

B. MORAHAN.
Stationary Wash-Tubs.

No. 139,685.

Patented June 10, 1873.

Fig. 1.

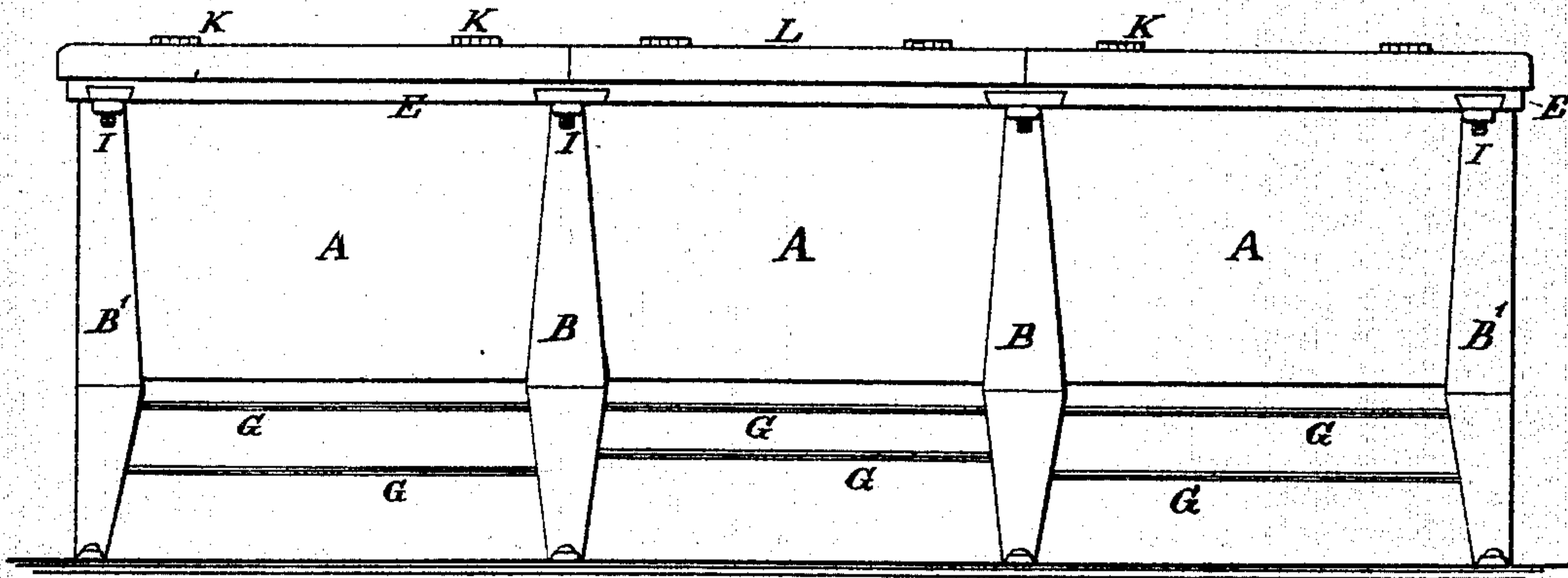


Fig. 2.

