J. G. GARDNER.

TURPENTINE RETORT.

APPLICATION FILED APR. 21, 1913.

1,124,607. Patented Jan. 12, 1915.

Fig. 1.

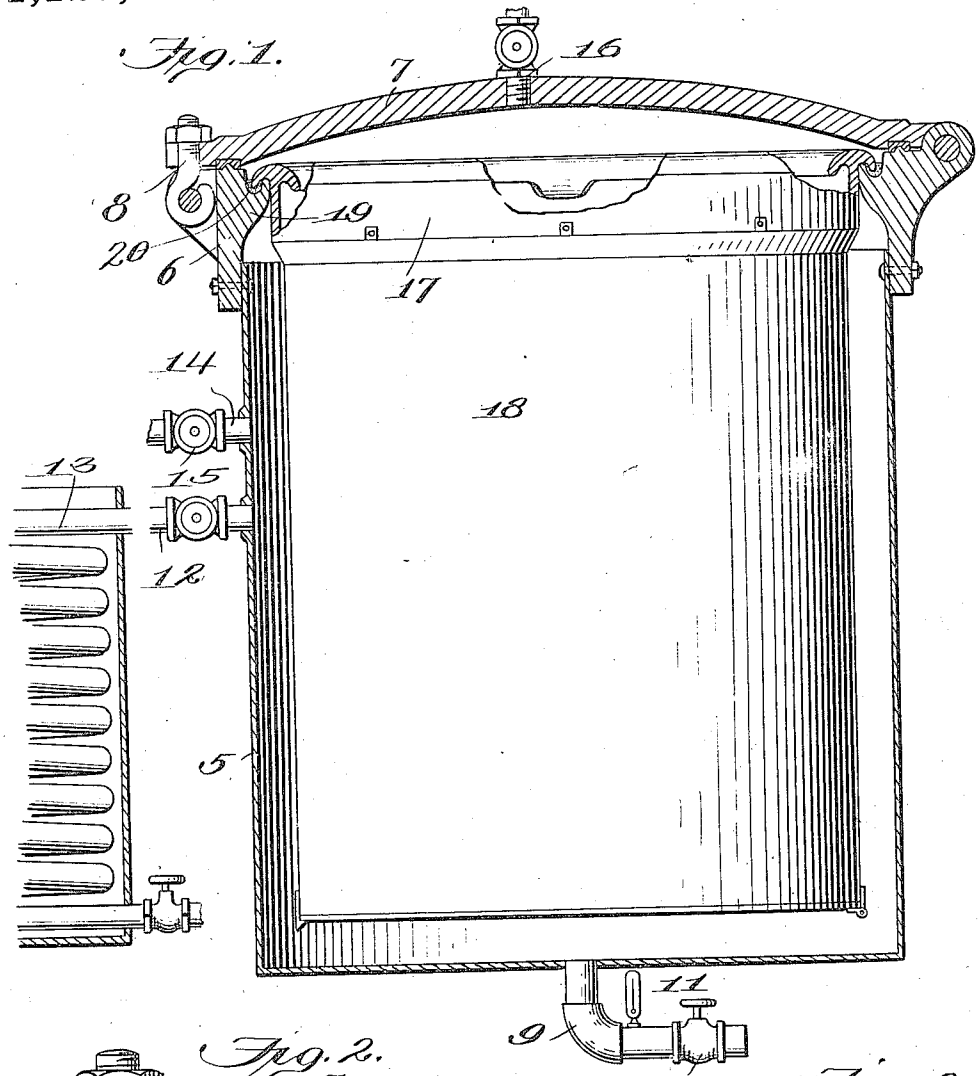


Fig. 2.

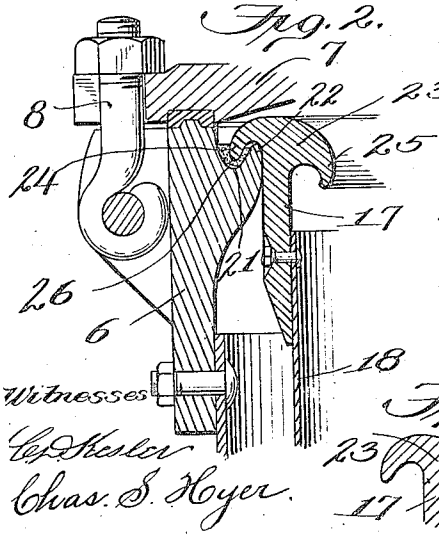


Fig. 3.

