No. 637,685. Patented Nov. 21, 1899.

E. VOCKLER.

AGITATOR FOR LIMING VATS.

Application filed June 13, 1899.)

(No Model.)

Fig. 1.

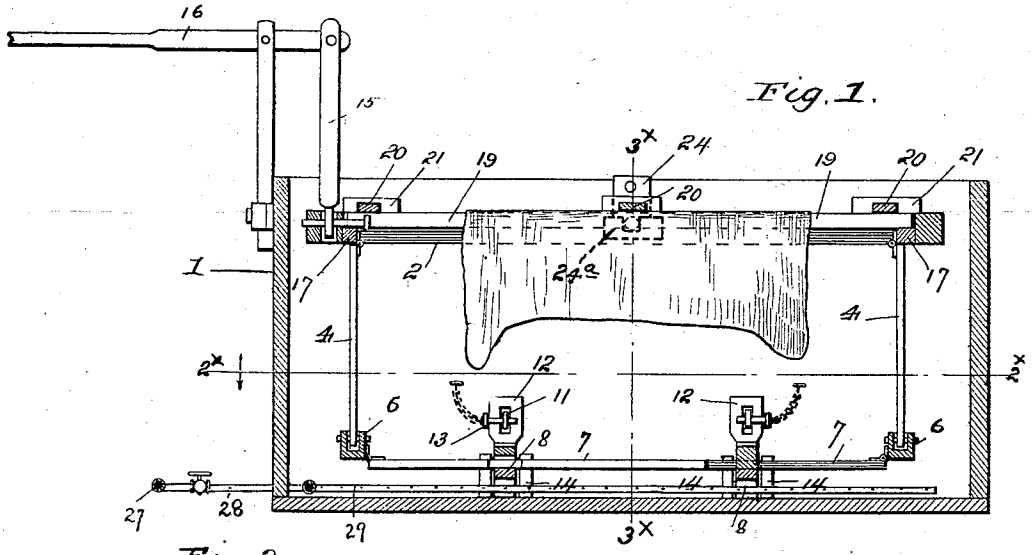


Fig. 2.

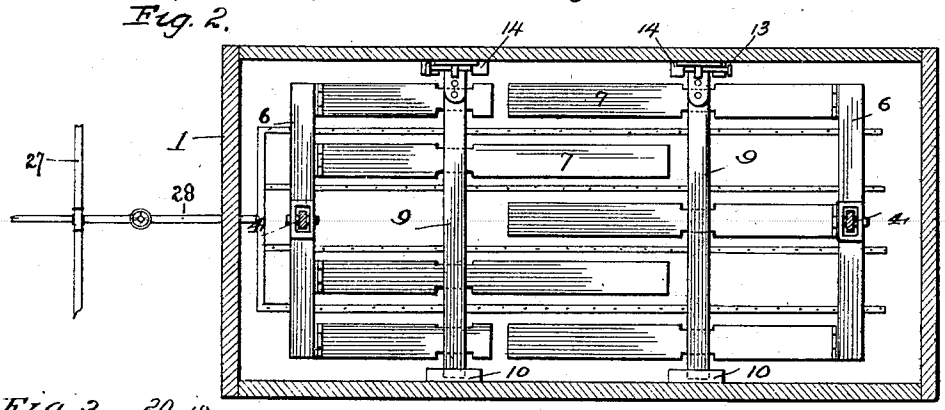
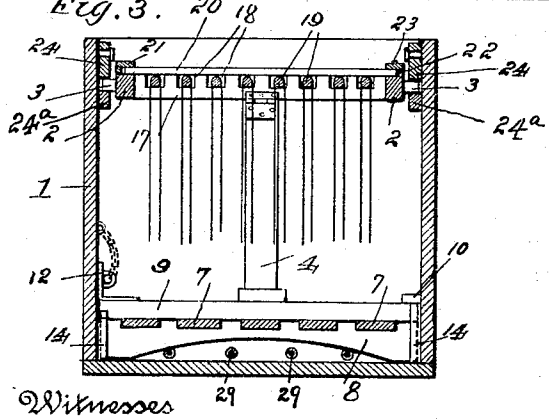


Fig. 3.



Witnesses
G. F. Walmsley.
Thomas Powell

Inventor
Edward Vockler
By Daniel Davis
Attorneys

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UNITED STATES PATENT OFFICE.

EDWARD VOCKLER, OF WHEELING, WEST VIRGINIA.

AGITATOR FOR LIMING-VATS.

SPECIFICATION forming part of Letters Patent No. 637,685, dated November 21, 1899.

Application filed June 13, 1899. Serial No. 720,423. (No model.)

To all whom it may concern:

Be it known that I, EDWARD VOCKLER, a citizen of the United States, residing at Wheeling, county of Ohio, State of West Virginia, have invented certain new and useful Improvements in Liming and Bating Vats, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical sectional view of a tan-vat provided with my improved devices; Fig. 2, a horizontal sectional view on the line $2^{\times}$ of Fig. 1, and Fig. 3 a transverse sectional view on line $3^{\times}$ of Fig. 1.

