

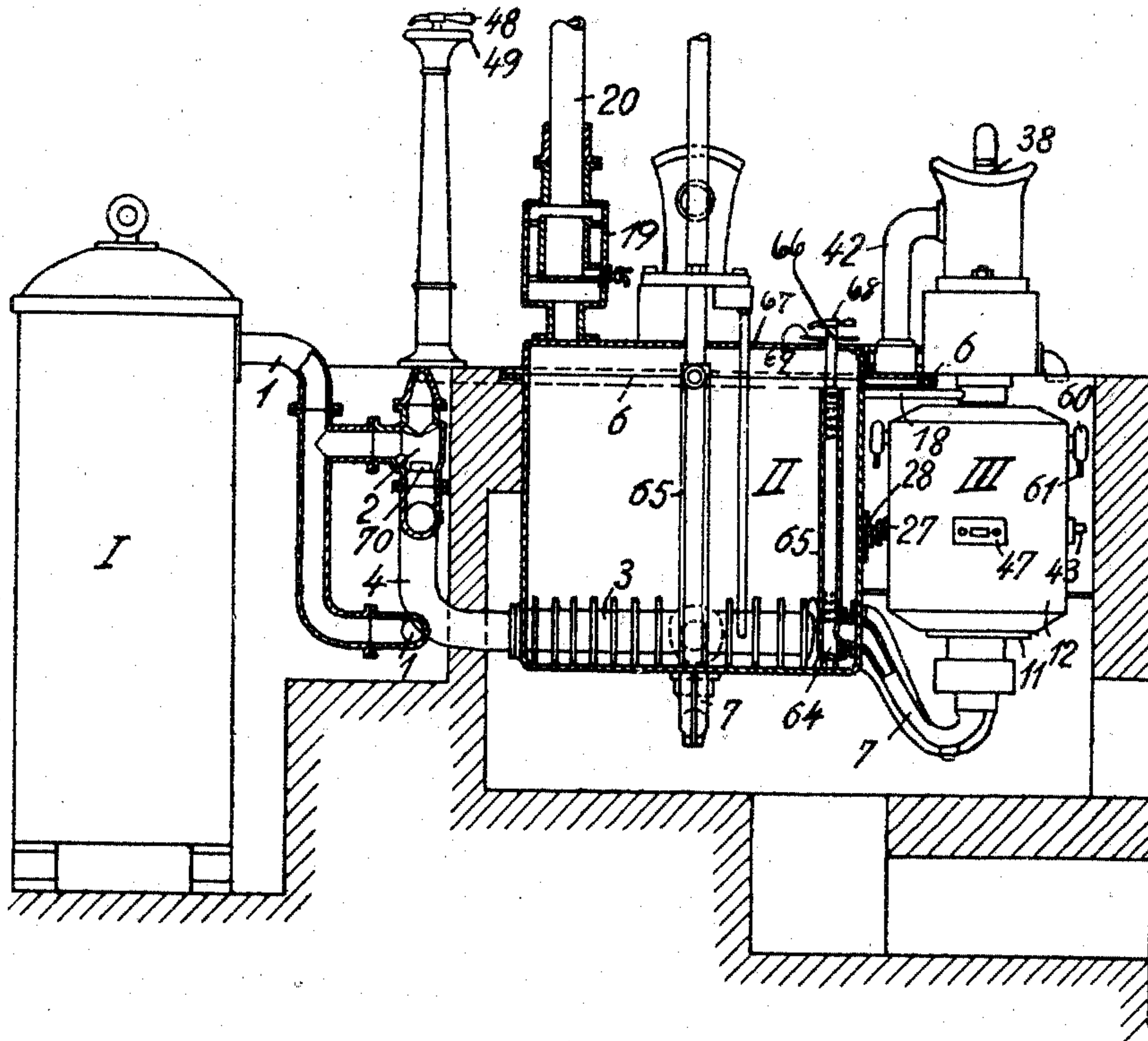
P. SEIFERT.
 APPARATUS FOR CLEANING AND PITCHING CASKS.
 APPLICATION FILED MAR. 13, 1908.

929,793.

Patented Aug. 3, 1909.

3 SHEETS—SHEET 1.

Fig. 1.



