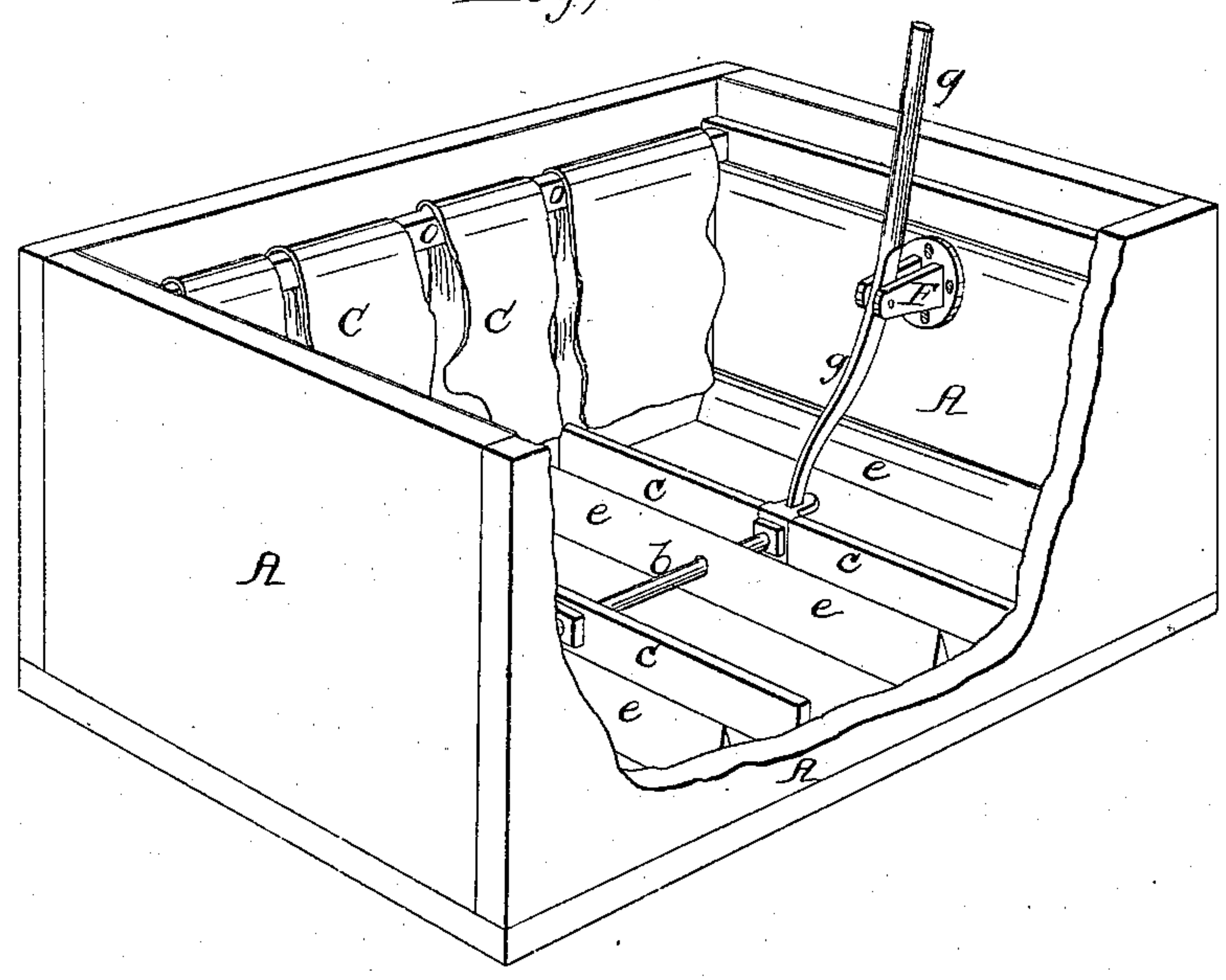


W. P. MARTIN.