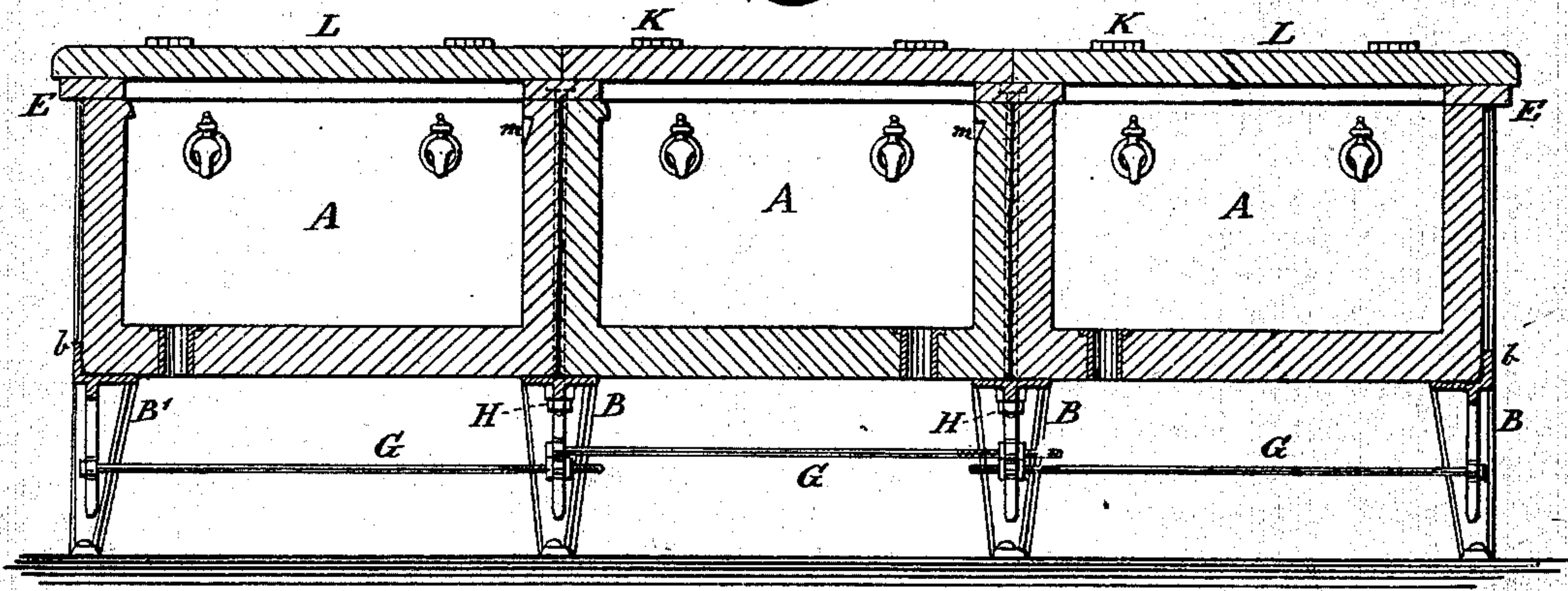


Fig. 3.