The object of this invention is to provide apparatus for violently agitating the liming liquor to prevent the lime settling and to keep it evenly distributed through the liquor, so that the hides will be affected uniformly over all their surfaces while in the vat, said apparatus being adapted to be folded and entirely and bodily removed from the vat to facilitate the cleaning of the interior thereof. The apparatus is equally well adapted for bating hides.

Referring to the various parts by numerals, 1 designates the vat, near the open top of which a horizontal rectangular rocking frame 2 is mounted on horizontal trunnions 3, projecting outward from the center of the longitudinal bars of said frame. Hinged at their upper ends to the center of the end bars of this frame and depending therefrom are links 4, which are pivotally connected at their lower ends to transverse bars 6. Hinged to each of these bars 6, at the inner edge thereof, is a set of paddles or agitator-bars 7, which extend inward from said bars 6 and bear pivotally on a transverse bar 8. The inner parts of the paddles of each set extend past the corresponding parts of the paddles of the other set, as shown, the paddles of one set lying between those of the other set and extending practically to the pivotal points or support 8 of the other set. To maintain these paddles in position on the pivot-bars, recesses are cut in said bars, in which the paddles fit, and fastened over the paddles supported by each bar is a retainer-bar 9, which at one end fits in a socket 10 and at its other end is removably held in position by means of a staple 11, slotted plate 12, carried by the bar, and the removable pin 13. The pivot-bars 8 fit at these ends between vertical guides 14, by means of which and the retainer-bars 9 they are removably held in position, and said bars 8 are arched on their under side to permit of a free circulation of the liquid thereunder.

Pivotally connected to one end of the frame 2 is a pitman 15, and to this pitman is connected a lever 16, by means of which the frame may be rocked. The vertical rocking of the frame on trunnions 3 will rock the paddles on the fulcrum-bars, their inner free ends working up and down in opposite directions and thereby causing a violent agitation of the liming and bating liquors. By reason of the overlapping or interlacing of the paddles, so as to bring the ends of those of one set near to the pivotal points of those of the other set, there will be no point in the tank where the lime will be permitted to settle. This is important, because if there is no agitation of the liquor under the pivots or at any other point in the vat lime will accumulate on the bottom at that point.

Secured to the inner side of each end bar of the rocking frame 2 is a bar 17, provided with notches 18, which receive the ends of the hide-supporting bars 19. These bars are held in position by removable cross-bars 20, which at one of their ends fit in sockets 21, carried by the side bars of the frame, their other ends being secured in sockets 22, carried by the other side bar by turn-buttons 23. The trunnions 3 of the rocking frame are removably held in sockets 24^{a}, carried by the vat by blocks 24, removably secured to the inner sides of the vat by suitable removable pins.

When it is desired to clean the vat, the hide-supporting bars are removed and the retaining-bars 9 taken out. The paddle may then by reason of the hinge connections between the paddles and bars 6 and between links 4 and bars 17 be readily swung up to one side out of the vat. The bars 8 may then be removed, leaving the bottom perfectly free to be cleaned. If desired, the blocks 24 may be removed to release pivots 3 and the entire frame 2 be removed from the vat.

A series of perforated pipes 29 may be placed in the bottom of the vat and connected at one end to supply-pipes 27 and 28 for the purpose of aerating the liquor.

I claim—

1. The combination of a vat, a rocking frame supported therein, two sets of pivoted agitator-paddles supported in the receptacle, one set being near each end of the receptacle, the paddles thereof extending inward beyond the center of the receptacle and terminating near the pivots of the paddles of the other set, the paddles of the two sets interlacing between the pivots of the two sets, and a link connecting each set to the adjacent end of the rocking frame.

2. The combination of a vat, a rocking frame supported therein, a link hinged to and depending from each end bar of the rocking frame, vertically-moving cross-bars pivotally hung to the lower end of said links, paddles hinged to each of said bars and extending inward therefrom, a fulcrum-bar for each set of paddles, a retaining device for each set of paddles, the paddles of the two sets interlacing between the two fulcrum-bars.

3. The combination of a vat, two horizontal sets of agitator-paddles therein, one set being pivotally supported at each side of the center of the vat, the paddles thereof extending inward and being pivotally supported about midway their ends, the paddles of each set alternating with and extending beyond the free ends of the paddles of the other set and means for rocking said paddles on their pivotal point.

4. The combination of a vat, means for supporting the hides therein, two sets of agitating-paddles pivotally supported near the bottom of the vat upon transverse fulcrums, the fulcrum of each set being at a point between the ends of the paddles and the adjacent ends of the paddles being free to vibrate vertically in opposite directions, and means for rocking the paddles on their fulcrums simultaneously in opposite directions whereby accumulations of lime will be avoided.

5. The combination of the vat, means for supporting the hides therein, two sets of longitudinal agitating-paddles, each set being pivotally supported transversely, the inner free portions of the paddles overlapping and alternating, and means whereby the paddles are vibrated vertically in opposite directions simultaneously.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 9th day of June, 1899.

EDWARD VOCKLER.

Witnesses:

THOS. O'BRIEN,

WM. M. DORHN, Jr.