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Inventor:
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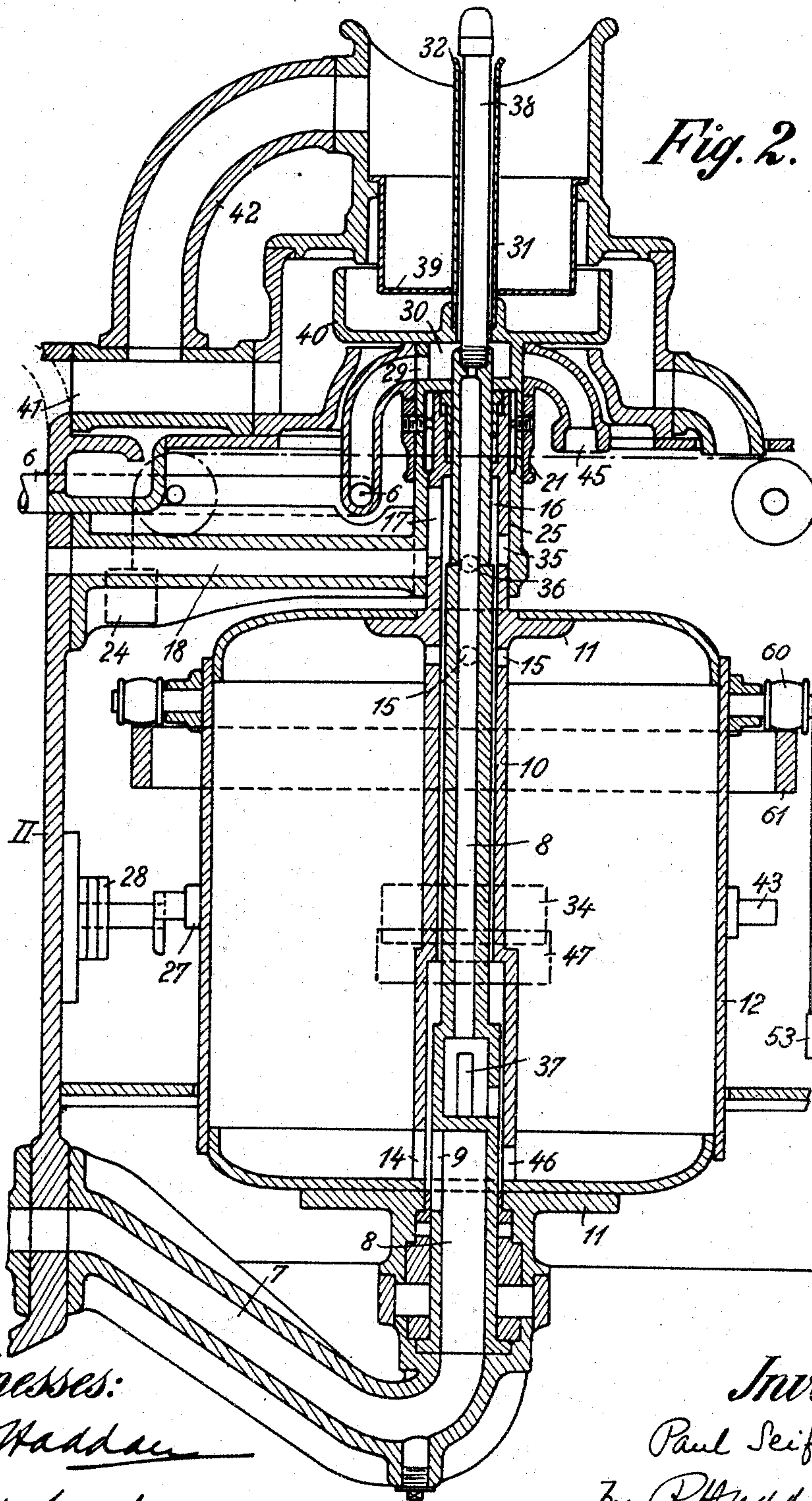


Fig. 2.

