

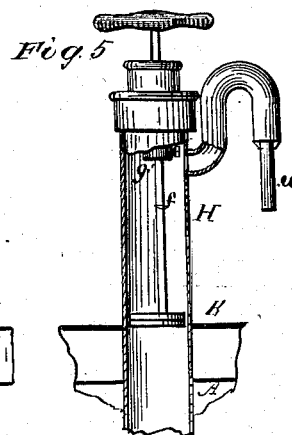
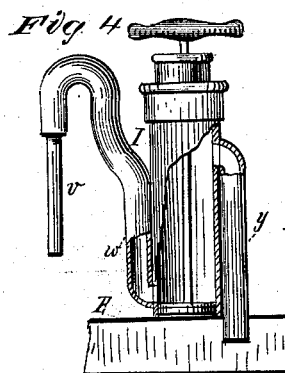
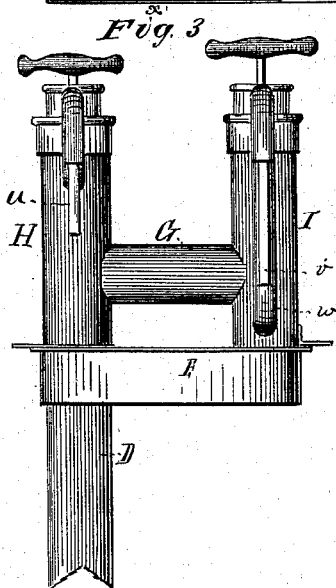
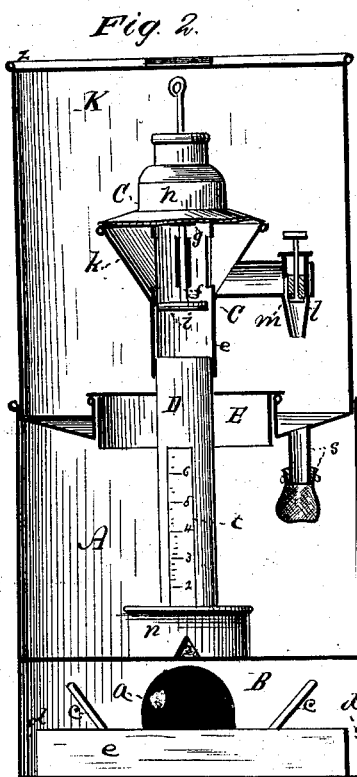
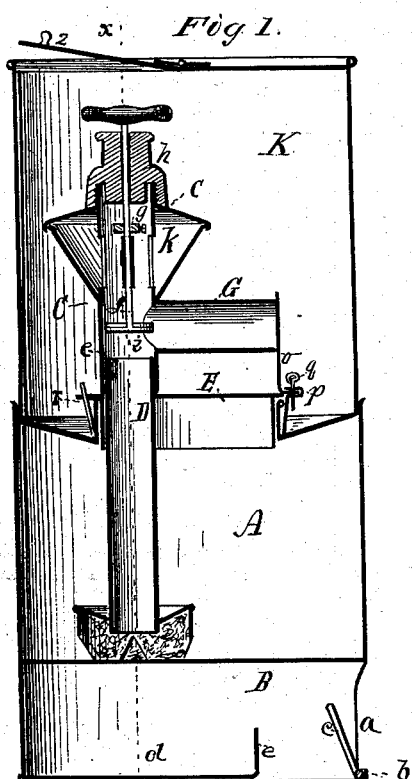
(No Model.)

E. F. WILDER.

APPARATUS FOR STORING, DRAWING, AND MEASURING OILS.

No. 261,888.

Patented Aug. 1, 1882.



witnesses
A. H. Krause
~~and~~
A. S. Brown

Eli F. Wilder *Inventor,*
By J. S. Brown,
his attorney.

UNITED STATES PATENT OFFICE.

ELI F. WILDER, OF GREENVILLE, NEW HAMPSHIRE.

APPARATUS FOR STORING, DRAWING, AND MEASURING OILS.

SPECIFICATION forming part of Letters Patent No. 261,888, dated August 1, 1882.

Application filed September 14, 1880. (No model.)

