

H. & H. E. RAUCH.
CASK PITCHING MACHINE.
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933,203.

Patented Sept. 7, 1909.

Fig. 1.

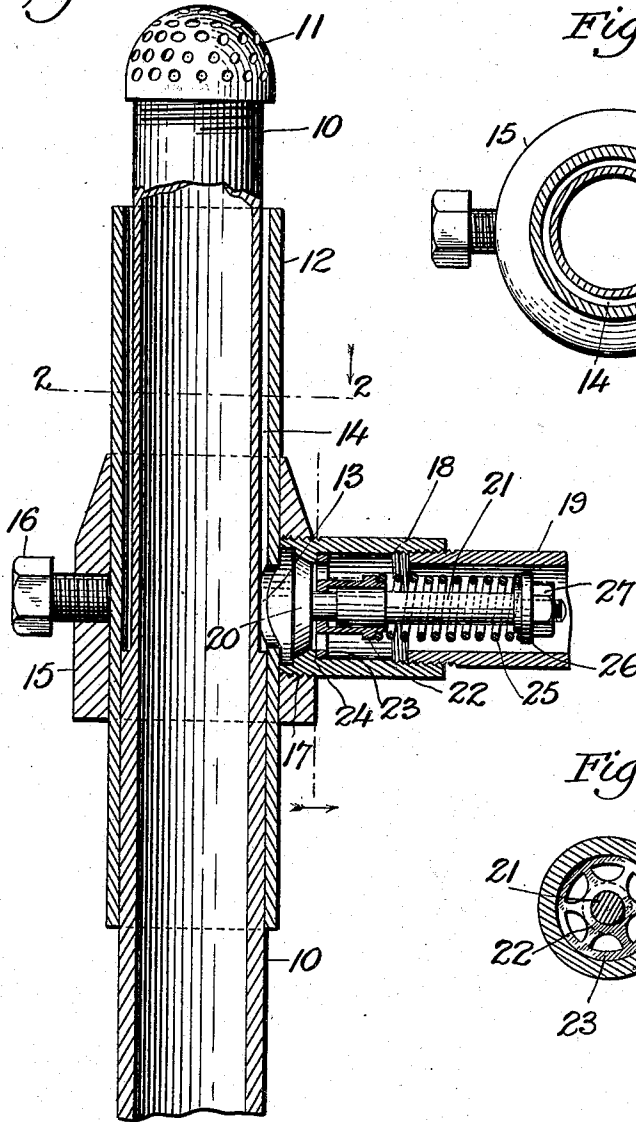


Fig. 2.

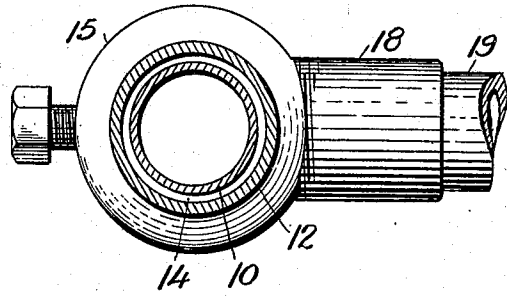
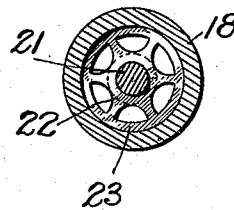


Fig. 3.



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HENRY RAUCH AND HARRY E. RAUCH, OF MOUNT VERNON, NEW YORK.

CASK-PITCHING MACHINE.

933,203.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed February 13, 1909. Serial No. 477,721.

To all whom it may concern:

Be it known that we, HENRY RAUCH and HARRY E. RAUCH, both citizens of the United States, and both residents of Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Cask-Pitching Machines, of which the following is a specification.

