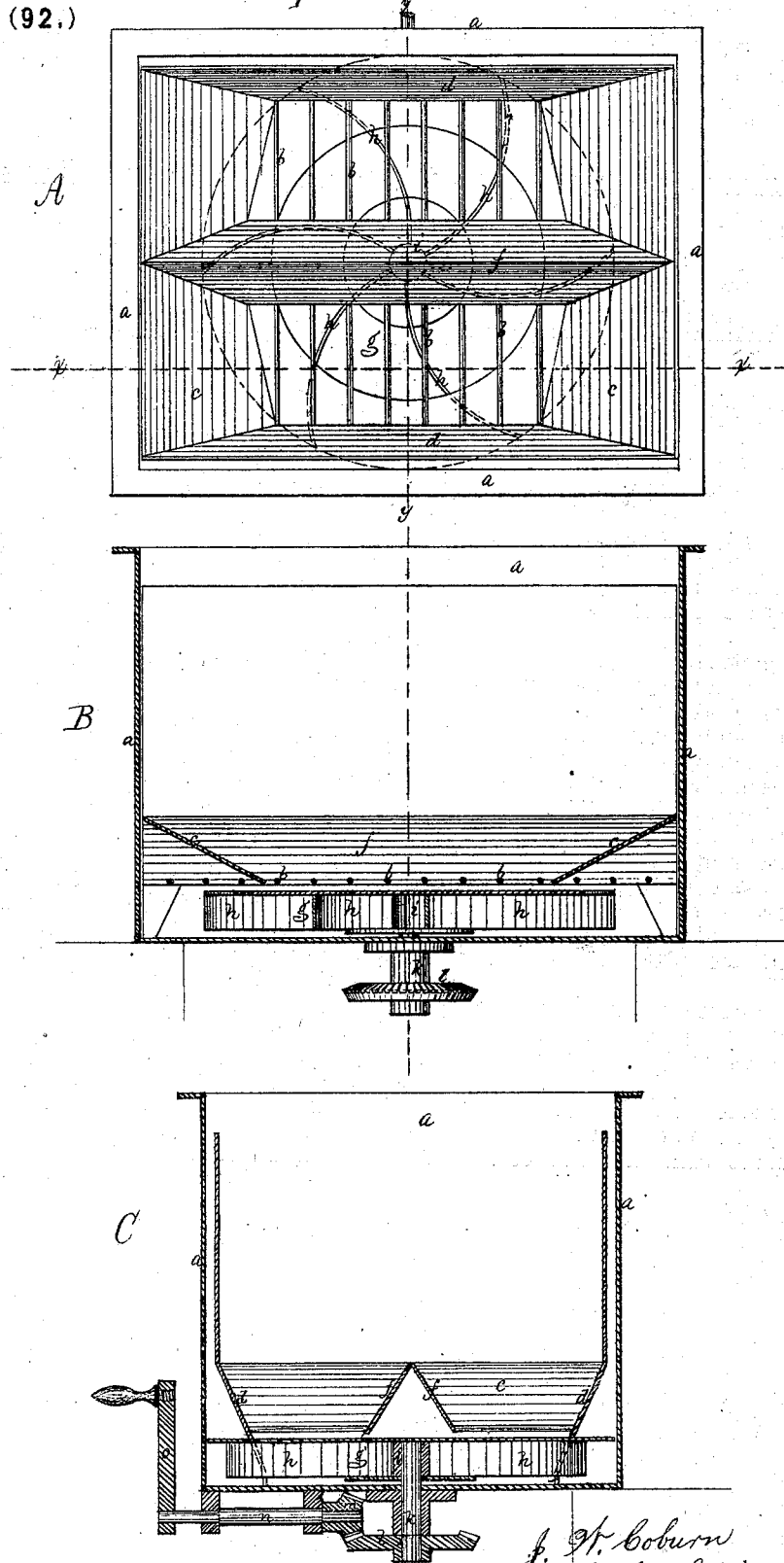


No. 122,157.

J. W. Coburn. Patented Dec. 26, 1871
Impt in Tanner's Vats.

(92.)



Witnesses { *L. B. Kidder.*
Mo. W. Frothingham.

J. W. Coburn
By his Atty's
Crosby, Harbott & Gould

UNITED STATES PATENT OFFICE.

JOSEPH W. COBURN, OF EAST WALPOLE, MASSACHUSETTS.

IMPROVEMENT IN TANNING-VATS.

Specification forming part of Letters Patent No. 122,157, dated December 26, 1871.

To all whom it may concern:

Be it known that I, JOSEPH W. COBURN, of East Walpole, in the county of Norfolk and State of Massachusetts, have invented an Improvement in Tanning-Vats; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to an improvement in tanning-vats, which improvement is designed to accelerate the tanning process by creating a circulation of the tannin and preventing its deposition, and thereby subjecting all parts of the skins equally to the action of a liquid of equal strength. My invention consists, primarily, in combining with a tanning-vat a horizontal rotary wheel placed in the bottom of the vat, the construction of the wheel itself, or of the wheel and the vat, being such that the rapid rotation of the wheel drives the liquid upward and in a current or currents against all the surfaces of the skins suspended in the liquid.

The drawing represents a vat embodying the invention. A shows a plan of the vat; B and C, sectional elevations on the respective lines *x x* and *y y*.

a a denote the side walls of the vat; *b b*, horizontal cross-bars at the bottom of the vat, which bars may terminate with side inclines *c d* (ex-

tending from the bars to the side walls, or to vertical partitions *e*) and with center inclines *f*. Under the bars *b* is the horizontal wheel *g*, having radial or radially-curved blades or spokes *h* fixed to and projecting from a hub, *i*, on a vertical shaft, *k*, journaled in suitable bearings. This shaft is driven by any suitable power, that shown in the drawing consisting of a bevel-gear, *l*, into which meshes a pinion, *m*, on a shaft, *n*, driven by a crank-handle, *o*.

The vat being charged with liquid and tannin and filled with skins, (suspended upon suitable rack-bars at the top of the vat,) rotary motion is imparted to the wheel *g*, and this motion drives the liquid centrifugally against the inclines and against the side walls, causing it to flow upward, and creating upward and downward currents, thereby keeping the tannin in circulation throughout the liquid and the liquid in circulation around and over the surfaces of the skins.

The partitions *e* form vertical spaces *q*, through which the liquid is driven upward, said partitions not reaching to the top of the vat, and the liquid consequently flowing inward over their tops toward the center of the vat.

I claim—

A horizontal liquid-circulating wheel, *g*, in combination with a tanning-vat.

Witnesses: JOSEPH W. COBURN.

J. B. CROSBY,
L. H. LATIMER.

(92)