMPS.

Specification forming part of Letters Patent No. **188,905**, dated March 27, 1877; application filed October 26, 1876.

To all whom it may concern:

Be it known that I, CHARLES HILDEBRAND, of Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Measuring-Pumps, of which the following is a specification:

The measuring-reservoir is supported directly upon the pump-stock, which terminates near the top of said reservoir.

The top head of the measuring-reservoir caps a sleeve, which is of greater diameter than the pump-stock, over which it extends to within a short distance of the bottom head of said reservoir, while the pump-stock, as stated, terminates within a short distance of the said top head, leaving an annular way for the oil into the reservoir.

This prevents the oil from foaming, since its flow is confined in the narrow annular passage between the stock and the sleeve. The oil escapes at the bottom of the sleeve and rises as it is pumped.

The pump-stock is in two sections, which meet in a central threaded socket of the bottom head of the reservoir, and thus means are afforded for properly supporting and sealing the reservoir upon the pump-stock.

The bung through which the pump-stock passes supports the dripping-pan and vessel-carrier, the connection being a pipe, which carries back the drippings into the can or barrel.

A valve is arranged to prevent the escape of gas from the barrel or can through the drip.

The bung is chambered to receive a metallic packing-collar and a washer for the pump-stock, or any other suitable packing, which packing rests upon the annular seat forming the bottom of the chamber.

By this construction I obtain a seat for both the pump-stock and the drip. An annular chamber is also formed by the pump-stock, and the interior of the bung forms a communication between the drip and the barrel, around the pump-stock.

The measuring-scale index is a tube, which embraces one of the tension screw-rods of the reservoir-heads, the scale being upon a serrated strip projecting from said tube.

The drip is mounted upon a tube, which is made adjustable within the bung-hole connection by means of a supporting-clamp fixed by a set-screw, so as to render the drip-tube extensible within the connecting-pipe.

In the accompanying drawings, Figure 1 represents an elevation of my improved oil-measuring pump, and Fig. 2 a vertical section of the same; and Fig. 3, an enlarged section of the bung and drip connection.

The measuring-reservoir may be made of metal, and be provided with a graduated glass, or its cylindrical portion may be of glass, its heads B B′ being of metal. When of glass, the indicating-scale may be cut in the glass, or, as shown, it may be a serrated flanged tube, *p*, embracing one of the rods holding the heads B B′ together.

This reservoir is supported directly upon the pump-stock A, and incloses it in the following manner: The pump-stock is in two parts or sections, A A′, threaded at their adjacent ends, both of which meet and become one in a threaded central hubbed socket, *a*, of the bottom head B′ of the reservoir.

When the cylinder of this reservoir is of glass, the metallic heads B B′ are secured together by screw-threaded tension-rods *b b*, one of which carries the measuring-scale, as above stated.

The section A′ of the pump-stock is within the reservoir, but extends upward only within a short distance of the head B, and, when pumping, the oil flows over and down its outer sides to the bottom of the reservoir.

To prevent the foaming which would result from such a fall, I extend a sleeve, D, from the top head B down over the section A′, to within a short distance of the bottom of the reservoir. This sleeve D is of greater diameter than pump-stock section A′, and, in combination with said section, forms a narrow annular passage for the oil, which retards the tendency to foam, and empties the oil at the bottom of the reservoir, from whence it rises to the required index as it is pumped.

The upper head B of the reservoir has a vent, *c*, with which there can be connected, if necessary, a double-acting valve.

The lower head B′ is perforated at a^2, for the reception of the spigot E and its connection. From this spigot the oil is drawn off into the ves-

sel to receive it, which rests upon the dripping-pan F, which is made adjustable by a clamp, *d*, and screw *e*, the clamp projecting and supporting the dripping-pan pipe-stem *f* upon the pipe-connection *g*, which is an elbowed pipe entering the bung G. At the entrance of the pipe *g* into the bung is a valve, *g'*, to prevent the escape of gas from the barrel, which, in this instance, is an automatic ball-valve. Any suitable valve, however, may be used. The oil flows from said pipe *g* through the opening *h* in the interior wall of the bung, from whence it flows into an annular chamber, *h'*, between said inner wall and the pump-stock, down into the barrel.

Said bung is chambered to receive a packing-nut, H, and a washer, *i*, to effectually seal the bung-hole-pump stock connection.

The bottom of the pump-stock, which is preferably made in the form of a detachable section, *j*, as shown, is provided with short spurred or armed legs *j' j'*, which, when the pump-stock is inserted into the barrel through the bung-hole, strike the opposite side of the interior of the barrel, and serve to "step" or steady the instrument, while the free ingress of the liquid into the pump is permitted. This detachable section carries the lower pump-stock valve.

The entering end of the bung has a tapering screw-threaded perimeter, *k*, which permits of a tight joint being screwed into the wood.

The pump itself is of any ordinary or preferred construction; but the pump-handle is preferably fulcrumed on arm I, secured rigidly to a collar, *l*, fastened, by set-screw *m*, to a cylindrical projection, *n*, of the head.

The piston-rod J, which enters the pump-stock at this point, has a suitable metallic packing, *o*, screwing down into said cylindrical projection.

I claim—

1. The combination of the meeting sections A A' of the pump-stock and the head B' of the reservoir, provided with a central hubbed screw-socket, *a*, whereby the said reservoir incloses and is supported directly upon the pump-stock, substantially as described.

2. The combination of the pump-stock section A', the sleeve D, and the reservoir, forming a narrow flowway for the oil into the reservoir to prevent foaming, substantially as described.

3. The tubular index-scale *p*, secured upon and by the tension-rod *b*, in combination with the reservoir, as and for the purpose set forth.

4. The bung G, having the annular chamber *h'* formed therein below its packing *i*, and provided with the packing-nut H, and the valved connection with the drip-pan, as and for the purpose herein set forth.

5. The combination of the dripping-pan F with its pipe-connection *g* and the annular chamber of the bung G of an automatic valve, *g'*, to prevent the escape of gas from the barrel through the drip-openings, substantially as set forth.

6. The combination of the dripping-pan pipe-stem *f* and the pipe-bung connection *g* of a supporting-clamp, *d*, and set-screw *e*, whereby the drip-pan is made extensible and is supported.

7. The combination of the chambered bung G, the pump-stock A, nut H, and washer *i*, whereby the pump-stock connection is sealed, substantially as set forth.

In testimony whereof I have affixed my signature in the presence of two witnesses.

CHARLES HILDEBRAND.

Witnesses:
T. L. CARROLL,
JOHN BRENNER.