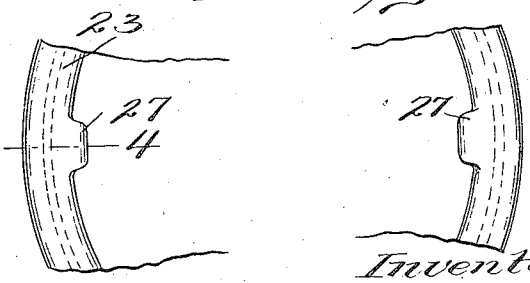


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSHUA G. GARDNER, OF DAYTONA, FLORIDA, ASSIGNOR TO SOUTHERN ROSIN-TURPENTINE COMPANY, OF DAYTONA, FLORIDA, A CORPORATION OF FLORIDA.

TURPENTINE-RETORT.

1,124,607. Specification of Letters Patent. Patented Jan. 12, 1915.

Application filed April 21, 1913. Serial No. 762,618.

To all whom it may concern:

Be it known that I, JOSHUA G. GARDNER, a citizen of the United States, residing at Daytona, in the county of Volusia and State of Florida, have invented new and useful Improvements in Turpentine-Retorts, of which the following is a specification.

This invention relates to turpentine stills or retorts and particularly to the joint formed between the cage or basket and the inner portion of the head of the still or retort body or casing, and the primary object of the invention is to provide simple and effective means for forming a tight joint between the upper portion of the cage or basket and the inner part of the head or rim of the retort body or casing principally through the weight imposed by the cage when loaded or charged to prevent leakage or escape of any vapors through the joint between the two parts and at the same time provide for a ready separation or disjointure of the basket or cage from the casing when it is desired to remove the basket or cage from the still or retort to discharge the contents of the same.

A further object of the invention is to provide simple and effective means at the interior of the rim of the basket or cage for engagement of the grab hooks of hoisting mechanism to facilitate the removal and discharge of the basket or cage.

The invention consists in the construction and arrangement of the several parts which will be more fully hereinafter described and claimed.

In the drawing: Figure 1 is a sectional view of a still or retort embodying the features of the invention and showing the basket or carrier also broken away in part and in section. Fig. 2 is an enlarged detail section through a portion of the head of the still or retort and the rim of the basket or carrier. Fig. 3 is a plan view of a portion of the basket or carrier particularly showing the rim and the opposed devices for engagement by the grab hooks of the hoisting mechanism. Fig. 4 is a transverse vertical section on the line 4—4, Fig. 3.

The numeral 5 designates the outer body or casing of the still or retort constructed of metal of suitable thickness and having an annular head 6 provided with a hinged cap or cover 7 and releasable hook bolts or analogous devices 8 for securing the said cap in closed position. The body or casing 5 is provided with a suitable outlet pipe 9 in the bottom thereof, the said pipe having a valve 10 and a thermometer 11 to determine the temperature of the fluid passing through the pipe 9. At a suitable elevation above the bottom of the body or casing 5 a valved outlet pipe 12 is attached and leads to a condenser 13, and above the outlet pipe 12 is an injecting pipe 14 which is also provided with a valve 15 for the purpose of cleaning out the retort or still by the injection thereinto of steam. Connected to the top or cover 7 is a valved steam inlet pipe 16. The function of all of these inlet and outlet pipes is fully and clearly disclosed in my copending application Serial No. 755,734, filed March 20, 1913.

