

No. 719,713.

PATENTED FEB. 3, 1903.

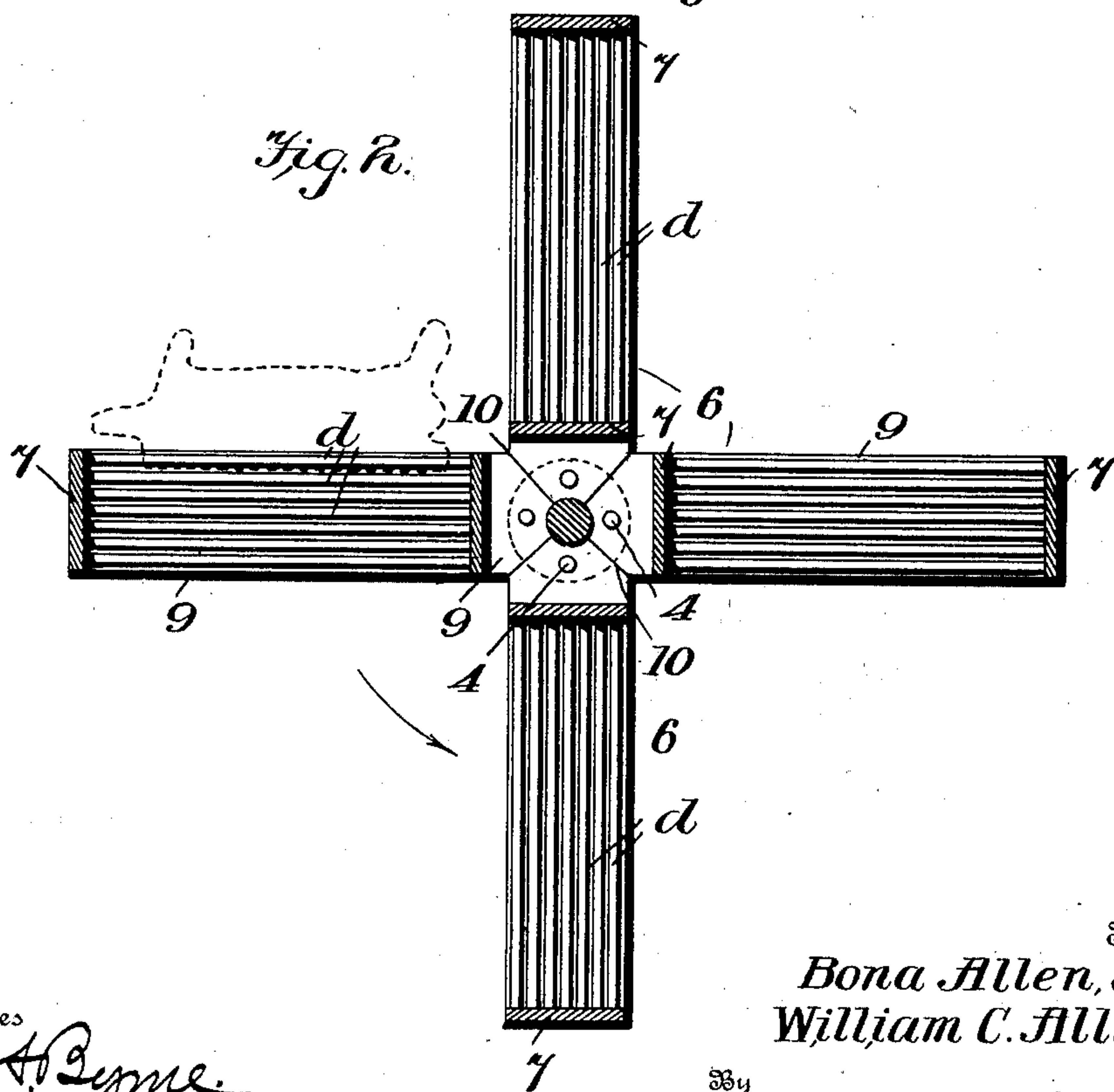
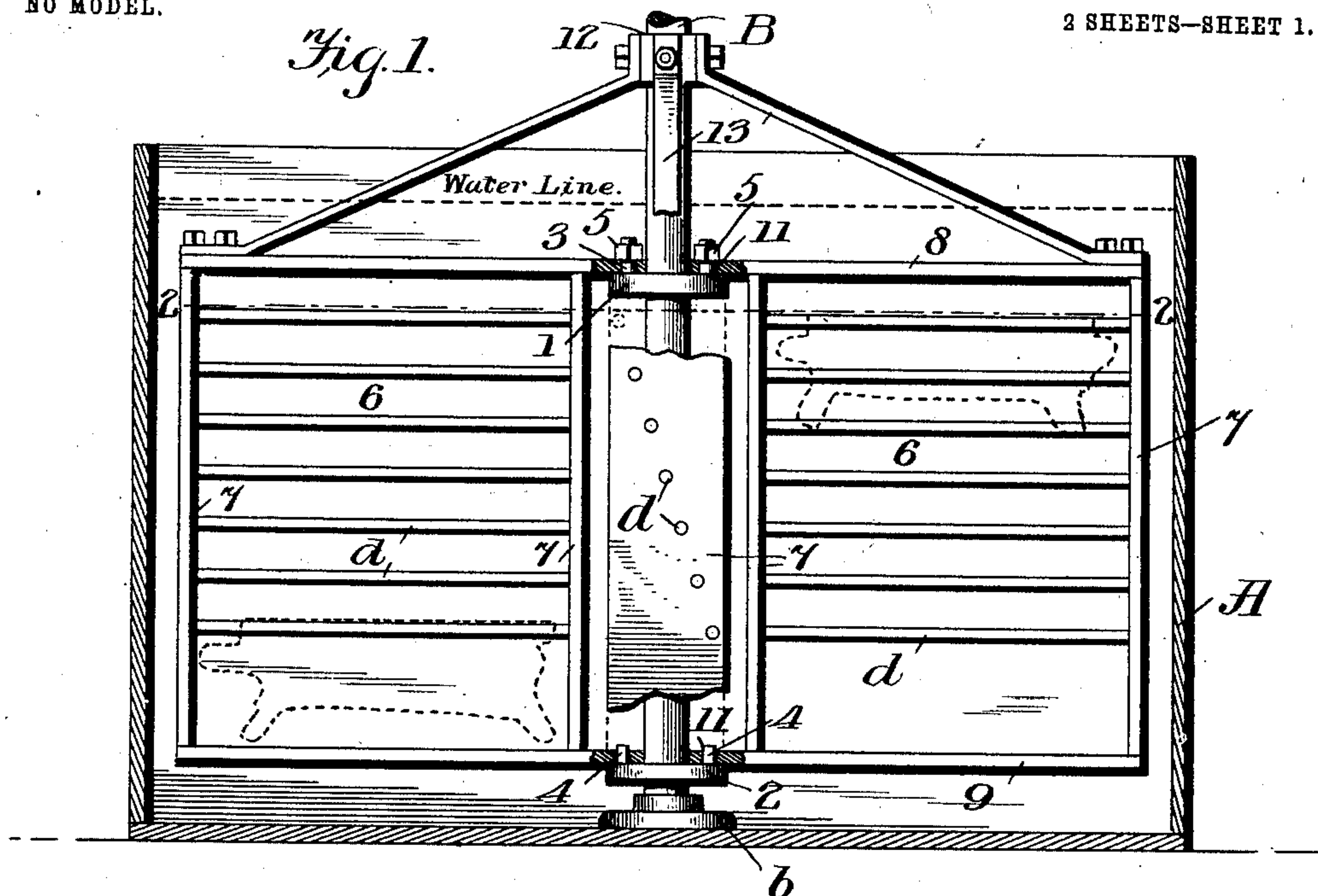
B. ALLEN, JR. & W. C. ALLEN.