To all whom it may concern:

Be it known that I, ELI F. WILDER, of Greenville, in the county of Hillsborough and State of New Hampshire, have invented an Improved Apparatus for Storing, Drawing, and Measuring Oils and other Liquids; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a central vertical section of the apparatus arranged for measuring and drawing liquids in different quantities for general use; Fig. 2, a vertical section of the same at right angles to the view in Fig. 1, and taken in a plan indicated by the line *xx* in the said figure; Fig. 3, a side view of the pumps and their support arranged for the special purpose of emptying and refilling small oil-cans or oilers; Fig. 4, a side view of one of the pumps shown in Fig. 3, a portion of it being in vertical section, the view being at right angles to the view in Fig. 3; Fig. 5, a side view and partial section of the other pump shown in Fig. 3, the view also being at right angles to that view.

Like letters designate corresponding parts in all of the figures.

In the drawings, A represents the oil-reservoir or storage-receptacle for the liquid to be contained in the apparatus. This may have any desired capacity; but as this apparatus is intended to be a portable one—that is, one that is conveniently formed to be readily moved from place to place—I do not contemplate making very large sizes on this plan. This reservoir or main body of the apparatus may be made of sheet metal, and inclosed in wood or not, as may be preferred, or according to the use to which the apparatus is to be applied. Since, then, it is not intended to make the apparatus large or heavy, in most cases it will be found desirable to have a ready means of holding it down and steadying it when lifting the pump-piston in drawing and measuring, especially when it is nearly emptied, and is then comparatively light. For this purpose I locate the reservoir A somewhat above the floor and support it by a low base, B, inclosing a space at the bottom. In one side of this base I form a foot-opening, *a*, large enough to insert the front part of the foot, with a bar, *b*, underneath the same on which the foot rests or bears in using the pump, and thereby steadies the apparatus. This bar may be re-en-

forced by a rod, *c*, soldered or otherwise secured around the lower part of the foot-opening. Back of the foot-opening *a*, in the space inclosed by the base, is a receptacle, *d*, protected at the front part by a raised guard, *e*, as shown in Figs. 1 and 2. This receptacle furnishes a convenient place for putting away small oil-cans, or other things convenient to carry with the apparatus but not desirable to have about loose.

This apparatus is intended for general purposes of drawing and measuring, say, by the pint, quart, and gallon, as for storing and selling petroleum. It is also designed for use in manufactories, or where small hand-oilers are to be filled therefrom. In order to provide for this double use or capability, the apparatus is provided with pumps of different construction according to the use, and these pumps are used interchangeably in the apparatus—one replacing the others according to the purpose at the time. Their construction and arrangement are substantially as follows:

The pump C (shown in Figs. 1 and 2) is intended for the purpose of measuring in different quantities, as by the gallon, quart, and pint. The piston-rod *f* has an adjustable stop, *g*, thereon, which strikes the top or cap *h* of the pump, which screws around but fits down in the pump-body and limits the upward stroke of the piston. The downward stroke of the piston *i* is intended to be uniform, and may be limited by any stop or obstruction to the piston itself or outer piston-rod or handle outside. By this means the amount to be drawn is determined by the number of full strokes of the piston. Thus it may be so adjusted as to draw a quart at each stroke, in which case four strokes will draw a gallon. This feature of itself has been claimed by me in a former patent. In connection with this measuring-stroke of the piston I use an enlargement or “standing fountain” at the top of the pump-body, as shown by the conical enlargement *k* in the drawings. This holds as much liquid as may be measured at one time, so that the liquid may be raised and measured at once, leaving it to run out at the spigot *l* more gradually. The spigot is closed by a valve, *m*. The pump is removably mounted in the apparatus by having the lower end of its body *e* fit snugly over a fixed tube, D, which extends through the top or cover E of the reservoir A down to nearly the bottom of the reservoir, (generally

surrounded with a filter, *n*,) and the upper end of which projects far enough above the said cover to couple the pump thereto, and by having a fastening flange or projection, *o*, at one side fitting, as shown in Fig. 1, under a catch, *p*, and secured by a pin, *q*, or its equivalent. On removing this pin the pump can readily be lifted off from the apparatus. In connection with the pump thus removable (or irrespective of the removable feature, if desired) I employ a handle, *G*, which, with the construction shown, is not only attached to the body of the pump, but forms the connection between the same and the fastening-flange. This handle serves both to lift the pump by, and the whole apparatus when the pump is attached thereto, it being centrally arranged on the apparatus, as shown. Since this handle lifts by the cover *E* of the apparatus, the said cover, though removable of course to gain access to the interior of the reservoir, is fastened thereto by a fastening latch and hook, *r*, Fig. 1, one or more, or by some equivalent means. A drip-aperture and filter, *s*, catch the waste oil from the spigot in a groove or inclined portion of the top of the reservoir around the removable cover *E* and return it pure to the reservoir.