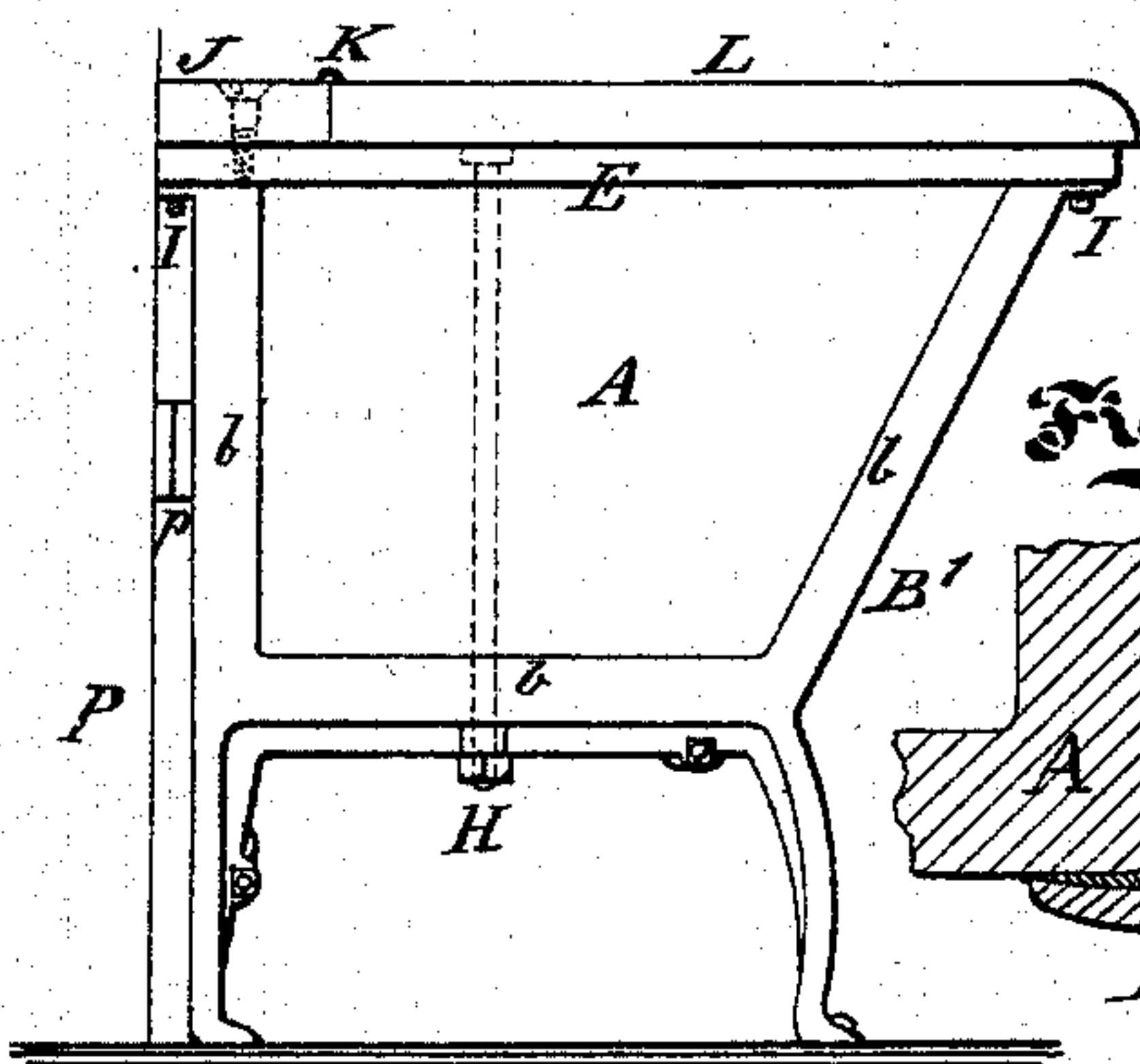


Fig. 5.

