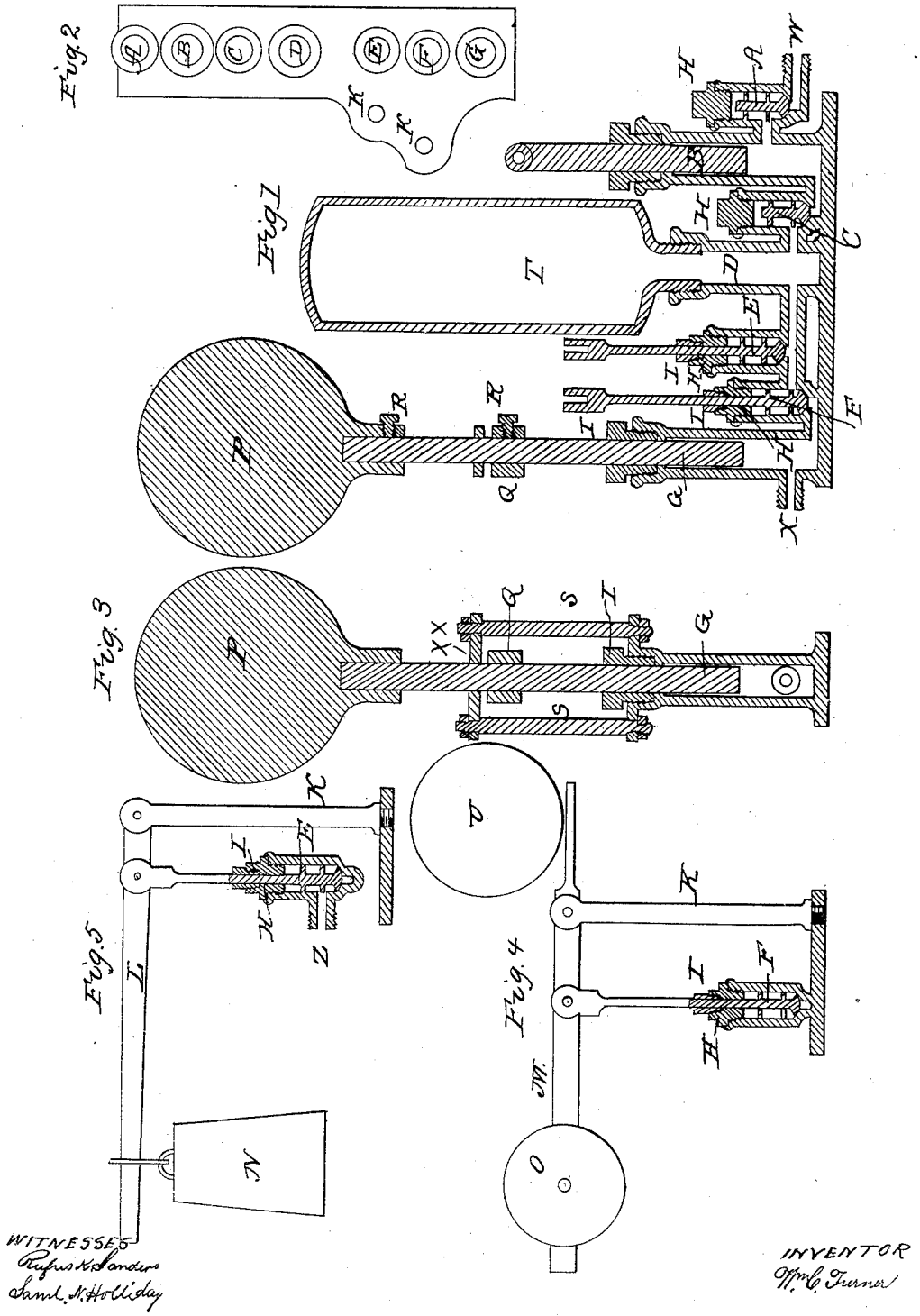
W. C. TURNER.

Liquid Measure.

No. 23,515. Patented April 5, 1859.



