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ADOLPH KOEGLER.

Apparatus for Closing Barrels and Casks.

No. 122,177.

Patented Dec. 26, 1871.

Fig. 1.

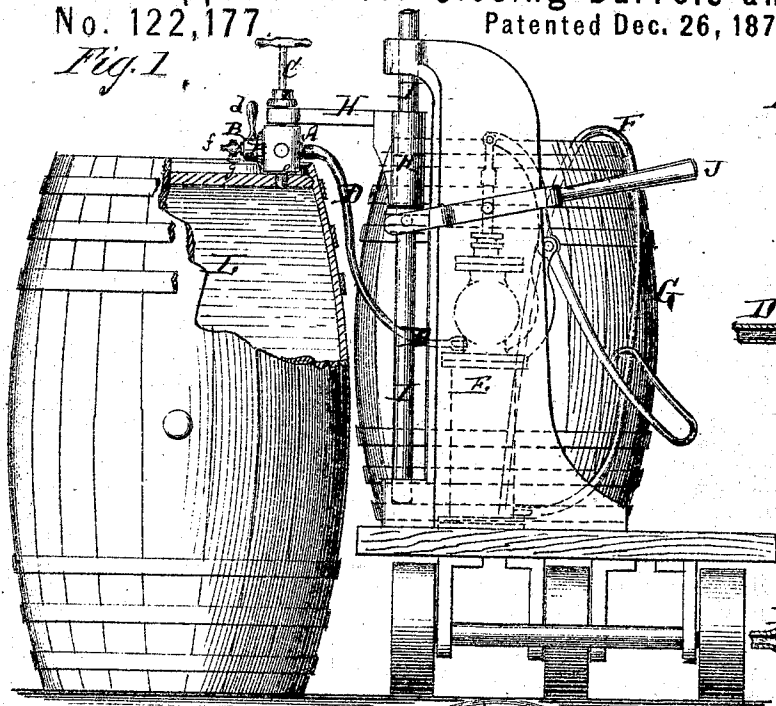


Fig. 2.

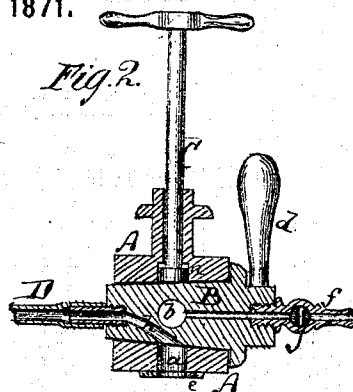


Fig. 3.

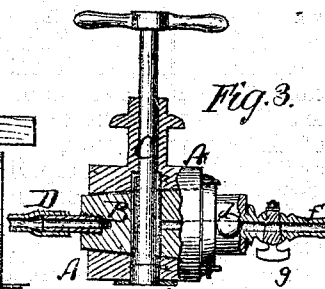


Fig. 4.

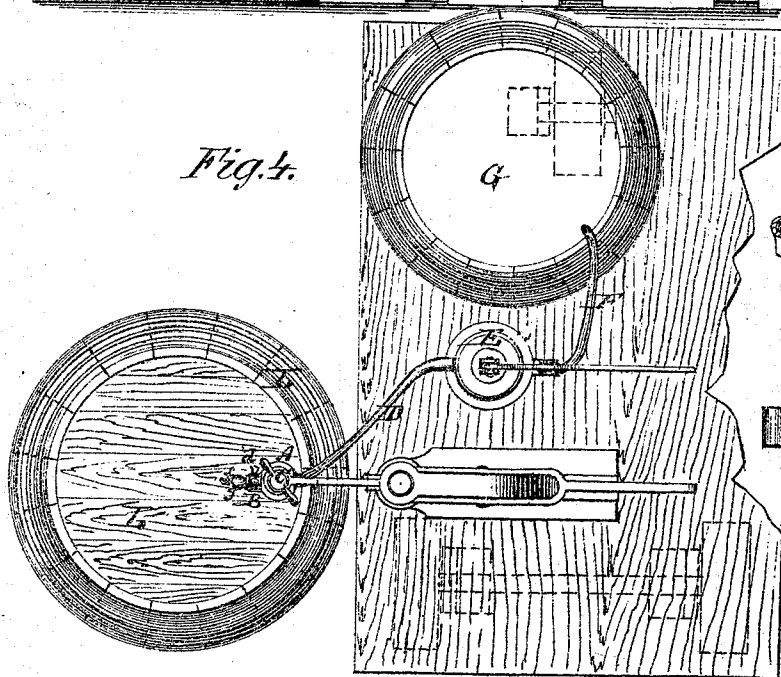


Fig. 5.

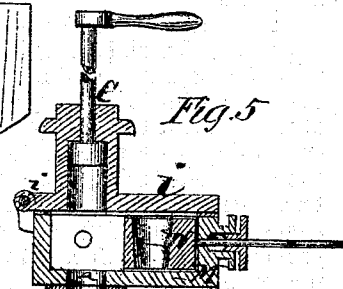
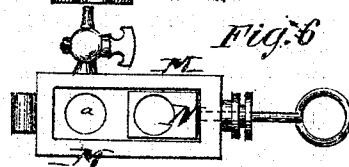


Fig. 6.



