

C. H. MANNING.

Tan-Vats.

No. 135,232.

Patented Jan. 28, 1873.

Fig. 1.

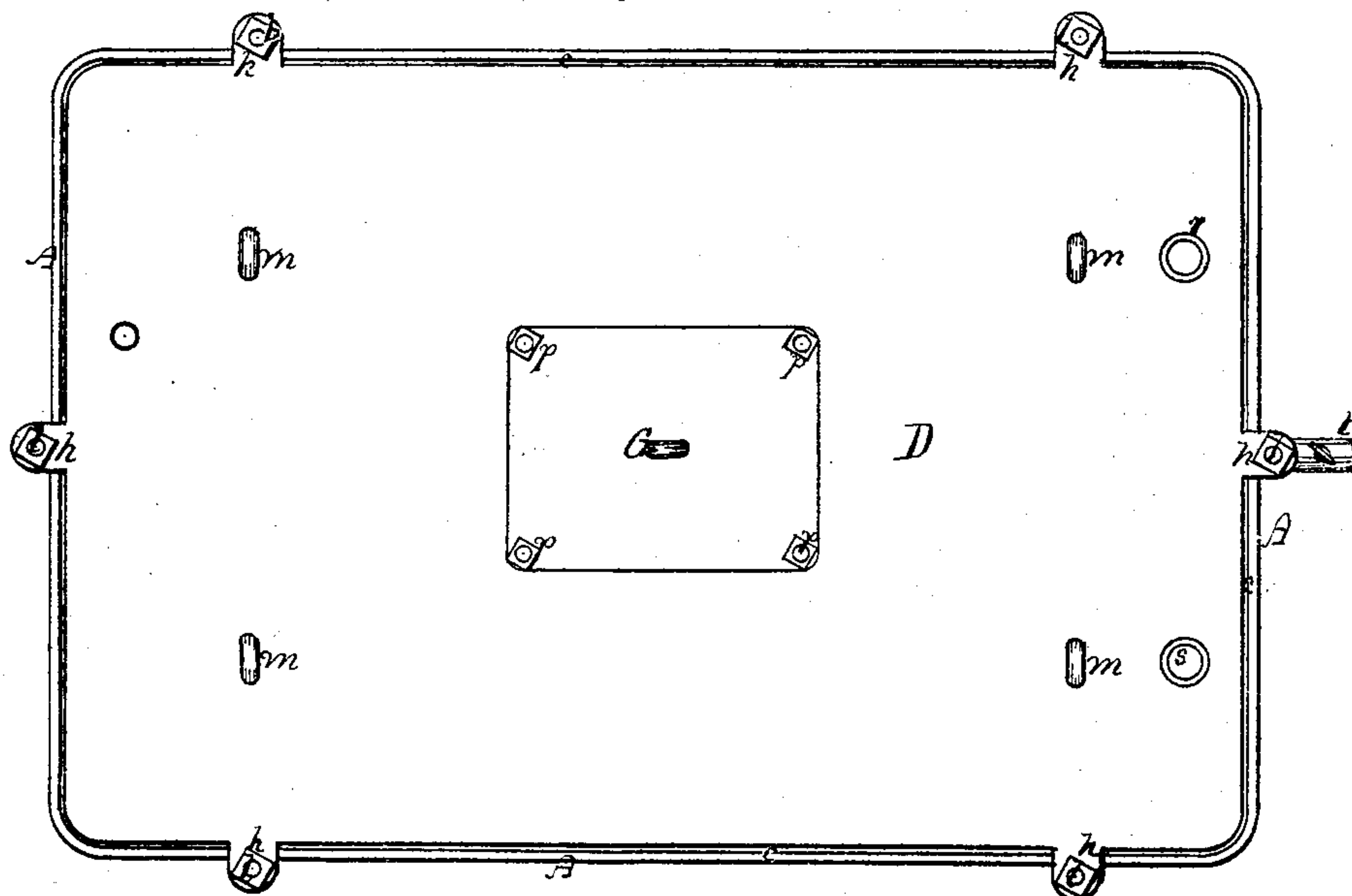


Fig. 2.