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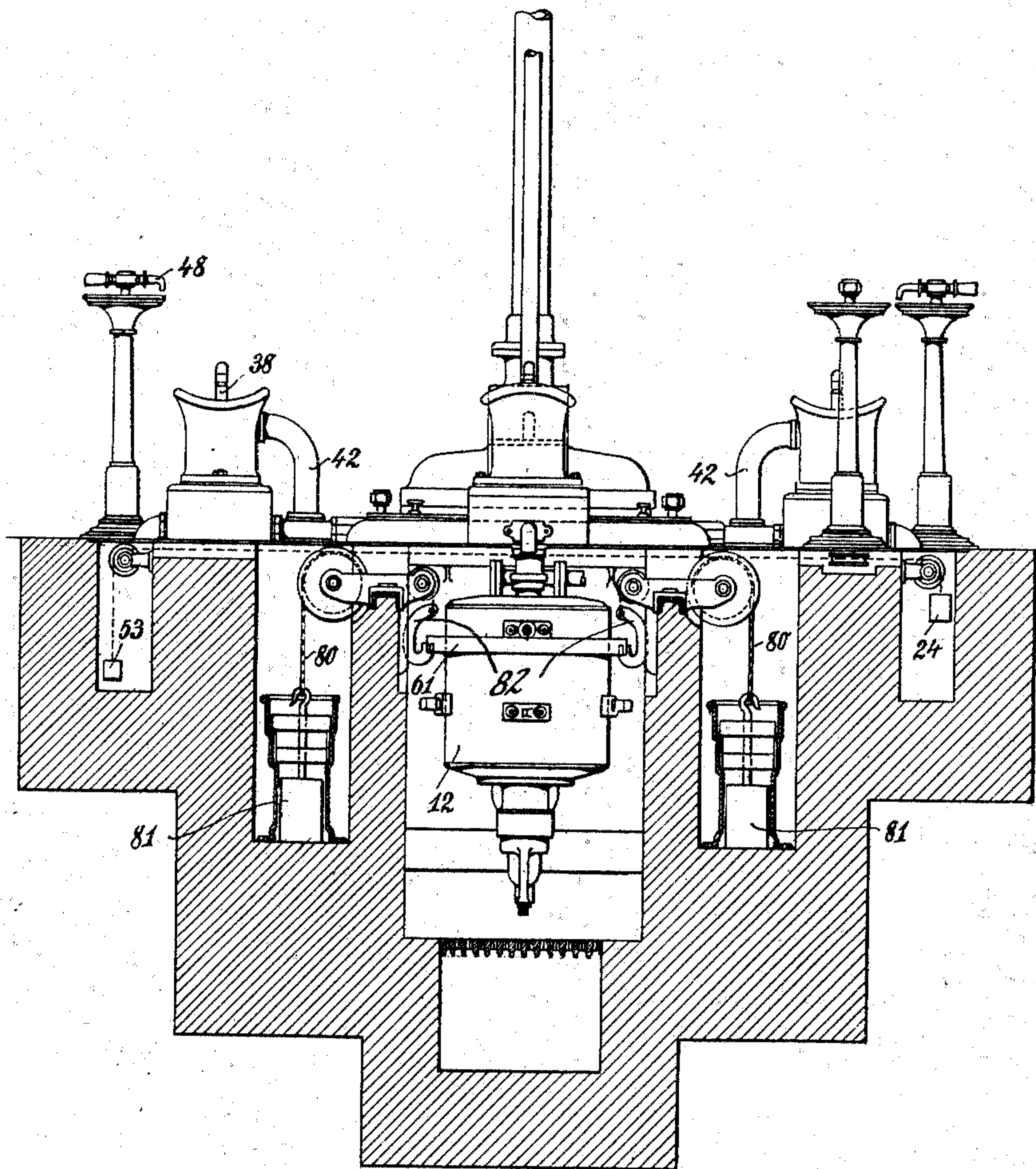
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3 SHEETS—SHEET 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

PAUL SEIFERT, OF CONSTANCE, GERMANY.

APPARATUS FOR CLEANING AND PITCHING CASKS.

No. 929,793.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed March 13, 1908. Serial No. 420,878.

To all whom it may concern:

Be it known that I, PAUL SEIFERT, a subject of the King of Saxony, residing at 3 Gartenstrasse, Constance, in Germany, have invented certain new and useful Apparatus for Cleaning and Pitching Casks, of which the following is a specification.

The object of the present invention is an apparatus for applying pitch to and removing same from barrels, casks, and the like and for blowing out the latter, the said apparatus being distinguished from those hitherto known for the purpose, by the pitch being applied and removed and the barrel blown out without the position of the latter being changed.

Formerly the barrels were placed on a frame for the application of the pitch, then on to another frame for the removal of the pitch, and finally after pitching, onto a third frame where the barrel was blown out. Apparatus has also been used in which the removal of the pitch takes place in conjunction with the application of same, and the melting of the old layer of pitch is effected at the same time as the injection of the pure pitch by the heat of the latter, but the old soiled pitch is thus mixed with the fresh pitch, runs with the latter back into the pitch-boiler and is then again injected into the same or another barrel. In this method the impurities in the barrel removed with the pitch, flow into the boiler containing the pure pitch, and contaminate the latter, so that after being used for some time the pitch in the boiler will become as impure or more so, than the old pitch in the barrel.