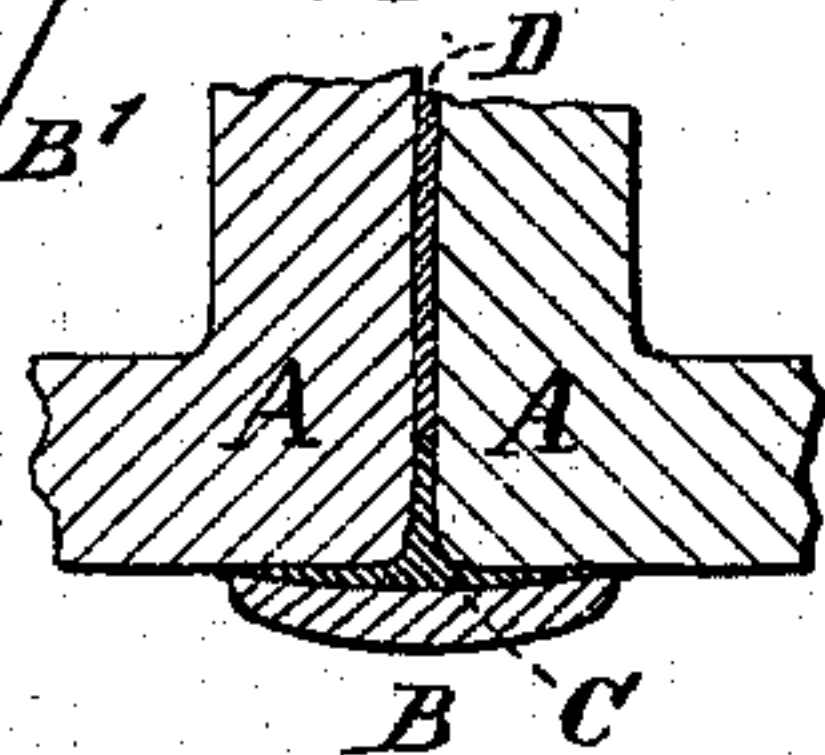
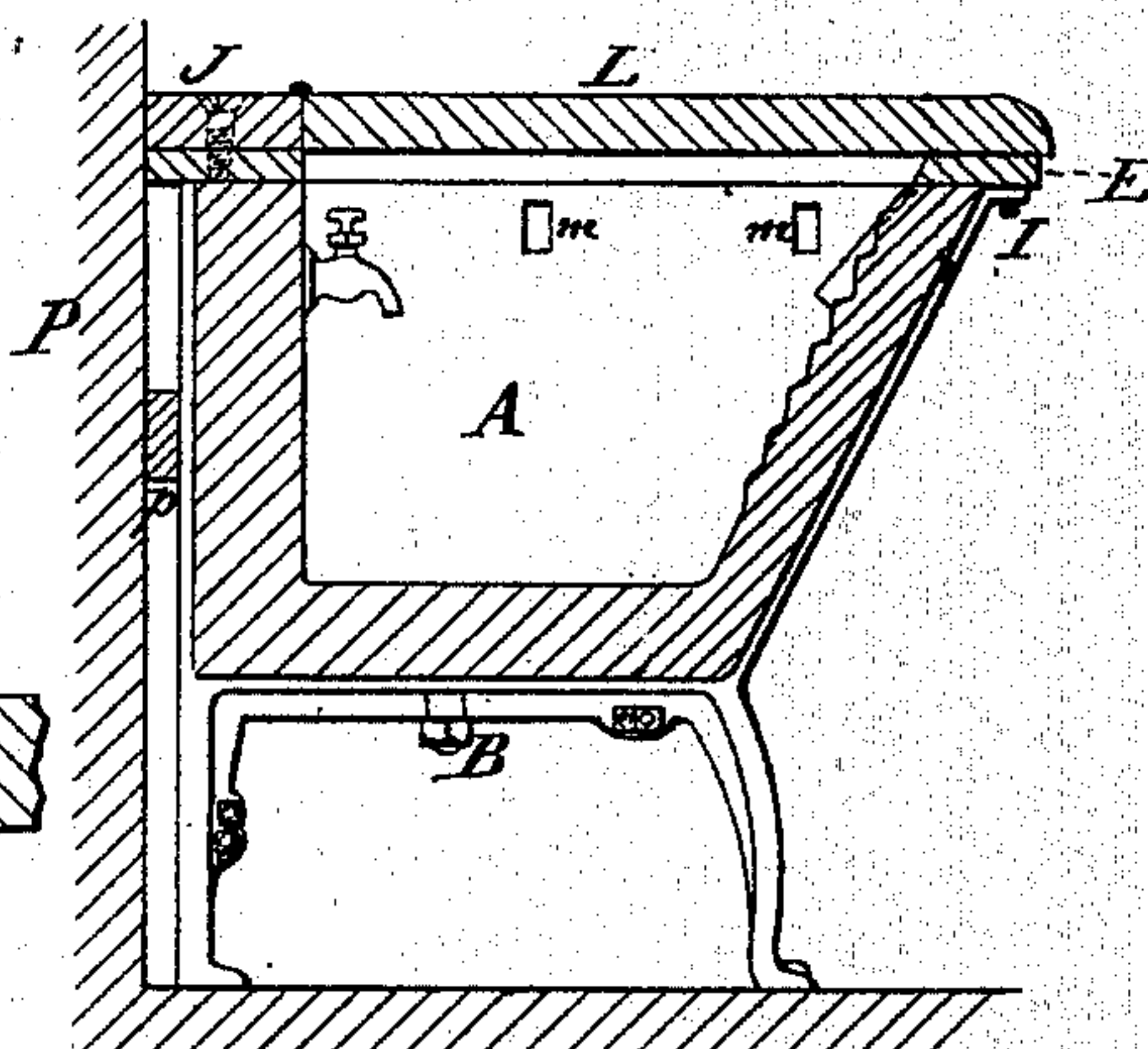


Fig. 4.



Witnesses;

Arnold Hornum.
Wm C Dey.

Inventor;

B. Morahan
by his attorney J. L. Peterson.

UNITED STATES PATENT OFFICE.

BERNARD MORAHAN, OF BROOKLYN, ASSIGNOR TO HIMSELF, FRANK TEFFT,
AND GEORGE G. KELLOGG, OF NEW YORK, N. Y.

IMPROVEMENT IN STATIONARY WASH-TUBS.

Specification forming part of Letters Patent No. **139,685**, dated June 10, 1873; application filed
January 16, 1873.