N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

WM. C. TURNER, OF ST. LOUIS, MISSOURI.

SYRUP-CHARGING APPARATUS.

Specification of Letters Patent No. 23,515, dated April 5, 1859.

To all whom it may concern:

Be it known that I, WILLIAM C. TURNER, of the city and county of St. Louis, in the State of Missouri, have invented a new and useful machine for supplying and measuring a regular uniform and definite supply of syrup or other liquids to bottles or other vessels under any desired pressure before, during, or after filling the same with any liquid or water surcharged with carbonic-acid gas, usually called "soda or mineral water," or any other liquid.

It is well known that in bottling soda or mineral water to be used as a beverage a sufficient supply of syrup is put into the bottle to render it palatable and in order to accomplish this much manual labor is necessary, a great deal of syrup is wasted, its quality much deteriorated by dust and insects. I have ascertained that all these evils may be obviated by using machinery to accomplish the result and I do hereby declare the following is a full, clear, and exact description of the machine I have invented and the construction and operation of the same, reference being had to the annexed drawings which are lettered to correspond with and constitute a part of this specification in which—

Figure 1 is a longitudinal elevation of the machine. Fig. 2 is a plan of bedplate showing the situation of valves and plungers. Fig. 3 is a transverse section of charging or measuring machine for syrup. Fig. 4 is a transverse section of charging valve. Fig. 5 is a transverse section of safety valve.

The nature of my invention consists in the use and combination of above as follows.

Fig. 1: B is a pump plunger attached to crank motion by steam or other motive powers. A receiving valve for syrup or other liquid. W pipe connecting with reservoir of liquid. C stop valve to prevent liquid returning to plunger when raising. D chamber connecting with air vessel T. E safety valve to permit surplus liquid over required measure to return to reservoir of liquid. F charging valve to connect with charger G. H H H H packing nuts to pack under collar. I I I I packing nuts to pack under nuts. P counterpoise on charger. R set screw collar by raising or depressing the same the quantity of liquid is increased or diminished. X X plate to connect stand bolts. R set screw for collar and counterpoise.

Fig. 2: A receiving valve. B plunger. C stop valve. D chamber to air vessel. E safety valve. F charging valve. G charging plunger. K stands for levers of valves.

Fig. 3: G charging plunger. K packing nuts. S S stand bolts. P counterpoise.

Fig. 4: K stand for lever. M lever. E charging valve. H packing nut. O weight to graduate and close charging valve. U counterweight on soda machine when corking or any other counterweight.

Fig. 5: K stands for lever. E safety valve. Z pipe for conveying surplus charge to reservoir. L lever. N counterpoise.

In working the machine when plunger B is raised syrup or liquid enters through W raises A passes into vacuum under B which forced down shuts A and opens C liquid is forced through to D thence to E which is raised by counterpoise U of soda-bottling machine or any other weight striking lever M′ from which to charger under G which is raised thereby until set screw collar strikes plate X X thence through X to bottle or vessel to be charged. By regulating set screw R the quantity passing through X is controlled, any excess over desired quantity being returned to reservoir through safety valve E. The machine may be changed in various ways and produce the desired effect the air vessel may be dispensed with and a cylinder with piston head and rod substituted or the counterpoise on charger may be dispensed with and spring or lever and weight used or the supply pump may be detached and used for several charges from branch pipes or the supply pump may be dispensed with by attaching charger to reservoir of liquid at a height sufficient to raise counterpoise.

Therefore what I claim as my invention and wish to secure by Letters Patent of the United States is—

The construction of a machine so arranged that a uniform and definite measure of any liquid may be supplied to bottles or any other vessel before, during, or after filling the same with soda, mineral or water sur-

charged with carbonic acid gas or other gas or any other liquid by means of pump air vessel safety valve charging valve or charger constructed and applied substantially as described in above specifications.

In testimony whereof I have hereunto subscribed my name in the presence of two witnesses on the eleventh day of October A D eighteen hundred and fifty eight.

WILLIAM C. TURNER.

Witnesses:
G. E. KENWORTHY,
L. C. WAITE.