The features of the present invention reside in the joint formed between the rim 17 of a basket or carrier 18 and the head 6 of the body or casing 5. The head 6 has an inner annular ledge 19 formed with an upwardly opening groove 20 which is gradually reduced toward its lower or base portion 21 and has an inner upwardly tapered or reduced guard flange 22. The rim 17 is formed with an irregular T-head 23 having an outer tapered flange 24 of reduced thickness and an inner overhanging tapered flange 25 of greater thickness and less length or dependence, both flanges 24 and 25 having their terminals projected downwardly. The flange 24 conforms in contour to the groove 20 of the head 6, and in the said groove a suitable yielding packing 26 is disposed and may be of any material adapted for the purpose of either a fibrous, granular or sheet character, and when the basket or carrier 18 is disposed within the retort the flange 24 engages the said packing and seats itself by compressing the packing, as shown particularly by Fig. 2, and automatically produces a tightly sealed joint which will prevent the escape of vapors between the head 6 and the rim 17 respectively of the body or casing 5 and the basket or carrier 18. At diametrically opposite points the flange 25 of the head 23 is formed with extensions or lips 27 for engagement therewith of grab hooks or other devices on the lower extremity of a hoisting cable usually employed with stills or retorts to remove the basket or carrier from the retort or to place said basket or carrier in

proper position within the retort. In view of the contour of the extensions or lips 27 the grab hooks or other devices carried by the hoisting cable may be readily associated with and detached from the flange 25, with obvious advantages in manipulating the basket or carrier when charging or discharging the retort or still.

The weight of the basket or carrier 18 when charged is effective in forming a tight joint between the flange 24 of the head 23 and the groove or channel 20 of the head 6 through the medium of the interposed packing 26, for the reason that the said flange 24 is caused to sink into and tightly engage and at the same time compress the packing material 26, and owing to the formation of the groove or channel 20 in the upper portion of the head 6 or so that it will open upwardly, the head 23 of the rim 17 together with the flange 24 may be readily disengaged from the groove or channel 20 and the packing 26 without displacing the said packing. The packing material 26 may be replaced at any time and is readily reached from the upper portion of the retort or still when the cover 7 is open.

The improved features hereinbefore disclosed will be found of material advantage in the effective operation of the retort or still and are applicable to all forms of stills wherein it is desirable to force the steam or other fluid downwardly through a charged basket or carrier to cause the vapors to rise between the basket or carrier and the body or casing of the retort or still and be carried off at the side of the retort or still to a condenser or other device.

What is claimed is:

1. In a retort of the class specified, the combination of a retort body having an annular head with an inner annular ledge adjacent to the top edge of the ledge and provided with an upwardly opening groove, a basket or carrier having a head with a rim which extends both outwardly and inwardly from the head to form inner and outer flanges which are undercut or grooved, the outer flange of the rim being at a higher elevation than the inner flange thereof so as to engage the groove in the annular ledge of the head of the body, the inner portion of the said ledge being of such shape as to fit snugly against the outer wall of the head of the basket or carrier to form a tight joint, and a compressible packing material interposed between the outer flange of the basket rim and the wall of the groove of the annular ledge, said packing automatically conforming to and remaining in the shape of the groove and providing a seat for the flange by the weight of the basket imposed thereon.

2. In a retort of the class specified, the combination of a retort body having a head with an inner annular ledge near the upper edge thereof formed with an upwardly opening groove, the inner portion of the ledge adjacent to the groove being vertically straight and the inner top portion of the wall of the groove being regularly curved, a basket having an approximately T-shaped head secured to the upper portion thereof to form a rim with inner and outer flanges which are undercut, the outer flange snugly fitting over the inner upper portion of the groove in the wall of the ledge and the inner part of said ledge closely bearing against the outer side of the upper portion of the basket head to form a tight joint, and a yielding packing means inserted in the groove of the ledge and engaged by the outer flange of the head of the basket.

3. In a retort of the class specified, the combination of a retort body having a head with an inner grooved ledge, a basket having a rim of approximately T-shaped form to provide an outer continuous depending flange to engage the groove in the head and also provided with means at the inner portion thereof for engagement of parts of hoisting apparatus whereby the basket may be readily withdrawn from and placed in the retort body, and a yielding packing removably disposed in the ledge groove and engaged by the outer flange of the basket rim to form a tight joint between the rim and the ledge, the basket rim and the inner portion of the ledge also having tight engagement with relation to each other to prevent leakage therethrough.

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

JOSHUA G. GARDNER.

Witnesses:
OTTO H. WEHNER,
ANNE MAUD HOBBS.