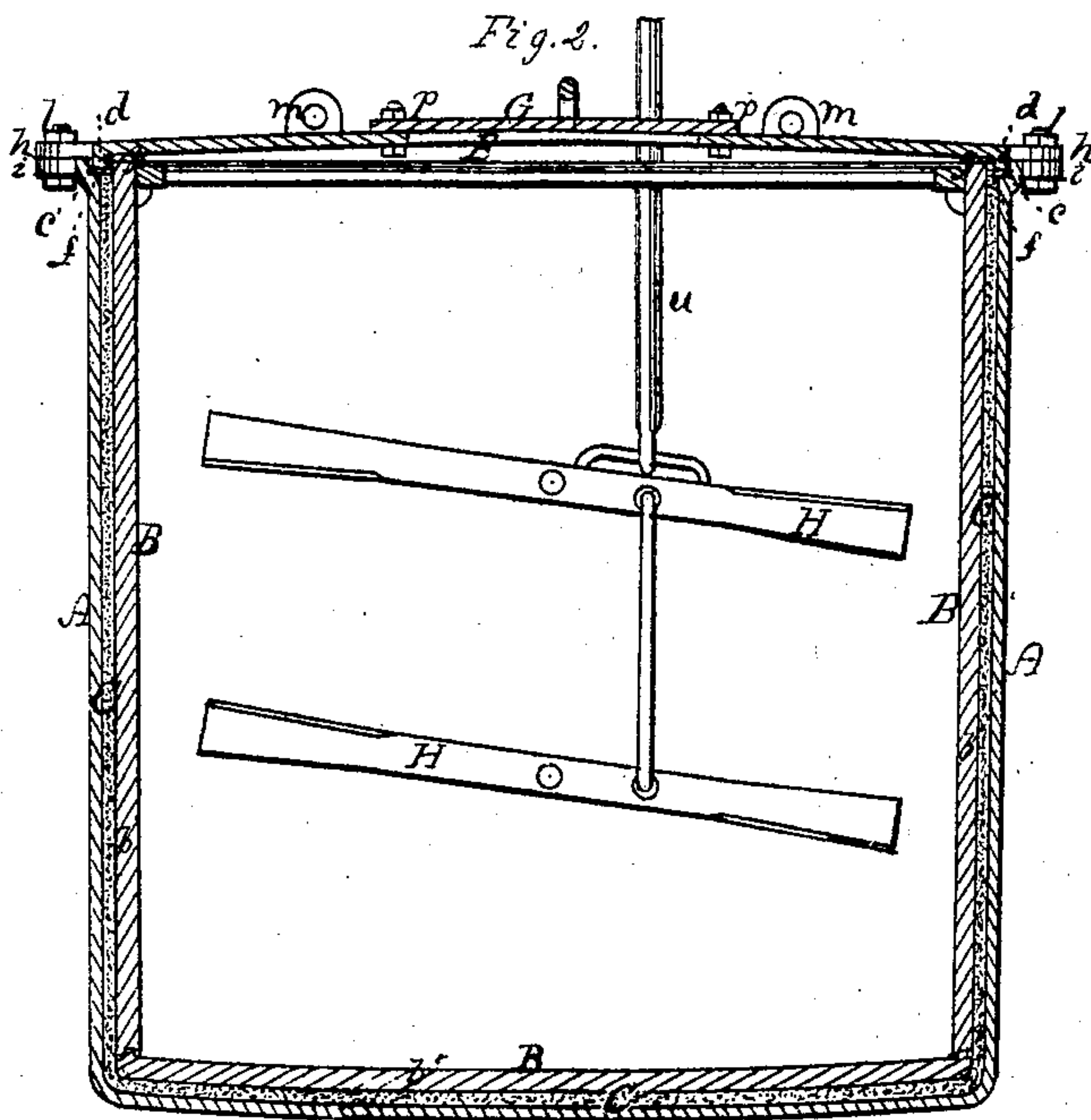
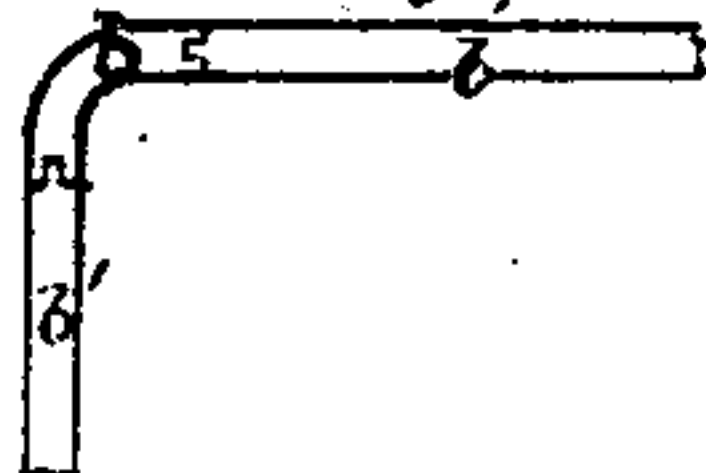


Fig. 3.



