

(No Model.)

A. KREMPER.

APPARATUS FOR DRAWING OFF LIQUIDS CONTAINING CARBONIC ACID.

No. 578,884.

Patented Mar. 16, 1897.

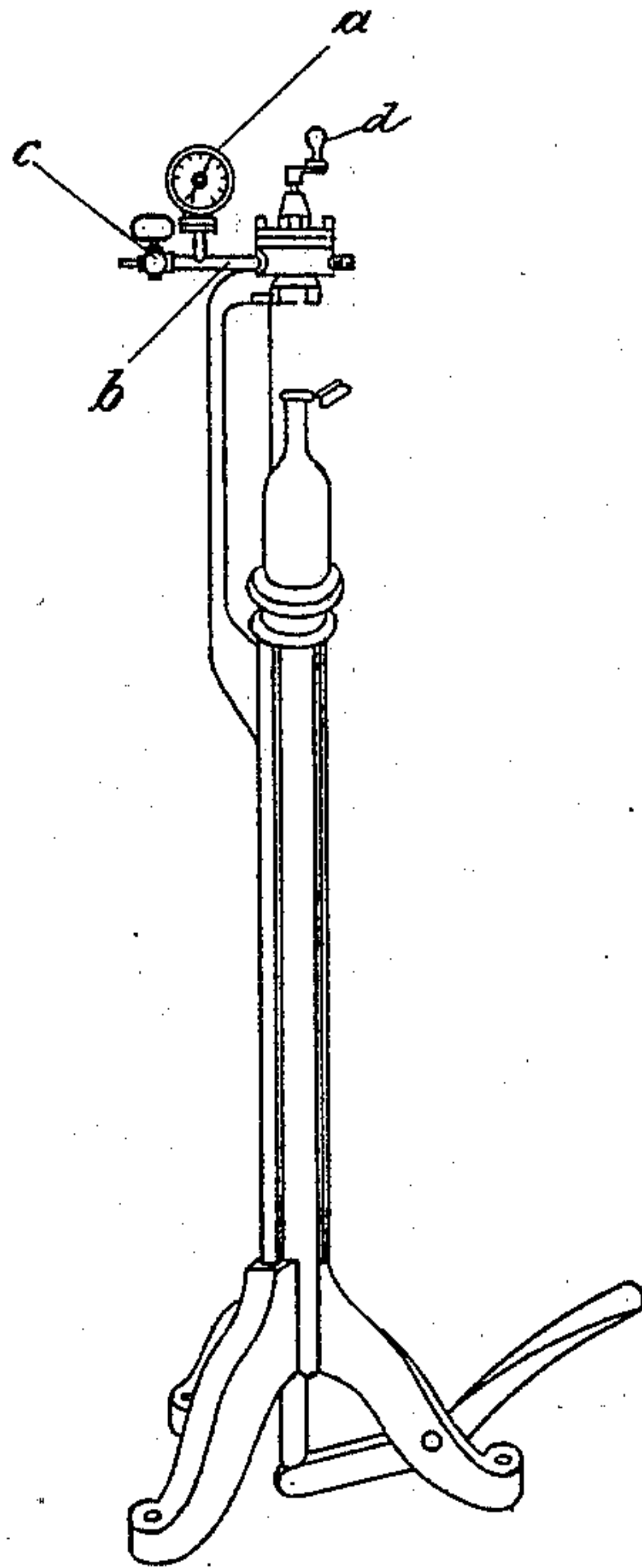


Fig. 1.