VAT FOR TANNING.

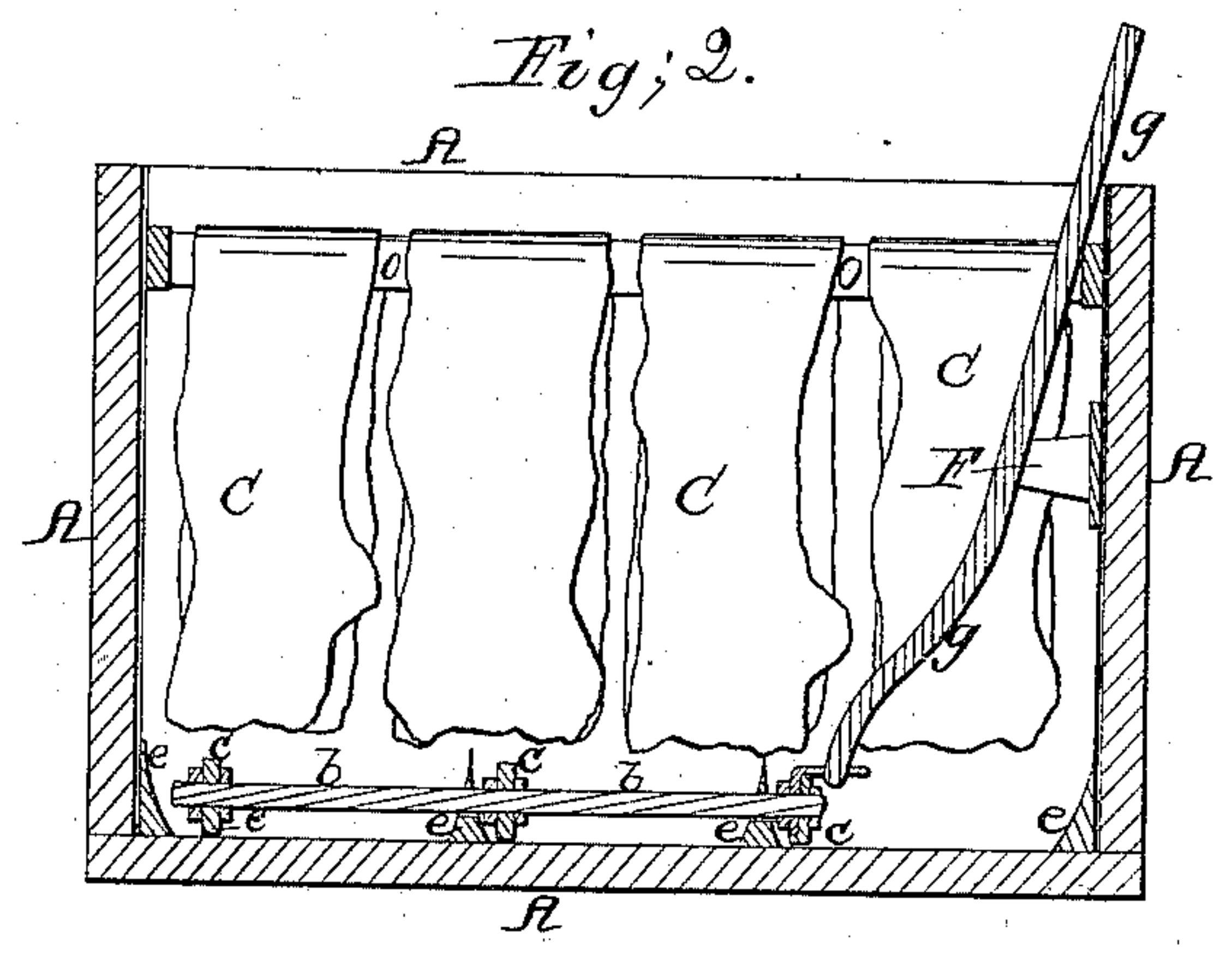
No. 33,203.