To all whom it may concern:

Be it known that I, BERNARD MORAHAN, of Brooklyn, Kings county, in the State of New York, have invented certain Improvements relating to Stationary Wash-Tubs, of which the following is a specification:

My patent, dated September 7, 1869, describes wash-tubs of glazed ceramic ware of about the form usually adopted for wooden stationary tubs—that is to say, mainly rectangular, but with an inclined front side. I have overcome most of the difficulties experienced in the manufacture of such tubs and have such now successfully in use.

The present invention is intended to promote the usefulness of such or analogous tubs, which are made separately and mounted together in sets. Pottery-ware shrinks irregularly, and, in the present state of the art, absolute uniformity of size and form cannot be attained. It is imperative that the tubs of a set be made separately from each other, as, otherwise, a crack in the manufacture of one or a break afterward would ruin the set.

I have, after many efforts, succeeded in mounting the tubs very satisfactorily, and so as to provide for the attachment of clothes-wringers.

The following is a description of what I consider the best means of carrying out the invention. The accompanying drawings form a part of this specification.

Figure 1 is a front elevation. Fig. 2 is a vertical longitudinal section. Fig. 3 is an end elevation. Fig. 4 is a vertical cross-section, and Fig. 5 is a section of a portion on a larger scale. It is a section through the front of the structure, at the junction of two tubs, taken on the line S S in Fig. 4.

Similar letters of reference indicate like parts in all the figures.

A A, &c., are the tubs, which may be made of crockery-ware according to my patent of 1869, referred to, or of various other materials. They may have the exact form set forth in my patent, or they may vary therefrom within reasonable limits. But it is important that they present approximately plane faces to match against each other. B B are stout iron supports, galvanized or otherwise coated as a defence against oxidation. Each is adapted to cover a joint between two of the tubs A A, and to support each, as will be understood.

B' B' are corresponding end castings or frames adapted to support the outer ends of the last tubs in the series. These latter are each formed with a flange, *b*, or with one or more lugs, serving in effect as a flange, which applies against or in close contiguity with the tub. Putty or analogous cement C is applied in liberal quantities between the several tubs and the respective frames B and B'. The tubs are bedded on the putty, and the frames B and B' are formed a little hollow, to better adapt them for holding the cement. The main space between two adjacent tubs, after the lower edge and front and back are stopped with the hard cement C described, may be filled with plaster of Paris, or analogous weak cement, D. E is a framing of wood applied on the top, and matching over the entire top rim or edge of all the tubs. It is made a little wider than the rims of the several tubs. It may also be bedded upon putty or analogous cement, so as to form a perfectly tight fit. G G are bolts, which hold the several frames B B' tightly to their bearings laterally. H H are bolts, which extend up and down between the tubs A A, and hold the wood framing E, and also the tubs, down firmly in their bearings. I I are shorter bolts, which hold the front edges of the wood E. J is a strip extending along the back, above the wood E, and supporting the hinges K, which connect the stout cover or covers L adapted to perform the usual functions of the covers of such tubs. Indentations *m* are formed at proper points in the ends of the tubs to afford firm holding facilities for wringing-machines. The wringer, not represented, may be made to match in these indentations, and to also take hold on the wood-work E; or the wringer may hold with sufficient firmness on one of these parts alone.

It being understood that the hot and cold water are connected through the back of each tub, and that proper provision is made for discharging the suds when required, the ceramic wash-tubs thus mounted are found to afford superior facilities. Employing pure white crockery the light available for the washer-woman is increased, and the sweetness and purity of the tubs are remarkable.

