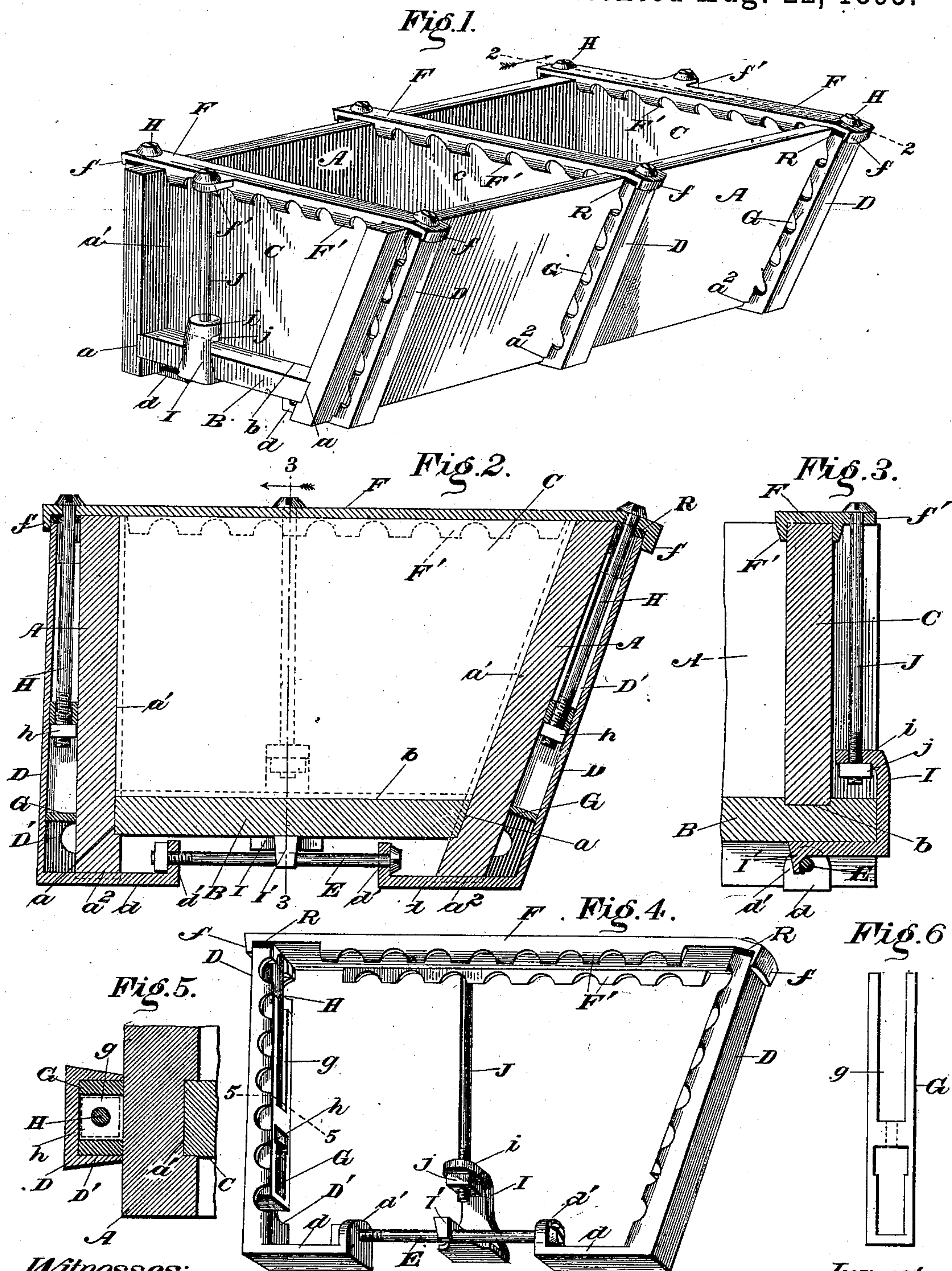


(No Model.)

F. RASNER.
WASHTUB.

No. 503,913.