For convenience in knowing how much oil or other liquid there is at any time in the reservoir *A*, I locate a measuring-scale, *t*, Fig. 2, inside of the tube *D*, so that it can be seen when the pump is removed, the figures indicating the number of gallons or any other unit of measure desired. This scale might be on the outside of the tube *D*; but that would require the raising of the cover *E* to get sight of it, and then the height of the liquid would only be indicated by the line of wetting on the tube or scale.

For filling hand-oilers with a definite or measured quantity of oil I remove the pump *C* and employ a double pump, or, rather, two pumps, *H I*, as shown in Figs. 3, 4, and 5. The pump *H* directly replaces the pump *C*, and is coupled to the fixed tube *D* and to the cover *E* in the same manner or by similar means. This pump also has an adjustable stop, *g*, on its piston-rod *f* to measure the exact quantity of oil to be poured into the oiler applied at the spout *u*, the quantity measured being comparatively small and just enough to fill the oilers uniformly at one stroke of the piston. Thus not only is the exact quantity put into the oiler each time accurately known, but there is never any running over of the oiler to daub it or to make the measurement inaccurate. In order to effect this purpose completely, however, it is necessary that each oiler should be entirely emptied each time before refilling, it being very common to bring the oiler for filling before all of the old oil is used. This oil also may be more or less impure, and it is best to return it to the reservoir and refilter it. I therefore employ the additional pump *I* in connection with the pump *H* for emptying the oilers before refilling. It

has a long spout or tube, *v*, Fig. 4, for inserting into the oiler, reaching close to the bottom thereof, and this is connected by a passage or tube, *w*, with the body of the pump near the lower end, so that as the piston is raised its exhaustive action draws the oil at one stroke from the oiler. The next upward stroke of the piston lifts the oil previously drawn into the pump and discharges it through a pipe, *y*, which extends down through the cover *E* and discharges the oil into the reservoir. The two pumps *H I* are connected together by a handle, *G*, the same as above described as attached to the pump *C*, and serving the same purposes of both lifting the pumps and the whole apparatus.

When using the pump *C* for general measuring purposes I employ a cover, *K*, Figs. 1 and 2, to inclose and protect the pump and all parts above the reservoir *A*, and one half, *z*, of the top of this cover, located over the pump *C* and its spigot, is hinged to the other fixed half or part, so as to be lifted to get access to the pump without removing the whole cover. For the pumps *H I* to fill oilers a removable cover may be used, removed at day or when in use, and put on again at night.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. An oil or liquid storing apparatus provided with a chamber, *B*, below its reservoir *A*, inclosed except an opening to gain access to the inside, and with a receptacle shelf or bottom, *d*, therein, protected by a guard, *e*, at its open edge, substantially as and for the purpose herein specified.

2. In an apparatus for storing and drawing oils and other liquids, a fixed tube, *D*, extending upward from the reservoir above the cover thereof, and constructed to form part of a pump-body, adapted to have joined thereto one or more removable pumps, *C H*, the body part of which tightly fits the same, substantially as and for the purpose herein specified.

3. In an apparatus for storing and drawing oils and other liquids, a can-emptying pump, *I*, arranged in a vertical position, and provided with an outer drawing-tube, *v*, elevated sufficiently to pass a can or oiler beneath it, and of proper length to reach the bottom of the can inside thereof, with a tube or passage, *w*, leading from the upper end of the drawing-tube, near the top of the pump, down and into the pump-body near the bottom thereof, and with a discharge-pipe, *y*, leading from the pump-body near the top thereof, substantially as and for the purpose herein specified.

4. The combination of the handle *G*, the two pumps *H I*, and the cover or lid *E*, substantially as and for the purpose herein specified.

The foregoing specification signed by me this 27th day of June, 1877.

Witnesses: ELI F. WILDER.
JAS. L. CHAMBERLIN,
HENRY J. WHITNEY.