According to the present invention the old pitch is thoroughly removed from the barrel, then fresh pure pitch applied thereto and finally by blowing in cold air, the heated layer of fluid pitch is hardened in the barrel, all these operations being effected without depending on the attention or discretion of the workman.

The introduction of hot air for removal of the pitch, the introduction of the fresh pitch for its application and the introduction of the cold air for the blowing out is controlled by an automatically operated regulating device, which controls the duration of each operation, and at the same time indicates what is taking place in the interior of the barrel, without stopping work on other barrels being treated. An embodiment of apparatus suitable for this purpose

is shown in the annexed drawing, Figure 1 being a sectional elevation of the complete plant; Fig. 2 is a section of a pitch receptacle and allied parts on an enlarged scale, and Fig. 3 a sectional elevation at right angles to Fig. 1.

I designates a hot air stove, II the pitch boiler, and III is one of the pitch receptacles provided with the aforesaid regulating device. From the stove I the hot air flows into the pipe 1 and from the latter through a branch pipe to the radiators 3 within the pitch boiler, and from there it flows back through the pipe 4 into the chamber 2 in which is a flap valve 70. From the valve chamber 2 a conduit 6 leads to the movable pitch receptacle III, and when the valve 70 is in the position shown, the hot air flows from the stove I directly into said conduit 6, but when the valve is in a vertical position said hot air flows first through the radiators 3 and afterward into the conduit 6.

The boiler II contains the fresh pitch to be applied to the barrel, and leading from said boiler is a plurality of pipes 7, corresponding to the number of movable receivers III and through these pipes the pitch has free passage to the pipe 8. On the latter is rotatably mounted a tube or shell 10 to the flanges 11 of which is fixed the receiver 12 which carries rollers 60 running on a ring 61 suspended by hooks 82 connected by means of wire ropes, chains or equivalents 80 to counterweights 81 (Fig. 3). The counterweights are slightly heavier than the empty receiver 12 and the tube 10, so that the receiver only drops when pitch enters same. In the position of the parts shown an aperture 14 in the tube 10 coincides with an aperture 9 in the pipe 8 and permits of pitch entering from the latter into the receiver. Air escapes from the latter through the ports 15 in the pipe 10; the intermediate space 16, the aperture 17 and the conduit 18 into the boiler II, whence it flows out through the condenser 19 and pipe 20. When the receiver is filled with pitch, it falls. At the upper end of the pipe 10 is a pulley 21 about which is wound a chain carrying two weights 24 and 53, which tend to rotate the receiver in opposite directions. The weight 24 is slightly heavier than the weight 53, and the pulley 21 bears on the ring or hub 25 of the pipe 18 which is shaped as a support. The said pulley is movably connected to the tube 10 by means of a

groove and feather but is not rotatable relatively thereto and consequently to the receiver 12. On the latter is an abutment 27 which in the position of the receiver shown is in contact with an abutment 28 on the pitch boiler.

During the filling of the receiver 12 and the lowering thereof, the hot air from the conduit 6 enters the space 30 through the aperture 29, and then passes into the pipe 31 and through the annular slot 32 into the bung-hole of the barrel. Owing to the downward movement of the receiver 12 the abutment 27 moves toward the abutment 28, and passes below same. Then the weight 24 rotates the receiver through an angle of 90 degrees, and owing to such lowering and turning the apertures 14 and 29 are closed, that is to say, the inlets of pitch and hot air to the receiver are cut off. The receiver continues to move still farther downward until the abutment 34, carried by the receiver at a higher level than the abutment 27, makes contact with the abutment 28 and stops the receiver. The port 35 of the tube 10 now coincides with the compressed air-conduit 36 (shown in dotted lines) the compressed air passing through the intermediate space 16 and ports 15 into the receiver 12 and driving out the pitch through the aperture 14, which now lies opposite the aperture 37 in the inner pipe 8, into the latter and upward through the injector-pipe 38 to the barrel. The surplus pitch flows from the bung-hole through the sieve 39 into the bowl 40 and from the latter through the conduit 41 back to the boiler II, while the smoke passes through the pipe 42 into said conduit 41 and through the boiler II, condenser 10 and pipe 20 to the exterior. Owing to the outflow of pitch the receiver 12 is lightened, and is lifted again by its counter-weight. During the upward movement the abutment 34 slides over the abutment 28 and the weight 24 again produces a rotation of the receiver through an angle of 90 degrees, until the abutment 43 contacts with the abutment 28. Owing to this rotation, the passage of pitch through the apertures 14 and 37 and therefore to the shell 8 and the passage of compressed air through the port 35 to the intermediate chamber 16 is stopped, while the aperture 29 is caused to coincide with the outlet of the cold air conduit 45. Cold air from any suitable source passes into the chamber 30 and from the latter through the annular space 32 and bung hole into the barrel. In this position of the receiver the pitch can pass from pipe 8 through the apertures 9 and 46 into the receiver 12 and the compressed air escapes through the ports 15, intermediate chamber 16 and conduit 18 into the pitch boiler and from the latter to the outside. Entrance of the pitch into the receiver causes the latter to again move