Patented Sept. 3, 1861.

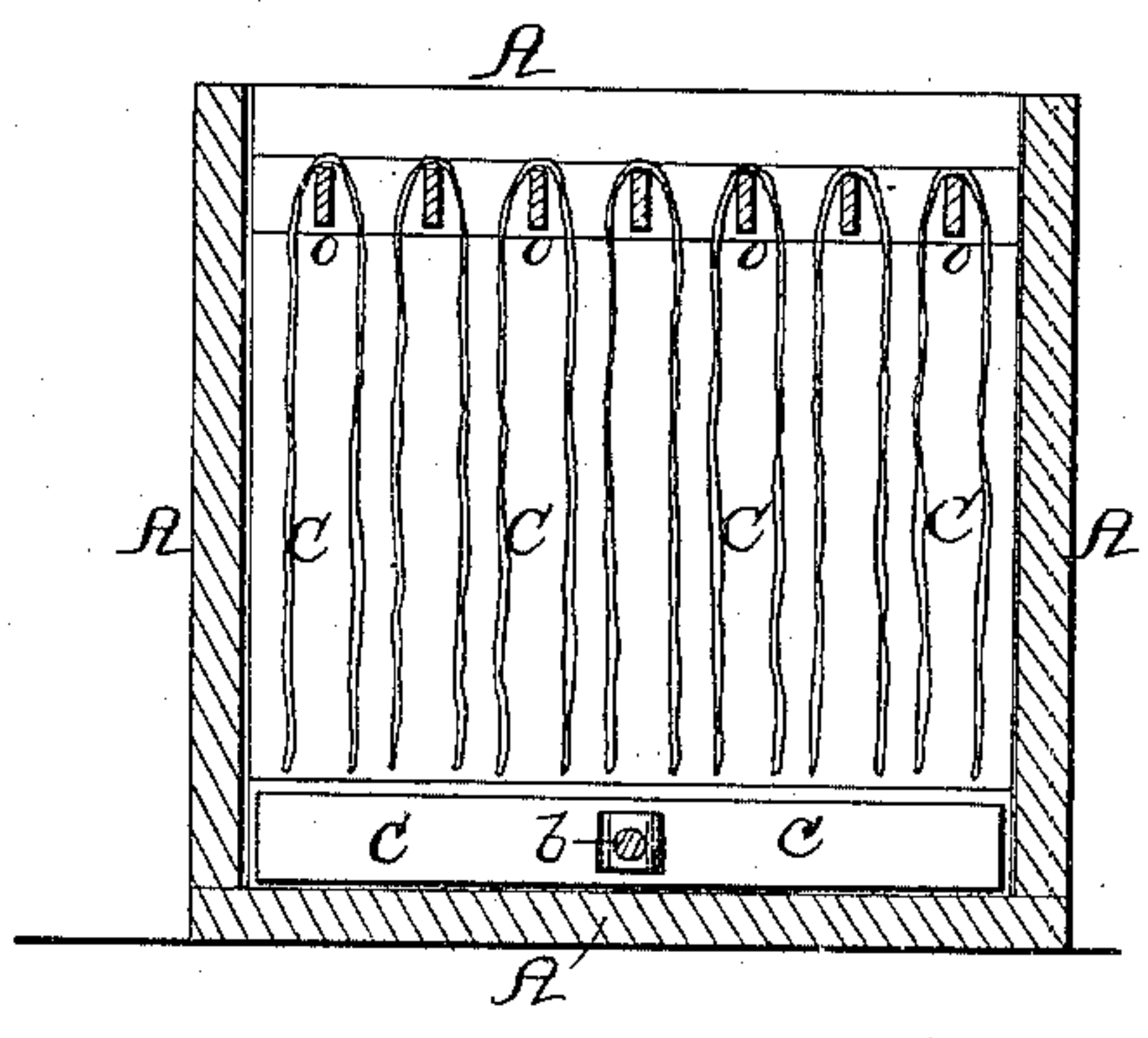
Fig; 1.