Patented Aug. 22, 1893.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK RASNER, OF BANGOR, ASSIGNOR TO CHARLES SHUMAN, OF BATH,
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WASHTUB.

SPECIFICATION forming part of Letters Patent No. 503,913, dated August 22, 1893.

Application filed May 1, 1893. Serial No. 472,536. (No model.)

To all whom it may concern:

Be it known that I, FRANK RASNER, of Bangor, Northampton county, and State of Pennsylvania, have invented certain new and useful Improvements in Slate Washtubs, &c., of which the following is a specification, reference being had to the accompanying drawings, which form part of this specification, by letters of reference marked thereon.

10 This invention relates to the manufacture of tubs, boxes, &c., out of slate or stone, and its object is to make such utensils without perforating the slate or stone and yet holding the parts thereof rigidly together making wa-
15 ter-tight joints, and to allow for expansion and contraction of parts.

The invention therefore consists principally in the novel manner and means of clamping the parts of the tub or box, &c., together,
20 and I have illustrated a double compartment wash tub in the drawings, in which—

Figure 1 is a perspective view of the tub. Fig. 2 is a transverse vertical section through the same (enlarged). Fig. 3 is a detail verti-
25 cal section through one of the end clamps. Fig. 4 is a perspective view through one set of clamps. Fig. 5 is a detail cross-section through a clamp. Fig. 6 is a detail view of a wedge block.

30 Referring to said drawings by letter: A, A, designate the sides of the tub and B the bottom thereof. The sides are longitudinally grooved near their lower edges as at *a* to receive the side edges of the bottom.

35 C, C, are the ends the edges of which are received in proper grooves *a'* and *b*, in the sides and bottom as indicated in the drawings. *c*, is an intermediate partition fitted between the sides like the ends.

40 The parts are bound together by means of adjustable clamps, constructed as follows: D, D, designate metallic uprights as long as the sides of the tub are wide, and fitted there-against opposite the ends of the partition and
45 end pieces, as shown. The lower ends *d* of these uprights are bent substantially at right angles to underlie the tub, and the ends *d* of adjoining but opposite uprights D are connected by bolts E, which pass through perforated
50 upturned ears or eyes *d'* on the extremities of parts *d*. By using bolts as shown the lower

ends of the uprights can be adjusted toward or from each other. The vertical portions of the uprights D are longitudinally grooved in their inner faces as at D' the grooves being
55 deeper at bottom than at top. These grooves may be formed by casting tapered side flanges on the uprights, as indicated in the drawings, or in any other desired manner.

F designate top bars overlying the ends C
60 and over-reaching the tops of adjoining uprights D, having lips *f* on their extremities which catch over the ends of the uprights and thus tie the latter together. The bars are preferably either grooved or have lateral
65 flanges F' which embrace the top edges of ends C, and partition *c*, to assist in holding them in place.

G, G, are wedge blocks fitted in grooves D' of uprights D, and H designate screw bolts
70 passed through openings in the ends of bars F and engaging the wedge blocks so that by tightening the screws the wedge blocks are raised.

As shown the threaded ends of bolts H en-
75 gage nuts *h*, which are confined in slots *g* in the wedge blocks. Now when bolts H are tightened they draw blocks G toward bars F, and consequently bind the latter tightly in
80 place. At the same time the blocks wedging between uprights D and the sides of the tub force the sides toward each other, as the up-
rights cannot be separated as they are tied together at top by bars F, and at bottom by
85 bolts E. And the more the bolts are tightened the closer will the sides be drawn toward each other until perfectly tight joints are made between them and the ends C, and
bottom. It will be observed that wedge blocks G and bolts H are the means also of tying the
90 bars F to the uprights, and therefore these wedges cause both lateral and vertical compression of the clamps. By adjusting bolts
E the pressure of the lower parts of the up-
rights or wedges against the sides can be regu-
95 lated. The lower edges of the sides are preferably notched as at *a''* for the accommodation of parts *d* so that the bottoms of the latter and lower edges of the sides will be flush.