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UNITED STATES PATENT OFFICE.

ADOLPH KOEGLER, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN APPARATUS FOR CLOSING BARRELS AND CASKS.

Specification forming part of Letters Patent No. 122,177, dated December 26, 1871.

Specification describing a certain Improved Apparatus for Opening and Closing Beer-Barrels and Casks and Injecting Finings, &c., invented by ADOLPH KOEGLER, of Newark, in the county of Essex and State of New Jersey.

Figure 1 represents a side view, partly in section, of my improved apparatus. Figs. 2 and 3 are detail vertical sections on an enlarged scale of the reversible plug for admitting the fining and tap. Fig. 4 is a top view of the apparatus. Fig. 5 is a vertical section of a modification of the device placed on the barrel. Fig. 6 is a top view of the same.

Similar letters of reference indicate corresponding parts.

This invention has for its object to provide an apparatus for removing barrel-taps, injecting into the barrels suitable liquid or matter, and then reclosing the barrels. In breweries and other places it frequently occurs that the barrels containing fresh or other beer, ale, or beverage, should, after having been closed for a specified term, be reopened and charged with liquids, gases, or "finings," whereby their quality is improved or their character finally determined. My invention consists in the new arrangement of a portable apparatus whereby the tap can be forced into the barrels, a connection established between the opened barrels and an injecting-pump, and the barrels finally retapped. The device is also constructed with the view of permitting the escape of gases or liquor from the barrels if desired.

A in the drawing represents a block of suitable shape perforated horizontally and vertically through the middle. Through its horizontal opening is fitted a conical plug, B, which intercepts the vertical passage *a*, as shown in Fig. 2. The conical plug B has a transverse passage, *b*, which can be brought in line with the vertical passage *a* of the block A, as in Fig. 3, in which case a plunger, C, which enters the upper end of *a*, can be forced clear through the plug and block. When, however, the plug is turned, as in Fig. 2, to bring the passage *b* in a horizontal position, the plunger C will be confined in the upper part of the passage *a*. The plug B has a handle, *d*, by means of which it can be turned into the two positions above referred to. The block A has preferably an elastic washer or plate, *e*, secured to its bottom, around the lower end of the passage

a, to make it set tight on the barrel. From one end of the plug B projects a pipe, *f*, which communicates with the passage *b*, and contains a cock, *g*. The other end of the plug B connects with an elastic tube, D, which extends to a pump, E. The tube D communicates with a passage, *h*, of the plug, that terminates in line with the passage *a* when the plug is turned to bring the passage *b* at right angles to *a*, as in Fig. 2. The pump E has its suction-pipe F connected with a vessel, G, containing the matter to be injected. The block A is intended to be sufficiently heavy to remain on the barrel even against the pressure of the contents of the same. But to make sure, and also to facilitate handling, I prefer to attach it to slide H, moving on a rod, I, and connected with a lever, J, by which the block can be easily lifted and held down.

The operation is as follows: The block is placed over the tap of a barrel, L, to be opened so that the axis of the passage *a* will be directly in line with the center of the tap. The plug is then turned, as in Fig. 3, and the plunger forced down to thereby drive the tap into the barrel, opening the latter. The plunger is then elevated to clear the plug B, which can be retained in position if it is desired to discharge some of the contents of the barrel, in which case the cock *g* is opened. When sufficient has been or nothing is to be discharged, the plug B is turned to connect the passage *h* with the lower part of *a*, as in Fig. 2. The pump is then set in motion and suitable matter injected within the barrel for improving the quality of its contents. Meanwhile a new tap is, through a hole in the side of the block A, put into the passage *b* of B. When the injection has been completed the plug is once more turned to bring the passage *b* containing the tap in line with *a*, and the plunger again forced down to drive the new tap home and reclose the barrel. The block A can then be removed from the barrel and applied to another. In places where the rather heavy block A cannot be conveniently handled I propose using the modification shown in Figs. 5 and 6. In these I have a box, M, having a hole, *a*, in its bottom, and containing a perforated slide, N, in place of the plug B. The plunger C fits the cover *i* of the box. The tube D connects with the side of the box. The slide containing in its opening the new tap is moved clear of the plunger to let the old tap be driven

into the barrel and the pump be operated; then the slide is moved under the plunger, closing the end of the tube D, and bringing the new tap in line with the plunger and with the opening *a*. By means of the plunger the new tap is finally driven home.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of a block or vessel containing a perforated slide or plug with a plunger, C, and pipe D, for opening and closing barrels and injecting liquids or other matter, as set forth.

2. The plug B having the passages *b* and *h*,

and connected with the tube D and pipe *f*, substantially as herein shown and described.

3. The apparatus as herein described for applying the new tap within the aperture *b* of the plug or slide, so that by the same motion of the plug or slide which shuts the injection-tube the tap is brought under the plunger, as specified.

4. The block A attached to a slide, H, which is operated by a lever, J, substantially as herein shown and described.

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