TANNING WHEEL.

APPLICATION FILED JUNE 18, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Inventor,

Bona Allen, Jr.
William C. Allen.

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Attorneys

Witnesses

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Geo. A. Byrne.
Stephen Ginst.

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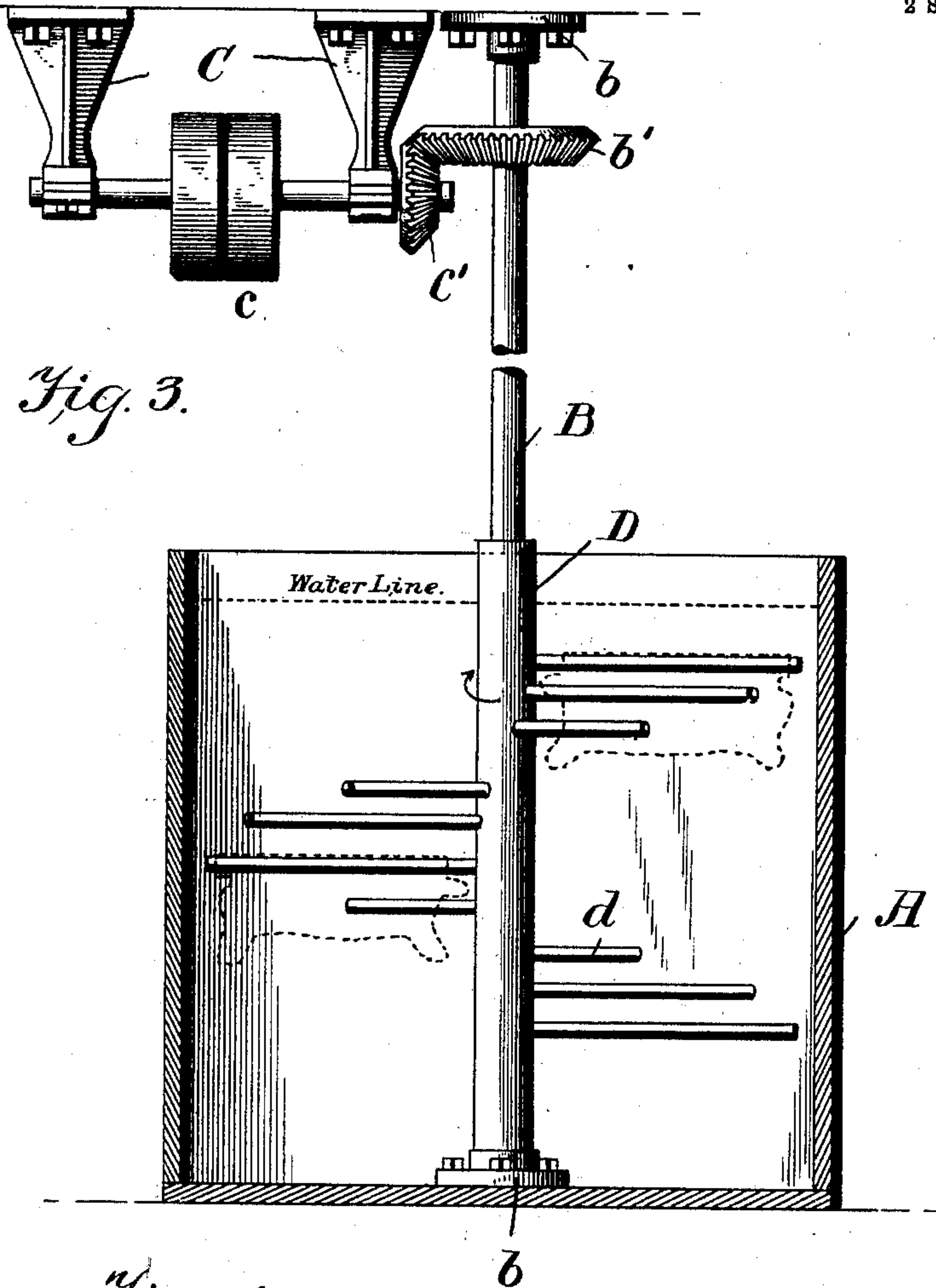
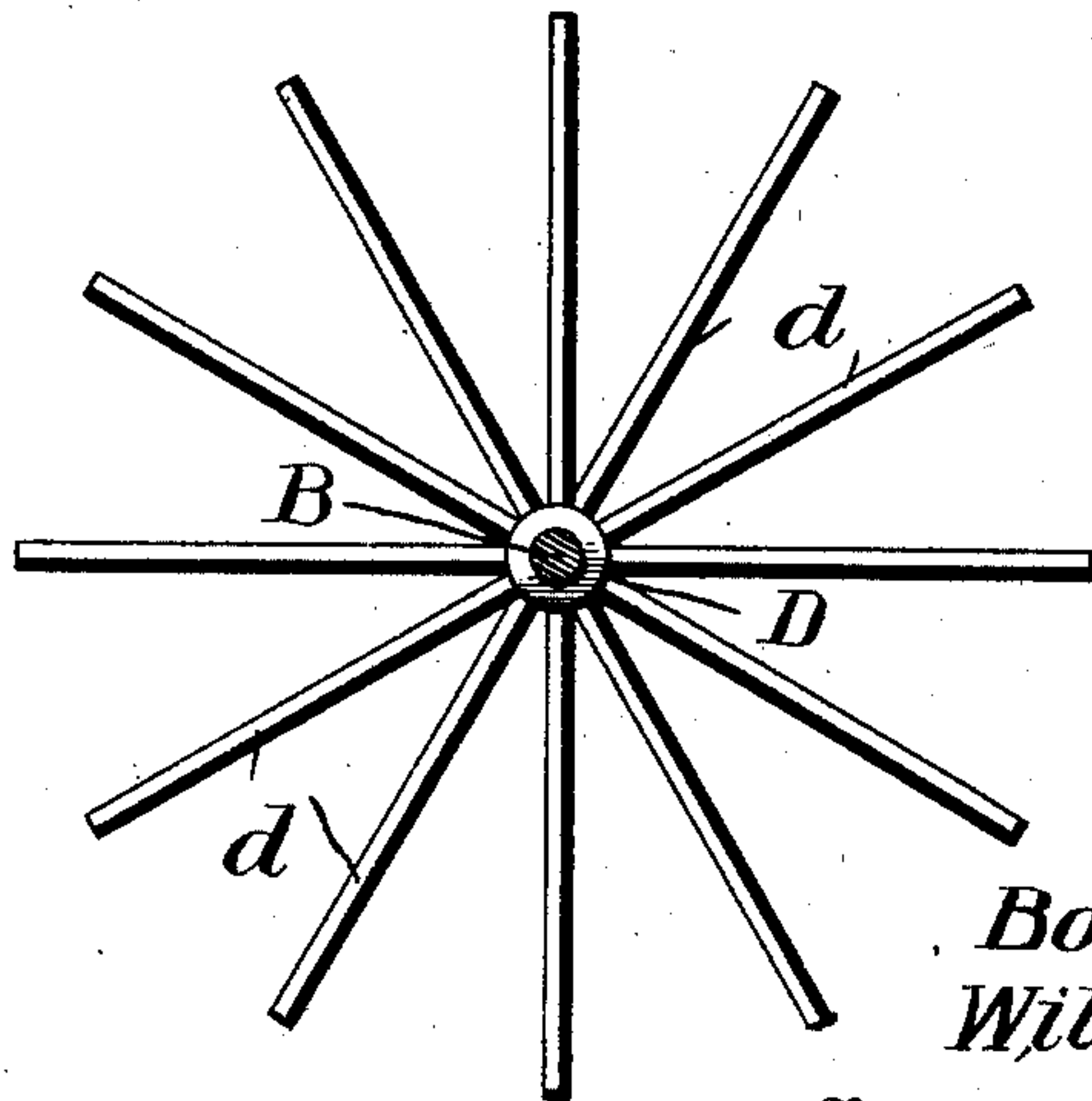