Our invention relates to improvements in cask pitching machines, more particularly of the type which has been described in United States Letters Patent No. 599,476, dated February 22, 1898, and also in a further United States Letters Patent No. 616,632, dated December 27, 1898. The apparatus described in the first of the said patents consists, briefly, of a kettle to receive the pitch arranged over a suitable furnace, and having below its bottom and preferably cast integrally with it one or more tanks to receive, through a valve-controlled inlet, pitch from the kettle. This tank, or each tank, if there be more than one, has an outlet-pipe, with a spray-nozzle on its upper end to deliver the pitch in the form of spray into the cask to be pitched, which is supported on the cover of the kettle. The pitch is ejected from the tank by the admission over it of compressed air from some suitable source.

After a cask has been sprayed or pitched, by means of an apparatus such as is described in the above mentioned Letters Patent or by any means whatever, it is usually considered necessary to blow out or otherwise expel from the interior of the cask the pitch vapor with which it is filled. Unless this is done the vapor will condense upon the inside of the cask and will impart an unpleasant flavor to the beer or other liquid with which the cask may afterward be filled. In order to bring about the removal or expulsion of this vapor of pitch the cask is transferred from the pitching apparatus to a pump, a blower, or other suitable device, whereby a current of air is forced into the cask and the pitch vapor blown out, or in some cases the cask is connected with a vacuum chamber and the pitch vapor thereby exhausted from the cask. Either of these operations, however, constitutes another entirely distinct operation, which is inconvenient and causes considerable loss of time,

especially when a large number of casks are to be handled.

Our invention provides means connected with and forming part of the cask pitching machine whereby the air pressure of that machine is utilized to expel the vapor from the pitched cask, immediately after the completion of the pitching operation and without removing the cask from the machine.

The invention consists in the novel construction, combination and arrangement of various devices and parts, as shown in the accompanying drawings and as hereinafter more particularly set forth and described.

In the accompanying drawings Figure 1 is a vertical section of a spraying pipe forming part of a cask-pitching apparatus and constructed according to our present invention. Fig. 2 is a transverse section on the line 2—2 of Fig. 1, and Fig. 3 is a detail view of the stop for the valve spring hereinafter more particularly described.

In carrying our invention into effect, we provide a spraying pipe and nozzle of the usual or any suitable type, the upper portion however being of slightly smaller external diameter than the portion below. In the drawings the pipe is designated 10 and the spraying nozzle 11. A sleeve 12, provided with a lateral opening 13, is driven down upon the pipe 10, fitting closely over the larger lower portion thereof and leaving an annular space 14 around the smaller upper portion. An annular casting 15 is then placed upon the sleeve 12 and secured by a set screw 16 which enters a screw-threaded opening in one side. In the opposite side of the casting 15 is a lateral opening 17, internally screw-threaded, into which is screwed a pipe 18, the inner end of which is beveled to form a valve seat. The outer end of the pipe 18 is screw-threaded and receives a pipe 19. A valve 20 is located inside of the pipe 18, and the stem 21 extends into the pipe 19. A sleeve 22 is provided inside the pipe 18, provided with a flange 23 which abuts against the shoulder 24 inside of said pipe 18, this sleeve serving to guide the valve-stem 21 and also to act as a stop for one end of a helical spring 25, the other end of which bears against the washer 26 and nut 27 on the outer end of the valve-stem 21, thus tending to keep the valve closed.

The pipe 10 leads from the pitch recep-

tacle, from which the pitch is forced, by means of air pressure, through the pipe 10 and nozzle 11 into the cask to be pitched, the operation thereof being as set forth and described in Letters Patent Nos. 599,476 and 616,632 before referred to. The pipe 19 leads to the source of compressed air, and a suitable valve is provided, not shown in the drawings, by means of which the compressed air may be admitted first into the pipe 10, then shut off and admitted into the pipe 19, and then shut off from the latter, also providing for the escape of the compressed air from the pitch kettle as explained in the previous patents before referred to.

