

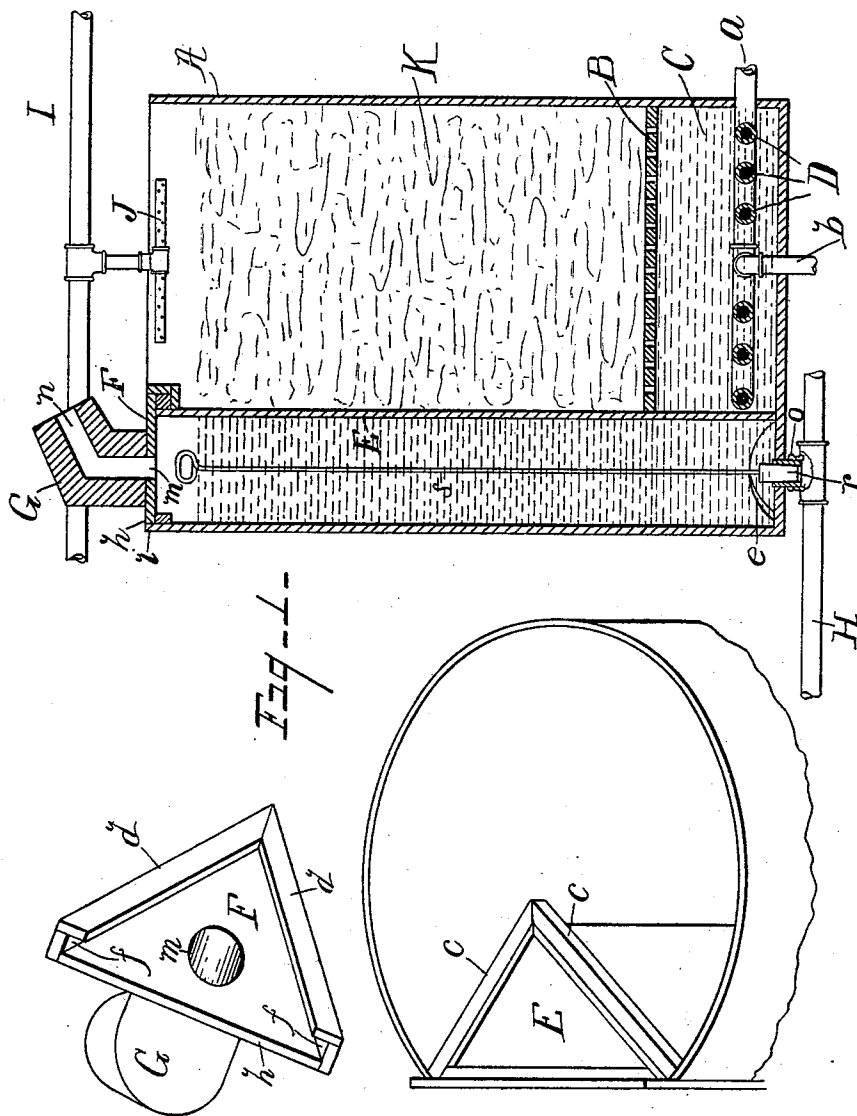
No. 631,840.

Patented Aug. 29, 1899.

J. D. WOOD.
LEACH FOR TAN BARK.

(Application filed Jan. 20, 1899.)

(No Model.)



WITNESSES
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By

Fig. 2.
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UNITED STATES PATENT OFFICE.

JAMES D. WOOD, OF RAPSON, MICHIGAN.

LEACH FOR TANBARK.

SPECIFICATION forming part of Letters Patent No. 631,840, dated August 29, 1899.

Application filed January 20, 1899. Serial No. 702,874. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. WOOD, a citizen of the United States, residing at Rapson, in the county of Huron, State of Michigan, have invented certain new and useful Improvements in Leaches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in leaches for leaching tanbark; and it consists in the construction and arrangement of parts, as hereinafter fully set forth, and pointed out particularly in the claim.