Fig. 4.



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UNITED STATES PATENT OFFICE.

BONA ALLEN, JR., AND WILLIAM C. ALLEN, OF BUFORD, GEORGIA.

TANNING-WHEEL.

SPECIFICATION forming part of Letters Patent No. 719,713, dated February 3, 1903.

Application filed June 18, 1902. Serial No. 112,212. (No model.)

To all whom it may concern:

Be it known that we, BONA ALLEN, Jr., and WILLIAM C. ALLEN, citizens of the United States, residing at Buford, in the county of Gwinnette and State of Georgia, have invented certain new and useful Improvements in Tanning-Wheels; and we do hereby 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.

Our invention relates to improvements in apparatus for tanning hides, skins, and the like, and has for its object to provide a revoluble tanning-wheel which will expose the hides to the uniform action of the tanning liquor.

In our pending application, filed February 27, 1902, Serial No. 95,956, we have shown and described an apparatus with this end in view; but it is often desirable and sometimes expedient that the hides be supported on a vertical revolving axis instead of a horizontal axis, as shown in said prior application, and we have therefore modified the construction of the apparatus to bring about this result.

In order to more fully set forth our invention, reference is had to the accompanying drawings, in which—

Figure 1 is an elevation of our improved apparatus, partly in section. Fig. 2 is a sectional plan of the tanning-wheel on the line 2 2 of Fig. 1. Fig. 3 is a side elevation of a modified form of apparatus, the tanning-vat being shown in section; and Fig. 4 is a plan view of the modified form of tanning-wheel shown in Fig. 3.

A represents the tanning-vat, adapted to be filled with the tanning liquor up to the water-line. (Indicated in Figs. 1 and 3.)

B is a vertical shaft mounted in the bearings *b b*, located centrally of the vat.

Inside the vat the shaft B is provided with the fixed collars 1 and 2, having a plurality of upwardly-extending lugs 3 4. The lugs 3 are screw-threaded to receive the nuts 5.