Witnesses,

J. I. Brown,
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Inventor,

Chas. H. Manning

UNITED STATES PATENT OFFICE.

CHARLES H. MANNING, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN TAN-VATS.

Specification forming part of Letters Patent No. 135,232, dated January 28, 1873.

To all whom it may concern:

Be it known that I, CHARLES H. MANNING, of Washington, in the county of Washington and District of Columbia, have invented an Improved Tan-Vat; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making part of this specification—

Figure 1 being a top view of the vat; Fig. 2, a transverse vertical section of the same; Fig. 3, view of a part detached.

Like letters designate corresponding parts in all of the figures.

My improved tan-vat, though applicable for other processes of tanning, is especially intended to be used with the vacuum and pressure process or processes of tanning. The main feature of the invention consists in the construction of the vat of cast-iron, lined inside with a thickness of wood and a layer of pitch, tar, asphaltum, cement, or equivalent substance that will secure the surface of the iron from contact with the tan-liquor. This construction not only affords extraordinary strength and durability, but especially renders the vat impervious to air and water, so that the production of a vacuum or compression therein is always sure and perfect.

Let A in the accompanying drawing represent the cast-iron vat. It is preferably rounded at the corners, and the bottom is slightly curved or concave, as also may be the sides, which are a little flaring so that the pattern will draw readily from the sand of the mold. The wooden lining B is properly made of boards tongued and grooved together. The corners are made of separate pieces *b b*, Fig. 3, curved, as shown, to conform with the corners *a a* of the cast-iron body. Their vertical edges are grooved or tongued to receive tongues or grooves at the contiguous edges of the side boards. Between this wooden lining and the cast-iron body is a space, C—say half an inch thick—to be filled with pitch, tar, asphaltum, cement, or other suitable substance which will completely shield the surface of the iron from oxidation and consequent discoloration of the leather. The inner surface of the iron may be enameled, if preferred, or galvanized. The

cover D also is made of cast-iron, and may be lined with wood and a layer of pitch or its equivalent between it and the wood in the same way as the vat, or it may be simply enameled or galvanized on the under side, since it is little exposed to the tan-liquor, and it is lighter to handle without the lining. It has a rim, *d*, extending downward to fit into a groove, *e*, in the top edge of the vat, which groove is formed between the cast-iron body and the wooden lining thereof. The rim has India-rubber packing-gaskets *f g*, and it is packed around with bar soap. The cover may be made wholly of wood in two or more thicknesses, with intermediate lead and water-proof paper packing between them. It is fastened down upon the vat by any suitable means, as by flanges *h h i i* cast thereon, and screw-bolts *l l*. Ears or loops *m m* may be cast on the cover to lift it by. A man-hole, E, is formed in the cover, covered by a plate, G, fastened to the cover by bolts *p p* or their equivalent. A tube or pipe, *r*, for an exhausting and condensing pump is cast or secured in the cover or vat side. Another pipe, *s*, for a safety-valve and pressure-gage is also cast or secured therein. A pipe or outlet, *t*, is formed in the vat at or near the bottom, through which the tan-liquor is introduced and again drawn off. Agitators H H, for stirring the tan-liquor within, are mounted inside of the vat, to be operated by means of a connecting-rod, *u*, working through the cover, surrounded by a packing or a stuffing box to keep all tight within. Thus access can be had to the inside of the vat, and the agitation of the liquor therein can be effected without removing the packed cover D from the vat.

What I claim as my invention, and desire to secure by Letters Patent, is—

A tan-vat made of cast-iron lined inside with wood and with a layer or thickness of pitch, tar, asphaltum, or their equivalent between the iron and wood, substantially as and for the purposes herein specified.

CHAS. H. MANNING.

Witnesses:

JAS. BROWN,

E. M. GALLAHER.