The object of the invention is to provide cheap and effective means for maintaining a continuous circulation of the boiling liquor through the bark in the leach, to obviate the boiling over and wasting of said liquor, and to enable the circulating liquor to be heated to a higher degree of heat, thereby enabling the soluble matter of the bark to be more quickly and perfectly removed by the process of infiltration, producing a liquor of greater strength, which object is attained by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section through a leaching-vat provided with my improved features. Fig. 2 is an enlarged perspective view of the top of the leaching-vat and the vertical well therein. Fig. 3 is an enlarged perspective of the hood or cap adapted to cover the upper end of said well and having a hollow elbow extending therefrom.

Referring to the letters of reference, A designates the leaching vat or chamber, in which the bark is boiled. This vat may be made in any desired form and is provided near the lower end with a false perforated bottom B, upon which the bark is supported and which forms a chamber C between its under face and the true bottom of the vat. Within this chamber C are coils of pipe D, having suitable induct and educt connections *a* and *b*, respectively, through which a circulation of

live steam is maintained through said coils to heat the liquor in the leach.

E designates a well which extends vertically of the leaching-vat, though separate therefrom and embraced within the wall thereof, the lower end of said well having apertures *e*, through which communication is established with the chamber C below the perforated bottom D of the leach. This well is triangular in form, and the top of that portion thereof which extends into the vat is provided with a lateral flange *c*.

F designates a hood or cover for the well E, which is also triangular and provided on two of its sides with a depending right-angled flange *d*, forming a groove or way *f* in the inner face of said flange *d*, that receives the flange *c* at the top of said well and locks said hood thereto when placed thereon, as shown in Fig. 1. This hood is slid onto the well from the inner point thereof, so that said flange *c* may properly engage in the way *f* in the depending flange *d* of said hood, whose back edge or side *h* closes against the face of the upper end *i* of the outer wall of the well when in position thereon. Through the center of said hood or cover is an aperture *m*, which communicates with an opening *n*, passing through an elbow G, which is attached to said cover. The discharge end of this elbow when the cover is in position on the well extends inward toward the center of the vat, so that any liquor passing upward through said elbow will be discharged into the top of said vat.

H designates a pipe through which the liquor is drawn from the leach to be cooled ready for use, said pipe communicating with the bottom of the well E through a nipple *o*, the aperture in which being closed by a plug *r*, having the operating-rod *s* attached thereto, which stands vertically within said well.

Crossing the top of the leach or vat is a pipe I, which conveys the menstruum or solvent liquor to the leach, said pipe being provided with a rotary sprinkler J, which depends therefrom over the top of said vat and distributes the liquor over the top of the bark K until the vat is filled.

In the operation of this improved device, the vat being filled with bark and liquor,

steam is turned into the coils D in the chamber below the false bottom, whereby said liquor is heated to the boiling-point. The presence of the false bottom prevents the liquor from boiling up through the bark in the vat; but vent for the boiling liquor is afforded through the well E, which communicates with said chamber at the bottom and in which said liquor rises when it reaches the boiling-point and flows from said well through the elbow G, discharging onto the top of the bark in said vat, through which and the perforated bottom B it percolates to chamber C, from which it again passes upward through the well, and so on the liquor continues to circulate upward through the well and back through the bark in the vat to the heating-chamber while said liquor is maintained at the boiling-point. Thus the liquor at a high temperature is continuously passed through the bark in the vat, whereby the soluble matter in the bark is more readily extracted and a liquor of greater strength is produced, at the same time obviating the boiling over and wasting of the liquor incident to leaches

wherein no provision is made for a circulation of the boiling liquor through the well and vat.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

In an apparatus for leaching, the combination of the vat having a false perforated bottom and a heating-chamber below said bottom, the vertical well formed within the wall of the vat but separated therefrom, said well communicating at its lower end directly with said chamber, the upper end of said wall terminating flush with the top of said vat, a removable cover covering the top of said well, an elbow mounted on the cover and communicating with the well therethrough, the discharge end of the elbow extending over the top of said vat.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES D. WOOD.

Witnesses:

FRED P. WATROUS,
 WILLIAM HARBON.