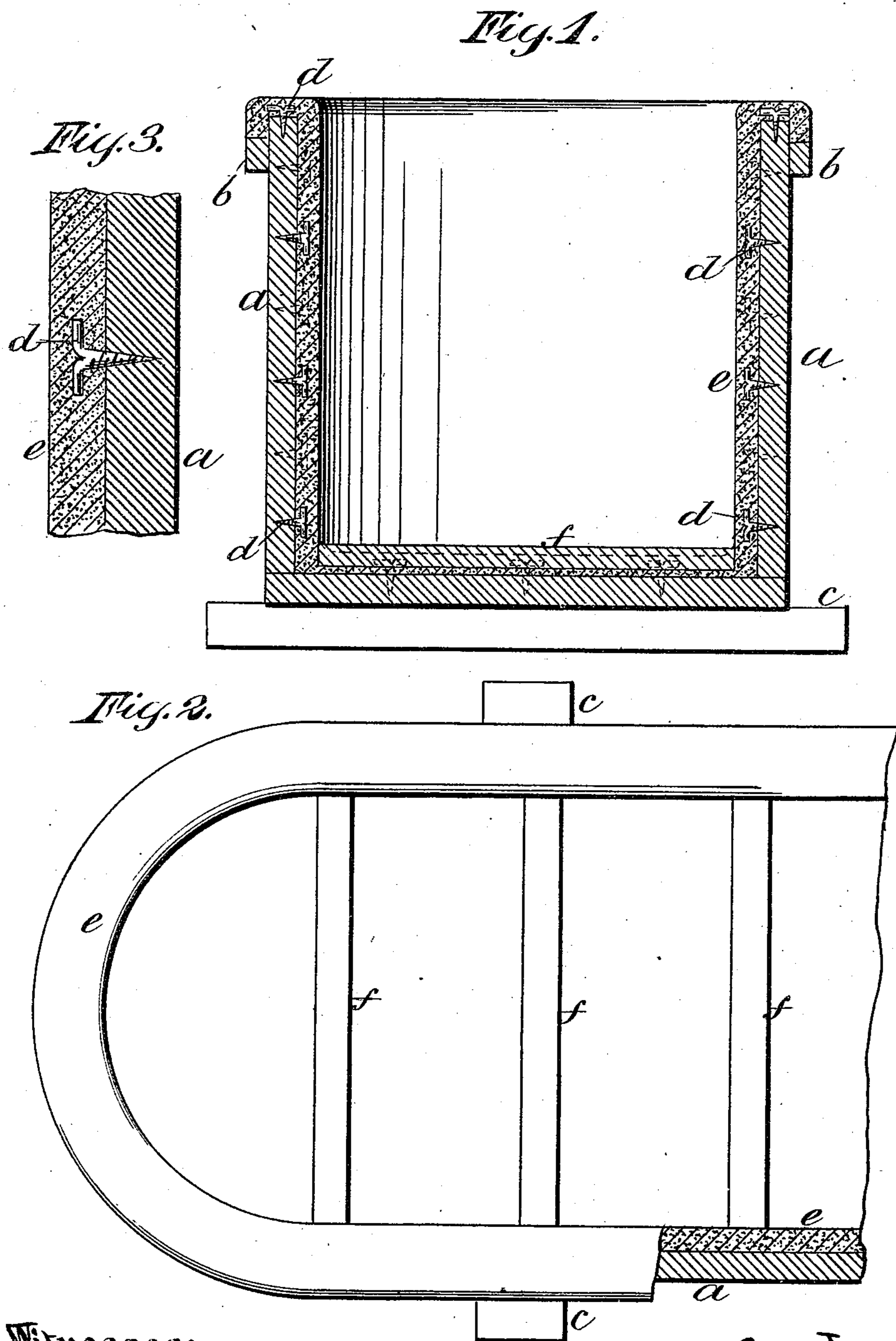


(No Model.)

