

(No Model.)

J. W. FUNCK.
AIR EJECTOR FOR CASKS.

No. 403,261.

Patented May 14, 1889.

Fig. 1.

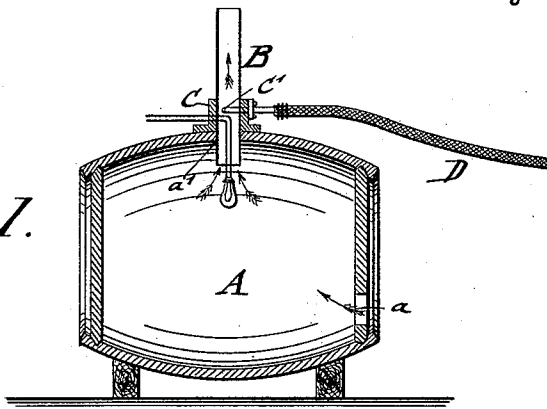


Fig. 2.

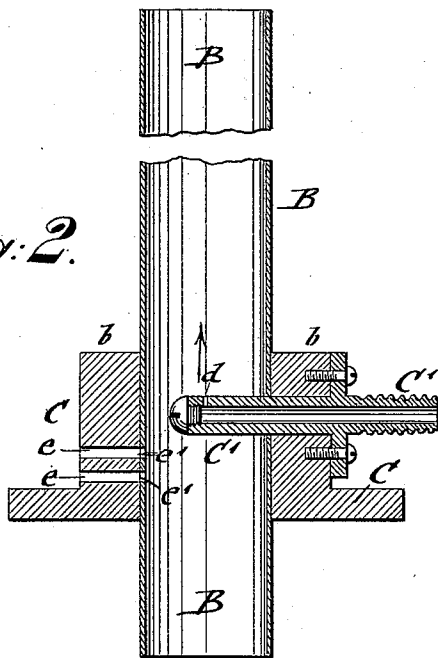
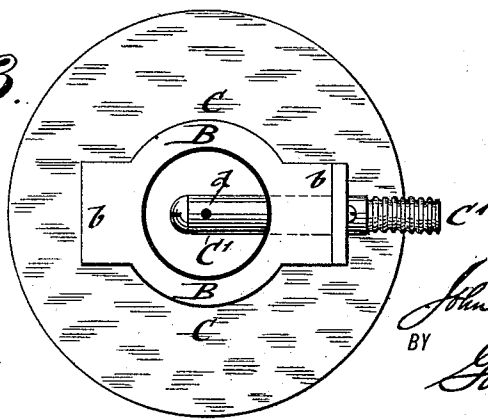


Fig. 3.



WITNESSES:

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JOHN WILLIAM FUNCK, OF STAPLETON, NEW YORK.

AIR-EJECTOR FOR CASKS.

SPECIFICATION forming part of Letters Patent No. 403,261, dated May 14, 1889.

Application filed February 15, 1889. Serial No. 300,014. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILLIAM FUNCK, of Stapleton, in the county of Richmond and State of New York, a citizen of the United States, have invented certain new and useful Improvements in Air-Ejectors for Casks, of which the following is a specification.

In varnishing the large vats and casks used in breweries explosions frequently take place, which endanger the life and limbs of the persons varnishing the interior of the casks. Different remedies have been proposed by which the formation of an explosible gas and air mixture while varnishing can be avoided and explosions prevented; but they were unsatisfactory and insufficient, as they did not provide sufficient safeguards against the danger to which the workingmen were exposed.

The object of my invention is to furnish a simple and effective means by which explosions in casks while they are being varnished are prevented; and the invention consists of an air-ejector for said casks which is inserted into the bung-hole of the cask and provided with an air-supply tube having a nozzle at the inside of the main tube, the supply-tube being connected with an air-compressor or other source of compressed air, so that the air is exhausted in the cask and a continuous current of fresh air drawn in at the man-hole of the cask, which carries off the vapors generated by the varnish in the same, so as to remove the cause of the explosions.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of a cask with my improved air-ejector for keeping up a current of air through the cask. Fig. 2 is a vertical longitudinal section of my improved air-ejector, drawn on a larger scale; and Fig. 3 is a top view of Fig. 2.

Similar letters of reference indicate corresponding parts.

A in the drawings represents a storage or other cask, which is provided with a man-hole, *a*, in the head and with a bung-hole, *a'*, at the top of the cask. In the bung-hole is inserted a tube, B, of suitable length, said tube being secured to a flanged collar, C, that rests on the top of the cask outside of the bung-hole, as shown in Fig. 1. The collar B is provided at diametrically-opposite points with square

offsets or bosses, *b*, to one of which a small tube, C', is attached, which passes through said boss into the larger tube, B, and is provided at the inner end with a small air-orifice, *d*, in line with the axis of the main tube. The outer end of the air-tube C' is grooved or corrugated and connected by a hose, D, with an air-compressor or other source of supply of compressed air. The opposite boss *b* is provided with holes *e*, which communicate with openings *e'* in the tube B, through which holes and openings the conducting-wires for an incandescent electric lamp are passed, which lamp is suspended from the tube B at the interior of the cask.

For varnishing the cask the workingman enters through the man-hole to the interior of the same and applies the varnish to the inner surface of the cask. While he is thus engaged, a jet of compressed air is continuously ejected through the air-orifice of the nozzle into the tube B, which exhausts the air in the cask and establishes a current of air from the man-hole through the cask to the ejector-tube and through the same to the outside of the latter, as indicated by arrows in Fig. 1. The main tube and air-supply tube act as an ejector for the mixture of air and varnish-vapors formed at the interior of the cask, and keep thereby the air in the cask perfectly pure and free of vapors, so that no explosive gas-and-air mixture can be formed, and thereby explosions and danger to life and limb are entirely prevented. The air-ejector forms an effective protecting device which can be readily placed in position on the cask to be varnished, the connection with an air-compressor or other source of compressed air being quickly established; also, the connection with a dynamo or other source of electricity for supplying the current to the incandescent lamp. In this manner a very simple, effective, and readily-applied device for preventing explosions of casks while varnishing the same is obtained.

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

1. An air-ejector for preventing explosions in casks when varnishing the same, consisting of a main tube inserted into the bung-

hole of the cask, a flanged collar for supporting said main tube on the cask, and an air-supply tube having a nozzle at the interior of the main tube, substantially as set forth.

5 2. An air-ejector for preventing explosions in casks while varnishing the same, which consists of a main tube that is inserted into the bung-hole of the cask, a flanged collar for
10 supporting the same on the cask, and an air-supply tube passing through a boss of said collar into the interior of the main tube, said air-tube having a nozzle and discharge-orifice in line with the axis of the main tube, substantially as set forth.

15 3. An air-ejector for preventing explosions in casks when varnishing the same, which consists of a main tube inserted into the bung-hole of the cask, a flanged collar for sup-

porting the main tube, and an air-supply tube having a nozzle and discharge-orifice at the 20 interior of the main tube, said air-tube being connected with a suitable supply of compressed air, the flanged collar being provided with bosses, one boss serving for attaching the air-tube, while the other boss is provided 25 with openings for inserting conducting-wires for an incandescent lamp, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses. 30

JOHN WILLIAM FUNCK.

Witnesses:

PAUL VON MERTSCHINSKY,
I. NEISEY.