Some of the advantages of my clamp could
100 be attained if the lower ends of uprights D were rigidly connected. It will be possible to

make various changes in the parts of the clamp, as by making two or more of the parts in one piece, and yet procure the double acting clamping feature, as can be readily devised after my invention is seen and understood. Therefore I do not wish to be confined to the particular construction of clamp herein described.

I, I, designate clamp pieces, one at each end of the tub, roughly L-shaped. One arm of the clamp piece underlies the bottom, and extends under the adjoining bolt E having a lug or hook I' on its end by which it is prevented from slipping out between the bolt and bottom. The other arm of the clamp piece extends up above the bottom and bends inward toward the end and is provided with a perforated ear *i* which is engaged by a bolt J that is passed through an ear *f'* on the side of the adjoining bar F above the clamp piece. As shown the rod is screw threaded on its lower end and engages a nut *j* below ear *i*, so that the clamp piece can be tightly bound in place and tied to the bar F.

The functions of the clamping devices will be readily understood from the above description and the drawings.

It is not always necessary to use the clamp piece I. It is useful in large or portable structures. It will be observed that the parts, bottom, sides, and ends, are tightly bound together and rigidly held by the clamps, yet there are no perforations through the sides, ends or bottom pieces, and if desired the tub can be "knocked down" by simply loosening bolts E, G, and J.

In order to allow for expansion and contraction of the parts I propose to employ washers R, R, of vulcanized rubber or other resilient substance, which will be interposed between the joints of the clamp at various points, as indicated in the drawings.

While I propose to make the tubs, &c., of slate or stone yet the bonds can be employed advantageously in constructing boxes, &c., of other substances, as metal or wood. As shown, one side of the tub is inclined, but this is a matter of choice not essential to the construction.

It will be readily understood how boxes, crates, bins, &c., of various sizes and forms can be constructed by my invention, and therefore I do not limit myself to a tub alone.

Having described my invention, what I claim as new, and desire to secure by Letters Patent thereon, is—

1. The combination with the side bottom and end pieces of a tub or other structure, of a clamp embracing the same and wedge blocks interposed between members of the clamp

and the adjoining surface of the structure, and means for adjusting said wedge blocks whereby the portions of the structure are rigidly bound together, substantially as described.

2. The combination with a tub or like structure, of a sectional and adjustable clamp surrounding the same, and adjustable wedge blocks interposed between the clamp and sides of the tub, and means for adjusting said wedge blocks, substantially as and for the purpose specified.

3. The combination with a tub or like structure, of a clamp composed of uprights applied to the sides of the tub, the top and bottom connection between opposite uprights, and adjustable wedge blocks interposed between the uprights and sides of tub, all constructed substantially as described.

4. The combination with a tub, of the uprights having tapered grooves in their inner faces, the adjustable wedge-blocks in said grooves, and the devices connecting the tops and bottoms of opposite uprights, substantially as described.

5. The combination of the uprights D, connected at their lower ends, the top bars F, the wedge blocks G, and adjusting bolts H, substantially as and for the purpose specified.

6. The combination of the grooved uprights D, the adjustable connection between the lower ends thereof, the top bar F, the wedge blocks G and bolts H, all constructed substantially as described.

7. The combination of the uprights D having bottom pieces *d*, the bolts E connecting pieces *d* of opposite uprights, the top bar F, the wedge blocks G and bolts H, all substantially as set forth.

8. A tub, formed of sides, bottom and ends, substantially as described, in combination with uprights D at each side thereof, the connections between the lower ends of opposite uprights, the bars connecting the upper ends of opposite uprights, the wedge blocks interposed between the uprights and sides of tub, and the devices for adjusting said wedge-blocks, and the clamp pieces I at the ends of the tub, and the connections of said pieces to the top bars, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature hereunto, in presence of two witnesses, at Bangor, Pennsylvania, this 27th day of April, 1893.

FRANK RASNER.

Witnesses:

F. S. WISE,
ARTHUR HESTER.