The top frame E may be of various materials, but I prefer wood. The frames B' B' may be of other materials, but I prefer cast-iron. It is highly desirable that the top frame E

shall be of some yielding material, to soften the concussion in case the lid L is allowed to fall heavily. By avoiding the use of iron, either in the bodies of the tubs A or in the rim or top frame E, I attain the highest degree of security against staining the clothing by rust. The hollow form of the interior of the frames B B' serves a double purpose. First, it allows the employment of a larger quantity of putty, C, so that stiff putty may be more yielding to receive and bear fairly on the irregular shapes of the tubs, and it also reduces the quantity of material to be removed by a file or other tool, when necessary, in order to allow for a very great distortion of a tub. It being impracticable to shape the tubs to the bearings, the bearings must be shaped to the warped and distorted tubs. In cases of great distortion the chipping away of the surface across the whole width of the frame B, so far as the tub laps or extends upon it, would be much labor. By forming it hollow I have only to remove the rim or edge of the hollowed frame and to employ less putty at that point to allow for any reasonable amount of distortion. The upright sides of the frames B B' may be bolted firmly to the permanent wall P of the apartment, or to a strip, *p*, which is provided to leave room for the water-pipes behind the tubs. Instead of the cavities or indentations *m* to receive the wringer-clamps, there may be projections, and the wringer may be adapted to fit thereon. The longitudinal bolts G are of the most importance in supporting the tubs on floors laid with tiles, as in that case the feet or end bearings of the frames B B' cannot be efficiently made fast to the floor. These bolts keep the castings in their place and prevent them from being knocked back and forth out of their places. It will be observed that my mounting allows of great facility of separation of the tubs in case of repair or exchange. For slight repairs it is only sufficient to simply remove the back strip J, with the appended hinges and lids, which it will be understood are secured by screws or screw-bolts to the wooden frame. The importance of supporting the tubs by their bases, instead of hanging them, as has been sometimes practiced, by their upper edges, is more felt with a fragile material like pottery-ware than with a very strong material, as cast-iron. My tubs, as here supported, may be made of large size and subjected to severe rubbing and handling, even when filled with water. The front leg of each of the frames B B' serves an important function in relieving the fastenings to the wall. It forms a direct and firm support. There should be a foot on the base of each leg and a hole to allow the setting of a stout bolt through each into the floor. I propose in some instances to make my ceramic-ware tubs A with flanges around their edges and through these flanges to bore holes while in its soft state, before it is baked and glazed. To this flange I fasten the wooden frame which covers

the edges of the tubs by means of bolts which pass through the holes in the flange of the tubs and draw the wooden frame down tight to the tubs by the nuts on the bolts. The thickness of this wooden frame should be sufficient to allow of a considerable cutting away to match it to the tops of the irregularly-warped and shrunken tubs. It will sometimes happen that the upper edges of the tubs will be an inch, or nearly that, higher at one point than at another. I esteem the light on the interior of the tubs a substantial and very important advantage, due to the brilliant white surfaces presented. The symmetry of the exterior is less important, though not to be despised. My frames B B', by covering the joints, give the appearance of unity to the series of tubs, as if all were made in one piece. The firmness with which I draw the tubs together allows me, when required, to remove or incline the whole, as if not only in appearance, but in reality, one structure. I put a nut on each side of the several frames to allow the same to set up very tightly and adjusted back and forth to suit the lengths of the tubs, while subjecting each tub to only the moderate compression desired. Each frame, B and B', is formed with a bead or web along the center of its width, and a broader surface on the upper and inner face, as shown. The holes for the bolts G are produced in the web and the nuts bear against the faces of the web, while the broader part performs the functions of covering the joints, supporting the putty or other bedding material, and supporting, directly or indirectly, the fragile and distorted tubs. I dovetail the cross-pieces of the top frame E into the longitudinal side pieces of said frame, and I take care to allow the short bolts I at the front to take a firm hold on both the parts where they intersect. The back, it should be observed, is fastened in the same manner as the front, by similar short bolts. I prefer to set nuts on these bolts both at the front and back, instead of tapping them into the frames B B'.

I claim as my invention—

1. In combination with the tubs A, the wooden or elastic top framing E, matched upon the edges of said tubs, as herein specified.
2. In combination with the tubs A with suitable top edgings, the supporting-frames B B', applied at or near the base of the tubs, and extending to or near the top edge of the tubs and to the floor at front and back, for the purpose herein specified.
3. In combination with the tubs A and supporting-frames B B, the longitudinal bolts or braces G, and the up-and-down bolts H and I, binding the parts firmly together, as specified.

In testimony whereof I have hereunto set my hand this 28th day of December, 1872, in the presence of two subscribing witnesses.

Witnesses: BERNARD MORAHAN.

W. C. DEY,
ARNOLD HÖRMANN.