

No. 672,993.

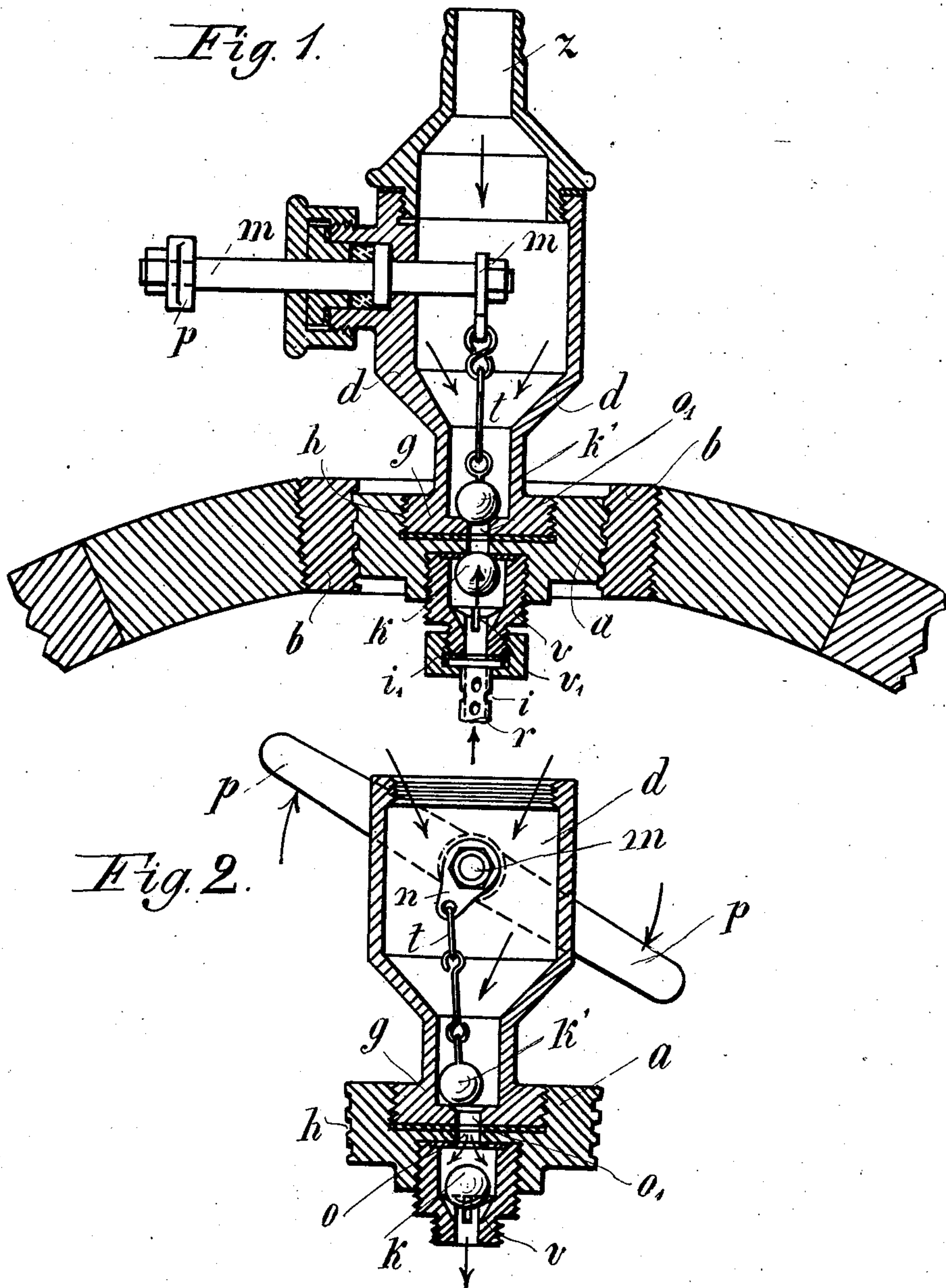
Patented Apr. 30, 1901.

P. VOLLMANN.

MEANS FOR SUPPLYING CARBONIC ACID TO CASKS.

(Application filed Aug. 17, 1900.)