downward, but again as the abutment 43 is placed at a lower level than the abutment 34, the receiver only moves for a short distance before said abutment passes below the abutment 28, whereby said receiver is again rotated through 90 degrees, until the abutment 47 makes contact with the abutment 28. Owing to this rotation the access of cold air and pitch are stopped. The pitch is now completely removed, again applied and the barrel blown out, so that the latter can be removed. In order that such removal of the barrel does not take place before the same is ready, the spindle of a pointer 48, which moves over a disk 49, is connected to the pulley 21 by suitable means (not shown). According to the position of the pulley 31, the said pointer points on the disk to words such as "Removal of pitch" "Application of pitch" or "Blowing out" and therefore by its position shows the operations of the hot air, pitch or cold air in the barrel. Any other barrel to be treated can now be placed over the nozzle and when this is done, the workman must adjust the pointer 48 to the words "Removal of pitch". On rotation of the pointer the receiver is also turned and the weight 53, which acts on the pulley 21, is wound up. The rotation of the receiver is effected in the opposite direction between the operations of removing and applying the pitch and between the latter operation and the blowing out and after the latter. The abutments 27, 34 and 47 on the receiver engage the abutment 28, which in this direction of rotation is adapted to turn around its pivot and is returned by a spring in any suitable manner. When the abutment 27 has passed the abutment 28, the receiver has arrived at its starting position and the pointer indicates the words "Removal of pitch". By the rotation of the receiver, the weight 24 has been wound up, which, as stated, is slightly heavier than the weight 53, and the said weight 24 now brings the receiver in contact with the abutment 28, that is to say, into its starting position.

For the removal of pitch from a larger barrel a longer time is obviously required than for a small one and consequently the operation has to be extended. For this purpose there is provided in the boiler II in front of the supply pipe 7 a cock or valve 64, by means of which more or less pitch can be introduced into the receiver 12. If a smaller quantity of pitch is introduced, it acts for a longer time until the receiver 12 is charged to such an extent that it moves downward, but since the hot air only flows into the barrel for the removal of the pitch during the filling of the receiver 12 such removal therefore extends over a longer period. The valve 64 is hollow and connected to a perforated pipe 65, which carries at its upper end a spindle 66 extending through the cover 67 of the

boiler II. On said spindle 66 is mounted a pointer 68, which always indicates on a suitable disk 69 the size of opening of the cock 64. The perforations in the pipe 65 prevent the entrance into the receiver 12 of dirt contained in the pitch.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

10 1. Apparatus for the removal from and application of pitch to barrels and the like, and for blowing out the latter, comprising in combination a rotatable and vertically movable pitch receiver and means controlled
15 by its movements for automatically starting and stopping separate working operations for the removal and application of pitch and the blowing out of the barrel.

20 2. Apparatus for the purpose set forth comprising in combination a pitch receptacle rotatable and vertically movable, a pipe, a pitch boiler connected to the pipe, a shell surrounding said pipe and connected to the pitch receptacle, the shell and pipe having
25 suitably disposed ports or orifices for the supply of pitch, compressed air and heated air respectively, said ports or orifices being

caused to coincide according to the positions of rotation and height of the pitch receptacle. 30

3. Apparatus for the removal from and application of pitch to barrels and the like, and for blowing out the latter, comprising in combination a rotatable and vertically movable pitch receiver, means controlled by its
35 movements for automatically starting and stopping separate working operations for the removal and application of pitch and the blowing out of the barrel, a pitch boiler in communication with said receiver, radi- 40
ators therein, a conduit for heated air having two branches, one branch leading directly and the other indirectly through said radi-
ators to the pitch receiver, and means whereby said heated air can be conducted 45
directly to the receiver or through the radiators as desired.

In witness whereof I have signed this specification in the presence of two witnesses.

PAUL SEIFERT.

Witnesses:

ROBERT HAUSAMANN,
OTTO MAYER.