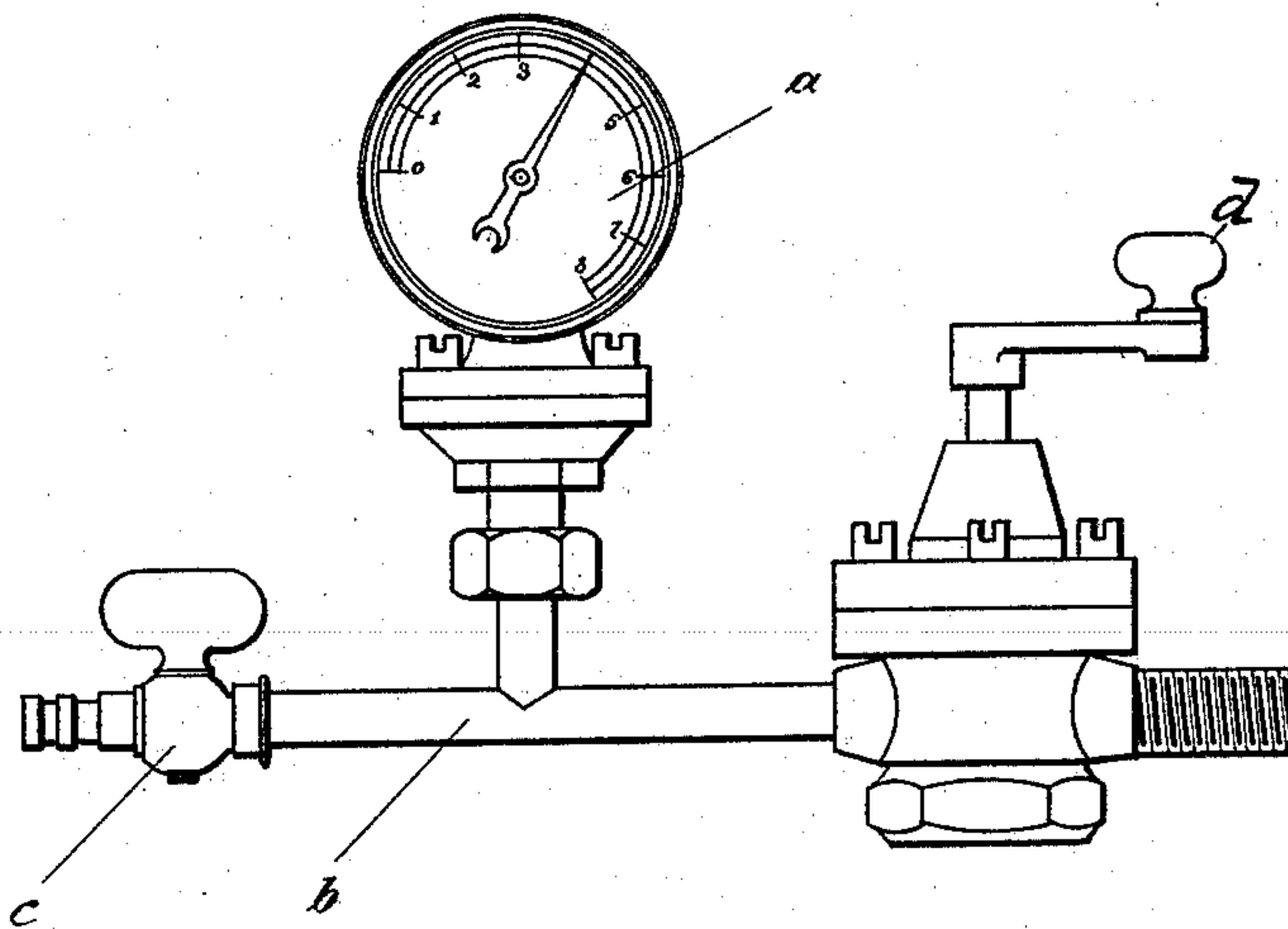


Fig. 2.

Witnesses  
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# UNITED STATES PATENT OFFICE.

AUGUST KREMPER, OF Breslau, GERMANY.

APPARATUS FOR DRAWING OFF LIQUIDS CONTAINING CARBONIC ACID.

SPECIFICATION forming part of Letters Patent No. 578,884, dated March 16, 1897.

Application filed December 13, 1895. Serial No. 572,071. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUST KREMPER, seltzer-water manufacturer, of 32 Sommerstrasse, Breslau, Province of Silesia, Kingdom of Prussia, German Empire, have invented new and useful Improvements in Apparatus for Drawing Off Liquids Containing Carbonic Acid, of which the following is a specification.

Hitherto it has been the custom in filling bottles with carbonic-acid liquids to measure the pressure in the collecting vessel, from which the liquid was conveyed to the bottles, by means of a manometer connected with the vessel in question. It was, however, only possible to determine the pressure existing in the space above the liquid contained in the vessel. This can, however, be considerably higher under certain conditions, particularly in cases of inadequate cooling, than the tension present in the liquid itself. When a higher temperature prevails, only a small quantity of the carbonic-acid gas may be absorbed by the liquid, when the carbonic-acid gas will collect in the free space over the liquid, thus causing the gas-pressure in the collecting vessel to be very considerable, the pressure in the liquid itself being at the same time only slight.

The object of the present invention is the arrangement of a filling-head serving to determine the tension of the liquid contained in the bottle. To this end it is necessary, first, to firmly shut off the bottle and its contents from the collecting vessel; second, to release the pressure over the liquid in the bottle corresponding to the pressure in the collecting vessel immediately after filling, and, third, to then measure the pressure developed from the liquid. To this end the new filling-head has a closing contrivance between the bottle and the collecting vessel, a manometer

connected with the upper part of the bottle, and a release-cock for the pressure prevailing above the liquid.

Figure 1 shows a filling apparatus for bottles with suitable stoppers provided with the new filling-head, and Fig. 2 the filling-head itself.

The cock *d* serves for shutting off the contents of the bottle from the collecting vessel or mixing-cylinder and is so arranged that when the way to the mixing-cylinder is cut off by it the upper part of the bottle is connected by means of the pipe *b* with the air-outlet cock *c* and the manometer *a*. On the bottle being filled the connection between the bottle and the mixing-cylinder is closed, the cock *c* opened, and the pressure over the liquid in the bottle released. Thereupon the cock *c* is closed and some carbonic acid is then developed from the liquid together with the tension in the liquid. The tension can be read upon the manometer *a*.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

In an apparatus for drawing off liquids containing carbonic acid the combination of a filling-head having a closing contrivance between the bottle and the collecting vessel, with a manometer connected with the upper part of the bottle, and with a delivery-cock for the pressure prevailing above the liquid; as and for the purpose set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

AUGUST KREMPER.

Witnesses:

EWALD BÖEHM,  
HERRMANN BARTSCH.