(No Model.)



Witnesses:

Stefan Wirtgen
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att'y

UNITED STATES PATENT OFFICE.

PAUL VOLLMANN, OF ALTENBURG, GERMANY.

MEANS FOR SUPPLYING CARBONIC ACID TO CASKS.

SPECIFICATION forming part of Letters Patent No. 672,993, dated April 30, 1901.

Application filed August 17, 1900. Serial No. 27,222. (No model.)

To all whom it may concern:

Be it known that I, PAUL VOLLMANN, a subject of the Emperor of Germany, residing at Altenburg, Saxe-Altenburg, Germany, have invented certain new and useful Means for Supplying Carbonic Acid to Beer-Transport Casks, of which the following is a description.

The present invention consists of means for supplying carbonic acid to beer-transport casks with as little loss of the acid as possible.

In order to render the present specification easily intelligible, reference is had to the accompanying drawings, in which similar letters of reference denote similar parts throughout both views.

Figure 1 is a vertical section through the apparatus, and Fig. 2 a similar section taken along a vertical plane at right angles to that of Fig. 1.

The metal plug *a* of the cask is screw-threaded into the frame *b* and provided with an opening *o* at about the center thereof and with an interiorly-threaded recess at the outer side, as at *h*. At the inner side of the plug *a* a recess having an interior thread is also provided, into which the housing *v* for a back-pressure ball or other valve *k* is screwed. This housing *v* has an opening to the interior of the cask, which is provided with a tube *r*, having perforations *i* and secured to the said housing by means of a cap-nut *i'*. This tube extends a suitable distance into the contents of the cask to distribute the carbonic acid into the beer therein. When the valve *k* is opened, the ball rests on suitable ribs *v'*, provided to allow the carbonic acid entering to have free passage. As soon as the outside of the valve is relieved of pressure the ball *k* will close the orifice *o* in the plug, owing to the excess of interior pressure.

In order to supply the carbonic acid to the interior of the cask, the valve-housing *d*, having ball-valve *k'* therein, is screwed into the recess *h* of the plug. This valve-housing is provided with an upper nozzle *z*, to which the carbonic-acid receptacle is attached. The ball-valve *k'* is operated positively in one direction by means of the lever-arm *p*, attached to the end of a spindle *m*, mounted to turn in the housing *d* and having a short arm *n* at its end within the housing, which is connected by

means of a chain *t* to the ball *k'*. When the lever *p* is turned, it turns the spindle *m* and lifts the ball *k'* off its seat, as indicated at Fig. 2. The pipe to the carbonic-acid receptacle is fixed to the housing *d* at *z*.

The device operates in the following manner: When it is required to supply fresh carbonic acid to the cask, the valve-casing *d* is screwed into the orifice *h* of the plug *a* and the ball *k'* lifted off its seat by means of the lever *p*, with its connections *m*, *n*, and *t*. The carbonic acid forces the valve *k* down, owing to the excess of pressure, and flows into the pipe *r*, being distributed in the beer. As soon as the supply is to be cut off—i. e., after the beer has been sufficiently charged—the housing *d* is unscrewed, when the interior pressure will hold the ball *k'* down on its seat, and as soon as the housing *d* is removed the valve *k* will be forced up against its seat in the housing *v* by the pressure within the cask, which will no longer be overcome by the excess of pressure from the carbonic-acid receptacle.

From the foregoing description it will be evident that in affixing and taking off the valve-housing *d* very little carbonic acid will be lost, since only the small quantity between the two ball-valves can escape.

I claim as my invention—

The combination of a metal cask-plug having a valve-housing screwed into its interior face, within the cask and a valve therein adapted to be closed by excess of interior pressure, a valve-housing adapted to be screwed into the exterior of the cask-plug and an opening through the said plug to establish communication between the said housings, means for feeding carbonic acid to the exterior housing, a valve in the bottom of the latter, a spindle mounted to rotate in the said outer housing and means for turning the same, an arm thereon inside the housing and means for connecting the same to the valve of the said exterior housing in the manner and for the purpose substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

PAUL VOLLMANN.

Witnesses:

H. SACH,
RUDOLPH FRICKE.