Supported on the shaft B by the collars 1 and 2 are a plurality of detachable frames 6, comprised of the uprights 7 and the upper and lower cross-pieces 8 and 9. The inner ends of the cross-pieces 8 and 9 project be-

yond the inside upright 7 and are beveled, as at 10, Fig. 2, to secure rigidity of the frame-sections when the wheel is revolved. These projecting ends of the cross-pieces are also provided with apertures 11 to receive the lugs 3 and 4 of the fixed collars 1 and 2. The shaft B is also provided with a suitable collar 12 outside the vat, and to this collar and the outer end of each frame 6 are suitably secured the supporting-braces 13.

Located inside of the frames 6 are the hide-supporting bars *d*. These bars *d* are arranged in a staggered series substantially diagonal of the frame, as clearly shown in Fig. 1, and are secured in any suitable manner to the uprights 7. Upon these bars *d* are hung the doubled hides or skins to be treated, and it is obvious that any number of such hides or skins may thus be hung at one time, limited only by the number of hide-supporting bars. It is also obvious that although we have shown four frames a greater or a less number may be employed, if desired.

The advantage of having the supporting-bars arranged as described is that the bars being located in a staggered series one above the other and yet not in the same vertical plane allows each hide to hang perfectly straight out of contact with the others when the apparatus is not revolving, as illustrated in Figs. 1 and 3, and one of the particular advantages of mounting the hide-supporting bars in the detachable frames 6 resides in the better facilities afforded for loading and unloading the tanning-vat. It is readily apparent by our construction that by unfastening the brace 13 and unscrewing the nuts 5 any of the detachable frames 6 can readily be removed from the vat and the hides taken off or placed upon the hide-bars, as the case may be. Upon power being applied to the shaft B the hides rotate rapidly through the tanning liquor in the direction indicated by the arrows, Figs. 2 and 3, and assume a substantially horizontal position, as in Fig. 2, each hide being parallel to, but separated from, the next adjacent one. It will therefore obviously appear that the hides being entirely submerged the action of the tanning liquor will be uniform, and the entire surface of each hide or skin will at all times be fully exposed to the action of the solution, the objectionable fea-

ture of the hides lapping upon each other being entirely eliminated.

Although we have only shown a limited number of hide-supporting bars for the purpose of simplicity of illustration, this number might readily be increased by placing the bars closer together or increasing the depth of the vat.

It is obvious that instead of securing the hide-bars in the detachable frames these bars could be carried direct by a central post or pillar (not shown) suitably secured to the shaft B. In this construction we would of course dispense with the frames altogether; but the hide-bars would be arranged in staggered groups, as hereinbefore described.

In Figs. 3 and 4 we have shown a modified form of the tanning apparatus. In this construction the bars *d* are disposed in spirally-arranged groups around a sleeve D, fixed to the shaft B.

b' c c' represent mechanism for operating the shaft B, and C represents brackets or journals for supporting the driving-pulley.

Other modifications might be made without departing from the spirit of our invention; but

What we claim, and desire to secure by Letters Patent of the United States, is—

1. In an apparatus for tanning, the combination with a vat, of a vertical shaft rotatable therein, and a plurality of radially-disposed hide-supporting bars carried by said shaft and arranged in staggered groups longitudinally thereof.

2. In an apparatus for tanning, the combination with a vat, of a vertical shaft rotatable therein, a plurality of radially-disposed

detachable frames carried by said shaft and hide-supporting bars carried in said frames.

3. In an apparatus for tanning, the combination with a vat, of a vertical shaft rotatable therein, a plurality of radially-disposed frames carried by said shaft, and a plurality of hide-supporting bars in said frames and disposed diagonally thereof.

4. In an apparatus for tanning, the combination with a vat, of a vertical shaft rotatable therein, collars fast to said shaft, a plurality of detachable frames suspended from said collars, and hide-supporting bars diagonally arranged in said frames.

5. In an apparatus for tanning, the combination with a vat, of a vertical shaft rotatable therein, a plurality of radially-disposed frames having projecting cross-pieces provided with beveled ends, suspended from said shaft, and hide-supporting bars arranged diagonally in said frames.

6. In an apparatus for tanning, the combination with a vat, of a vertical shaft rotatable therein, collars fast to said shaft, upwardly-projecting lugs on said collars, a plurality of radially-disposed frames having projecting cross-pieces, provided with apertures therein adapted to engage said lugs and detachably support said frames, and a plurality of hide-supporting bars carried in said frames.

In testimony whereof we affix our signatures in presence of two witnesses.

BONA ALLEN, JR.
WILLIAM C. ALLEN.

Witnesses:

T. CLIFF MAYSON,
E. L. LOCHHART.