Fig; 2.



Fig; 3.



Witnesses;
Frederick A. Gray
Stephen M. Gardner

Inventor;
William P. Martin

UNITED STATES PATENT OFFICE.

WILLIAM P. MARTIN, OF SALEM, MASSACHUSETTS.

IMPROVEMENT IN APPARATUS FOR STIRRING TAN-VATS.

Specification forming part of Letters Patent No. 33,203, dated September 3, 1861.

To all whom it may concern:

Be it known that I, WILLIAM P. MARTIN, of Salem, of the county of Essex, in the State of Massachusetts, have invented a new and useful Stirring Apparatus for Vats for Tanning Leather, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this application.

My invention relates to a novel method of agitating the liquor in vats for tanning leather; and my invention consists in the employment of stationary deflecting-bars arranged in the bottom of the vat in combination with agitating-bars arranged on a sliding bar or bars operated by a hand-lever extending up from the side of the vat, as will be all fully explained hereinafter.

To enable those skilled in the art to make and use my invention, I will proceed to describe the construction and operation of my improved apparatus, referring by letters to the accompanying drawings, in which—

Figure 1 is a skeleton perspective view of a vat embodying my invention. Fig. 2 is a vertical longitudinal section of the same, and Fig. 3 is a vertical lateral section of the same.

I have shown the vat with one side broken out at Fig. 1, to illustrate more clearly the internal arrangement, and have in said figure and also in Fig. 2 shown only one set of hides to avoid complication in the drawings.

In the several figures the same letter indicates the same parts.

A is the vat or box which contains the liquor into which the hides are immersed.

C are the hides, which are suspended over a series of bars *o*, arranged longitudinally at the top of the vat and parallel with each other in a manner well known.

On the bottom or floor of vat A' are arranged or fixed four deflecting-bars *e e e e* laterally and parallel (to each other) about equidistant. The central two of these bars *e* are each wedge or triangularly shaped, (in a vertical cross-section, as seen at Figs. 1 and 2, while the other two of said bars are half-wedge shaped, being in the corners of the vat, as illustrated.

b is a sliding rod, which is operated by a hand-lever *g*, pivoted near its center to a stand *F* projecting from one side of the vat A.

On the rod *b* are secured by nuts (or otherwise) three slats or flat bars *c*, arranged parallel to the bars on deflectors *e*. (See Figs. 1 and 2.) By moving the upper end of the lever *g* back and forth in the directions indicated by the arrows at Fig. 2, the rod *b* will be reciprocated in its bearings, (formed in the deflecting-bars *e*), causing the bars *c* to move back and forth between the bars *e*. It will be observed that the hides are hung so that their lower extremities or sides do not come down to the bars or in the way of the stirring apparatus.

The operation of the above-described apparatus is thus explained briefly, so as to be fully understood, the vat being filled with the liquor and hides C. When it is desirable to stir up the sediment in the liquor and cause the tannin to float up to enter the pores of the hides, it is only necessary to move the handles *g* back and forth a few times, whereby the agitating-bars *c* will be reciprocated and the liquor agitated at the bottom of the vat. The wedge shape of the deflecting-bars *e* will cause the sediment to be deflected upward and thrown up between the hides and into the body and upper portion of the mass of liquor.

It will be seen that by the mechanism described (which is exceedingly simple and economical) a perfect circulation through the mass of liquor of the sediment is effected at pleasure by simply moving the handle *g* at the top of the vat.

Having described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

The employment in the vat A of the deflecting-bars *e* and agitating-bars *c*, the whole constructed and operating substantially as described, for the purpose set forth.

In testimony whereof I have hereunto set my hand this 7th day of June, 1861.

WILLIAM P. MARTIN.

Witnesses:

FREDERICK A. FRYE,
STEPHEN W. GARDNER.