The pipe 19 should be of sufficiently large caliber and length, between its outer end where it discharges into the annular space 14 and the last mentioned but not shown valve, to provide a considerable air capacity, and the pipe between said valve and the source of compressed air, connecting said source with said pipe 19, should be of materially smaller caliber than that of the said pipe 19. The object of this is to prevent too sudden an outrush of air through the valve 20 and into the annular space 14, which would result in scattering the residuum of pitch in said annular space 14 and forcing some of the same back into the pipe 19, thus more or less choking the same and clogging the valve 20.

The operation of our invention is as follows: After a cask has been sprayed with heated pitch through the pipe 10 and nozzle 11, in the manner set forth in the said Letters Patent, and the pitch has ceased to pass into the cask, communication is opened from the source of compressed air into the pipe 19. The compressed air passes through this pipe and the pipe 18, opens the valve 20 against the pressure of the spring 25, and passes into the annular space 14 between the pipes 10 and 12 and thence out into the cask, blowing out and completely expelling all pitch or other vapor which may be therein through the bung-hole and leaving the cask fresh and clean.

We have found in the practical use of our invention that not only is the vapor thoroughly and quickly expelled from the cask by the current of air which is blown into it as above described after the spraying of the pitch is completed, thus preventing any condensation of such vapor upon the inside of the cask with the resulting contamination of the liquid contained therein, but also that the cask is better pitched as a result of the introduction of the current of air into the same after the pitch has been sprayed.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

1. In a cask pitching apparatus, the combination with a pipe leading from a pitch

supply and adapted to enter the interior of a cask to be pitched, of a pipe surrounding the upper portion of said first named pipe, an annular space between said pipes, a pipe leading from a source of compressed air and communicating with said annular space, and a valve in said last named pipe adapted to permit the passage of compressed air into said annular space but to prevent the passage of melted pitch back into said last named pipe.

2. In a cask pitching apparatus, the combination with a pipe leading from a pitch supply and adapted to enter the interior of a cask to be pitched, of a pipe surrounding the upper portion of said first named pipe, an annular space between said pipes, a pipe leading from a source of compressed air and communicating with said annular space, and a valve in said last named pipe, adapted to automatically open to permit the passage of compressed air into said annular space but to automatically close to prevent the passage of melted pitch back into said last named pipe.

3. In a cask pitching apparatus, the combination with a pipe leading from a pitch supply and adapted to enter the interior of a cask to be pitched, of a pipe surrounding the upper portion of said first named pipe, an annular space between said pipes, a pipe leading from a source of compressed air and communicating with said annular space, and a valve in said last named pipe provided with means adapted to normally yieldingly hold said valve closed and prevent the passage of melted pitch back into said last named pipe, but to permit said valve to open when air is forced through said last named pipe into said annular space.

4. In a cask pitching apparatus, the combination with a pipe leading from a pitch supply and adapted to enter the interior of a cask to be pitched, of a pipe surrounding the upper portion of said first named pipe, an annular space between said pipes, a pipe leading from a source of compressed air and communicating with said annular space, and a valve in said last named pipe provided with a spring adapted to hold said valve normally closed but to yield and permit said valve to open when air is forced through said last named pipe into said annular space.

5. A cask pitching apparatus comprising the following elements: a pipe 10, leading from a pitch supply and adapted to enter the interior of a cask to be pitched; a pipe 12; an annular space 14; pipes 18 and 19; a valve 20, a valve-spring 25, and a valve-guide and spring-seat 22.

6. A spraying nozzle for cask pitching machines provided with an outer pipe surrounding the upper portion of the spraying pipe and leaving an annular space between the two, and provided with a pipe leading

from a source of compressed air to said annular space, said last named pipe having a valve adapted to permit the passage of air into said annular space but to automatically close when air ceases to pass and to thereby prevent the passage of melted pitch back into said last named pitch from said annular space.

In witness whereof we have hereunto

signed our names this second day of February 10
ary 1909, in the presence of two subscribing
witnesses.

HENRY RAUCH.
HARRY E. RAUCH.

Witnesses:

JOHN J. HAGMANN,
FRANCIS S. WANDALL.