G. LIEBAU.  
PICKLING TANK.

No. 512,725.

Patented Jan. 16, 1894.



Witnesses:  
W. W. Gardner,  
Charles C. Peters.

Inventor:  
Gustav Liebau  
by *Emmanuel*  
his Atty.

# UNITED STATES PATENT OFFICE.

GUSTAV LIEBAU, OF MOSCOW, RUSSIA.

## PICKLING-TANK.

SPECIFICATION forming part of Letters Patent No. 512,725, dated January 16, 1894.

Application filed June 15, 1893. Serial No. 477,648. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAV LIEBAU, a subject of the Emperor of Germany, residing at Moscow, in the district of Moscow and Empire of Russia, have invented certain new and useful Improvements in Pickling-Tanks, of which the following is a specification.

This invention relates to certain new and useful improvements in pickling tanks, or receptacles designed to contain the acid pickling or cleaning baths, in which metal or metal articles are cleaned, prior to an enameling, galvanizing, or other coating operation, and subsequent to a casting operation.

It is the object of my invention to construct a tank, which shall be economical, durable, not liable to breakage, and portable, when desired.

To these ends, therefore, my said invention consists in a tank provided with an inner coating of asphalt or asphaltum, or asphaltum composition as hereinafter more particularly described and pointed out in the claims.

Referring to the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1, is a vertical cross section of one of my improved tanks. Fig. 2, is a fragmentary top plan view thereof, with a portion of the upper rim broken away; and Fig. 3, is an enlarged fragmentary sectional view of Fig. 1.

*a*, is a wooden tank frame, of any desired size and shape, provided on the outside, near the top, with a shoulder or bead *b*. The tank rests usually upon the beams *c*, lying on the floor, although this is immaterial, and said tank may be mounted on rollers or wheels, so as to be easily portable.

The entire inner surface of tank *a* is studded with any suitable headed projections *d*, and I have used the double headed hooks shown, and ordinary wood screws with equally good results. These projections are driven or screwed about half their length into the wood work of the tank, and form the locking mediums for the coating.

The inner surface of the tank is provided with a coating *e*, of asphaltum, applied with an ordinary mason's trowel, and this coating, which preferably extends over and protects the top of the tank, and ends on the shoulder or bead *b*, may be applied to any thickness desired, or as may be necessary, varying from

the fraction of an inch for very light work, to four, five or six inches in thickness for heavy work.

In pickling metal sheets, and other articles having sharp edges, the coating at the bottom of the tank would soon be broken and destroyed, and to obviate this, I first coat the bottom with a comparatively thin layer of asphaltum, and then lay on this bottom a number of wooden strips or pieces *f*, projecting slightly above said bottom coating, and forming a protection therefor, and when said strips become worn and damaged, they may readily be removed and new ones placed in the grooves left in the coating by such removal.

It will be apparent from the foregoing, that by my invention I am enabled to construct a pickling vat or tank, with a coating absolutely impervious to the acid of the bath; that such coating is firmly locked in place, and that the bottom coating is protected from injury by the cross-strips described. I do not, however, desire to limit myself to a portable or a wooden tank, as the coating can be applied to vats or tanks of masonry, and other materials.

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

1. A pickling vat or tank provided internally with a number of projections, surrounded by a coating of asphaltum or asphaltum composition, substantially as described.

2. A pickling vat or tank provided internally with a number of projections surrounded by a coating of asphaltum, and protecting strips for the bottom coating, substantially as described.

3. A pickling vat or tank, having externally and near the top, a shoulder or bead, and provided internally with a number of projections, in combination with a coating of asphaltum surrounding said projections, covering the edges of the tank, and ending on the shoulder or bead thereof, substantially as described.

Signed at Chicago, in the county of Cook and State of Illinois, this 6th day of June, A. D. 1893.

GUSTAV LIEBAU.

Witnesses:

JULIUS RODBERTUS,  
FRED M. SCHMIDT.