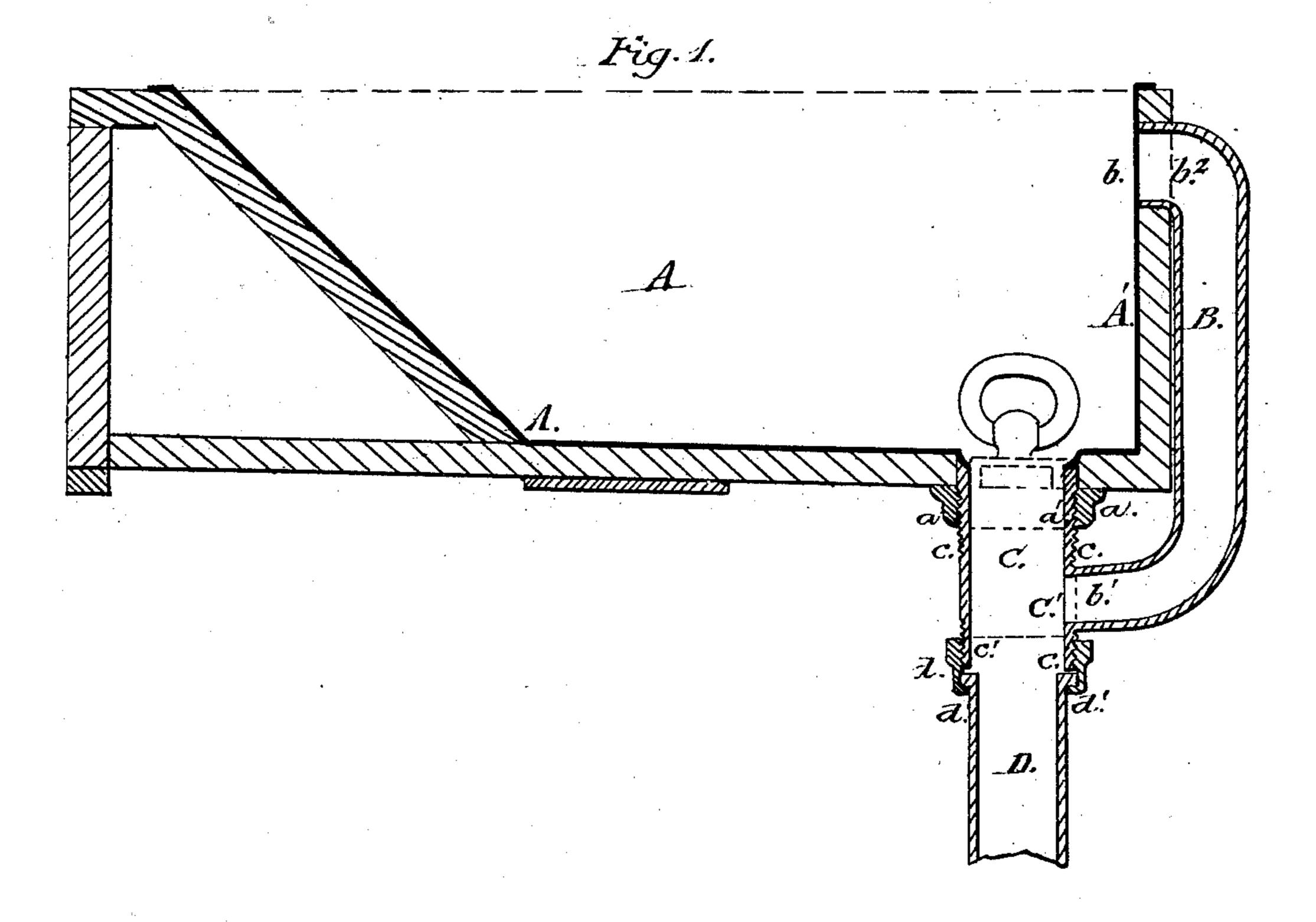
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WITNESSES:

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## Anited States Patent Office.

## CHARLES A. BLESSING, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 94,385, dated August 31, 1869; antedated August 27, 1869.

## IMPROVEMENT IN BATH-TUBS

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, Charles A. Blessing, of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Bath-Tubs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, and the letters of reference maked thereon, in which—

Figure 1 represents a horizontal sectional view of a bath-tub with my improvement attached.

The nature of my invention consists in constructing the bath-tub with a circular projecting flange, surrounding the opening in the bottom of the tub, through which the waste water is discharged, said flange being provided with a female screw-thread, in which tightly fits a short brass plug. This brass plug has a screw-thread cut on each end of the same. The upper thread enters the female screw of the circular flange as before stated, while the lower thread receives and retains the ordinary screw-coupling, by means of which the waste-pipe is securely attached.

My invention also consists in constructing the screwplug with an opening in its side, to which is firmly united the curved end of a pipe. The other end of this pipe is also curved, and firmly soldered around the overflow-opening in the upper section of the footboard of the tub.

Experience has fully attested the practical utility of this arrangement, and its vast advantages over all former arrangements.

By constructing the pipe with suitably-curved ends, a secure, durable, and exceedingly neat connection is formed between the "overflow-opening" and the connecting-pipe beneath the tub, and the main section of the pipe runs in such close proximity to the base of the tub, that the room required for the successful operation of my improvement is not more than two or three inches.

The advantages of my arrangement, as well as its cheapness, in comparison with the method now generally used, will readily suggest themselves to any one skilled in the art to which my invention appertains.

The usual mode of carrying off the "overflow" is to solder an elbow of two pieces into the tub, and secure the same to a lead pipe on the outside. This pipe is either connected with the waste-pipe, or runs off as an independent pipe.

In all the methods now in use, in which the over-flow, pipe is connected with the waste-pipe, it is impossible to break the connection without sawing off the waste-pipe.

In my invention all these complications are dispensed with, and all these disadvantages avoided.

My construction of the pipe renders the use of the elbow entirely unnecessary.

I do not attach the overflow-pipe to the waste-pipe, but to a screw connecting-pipe, which can be readily attached to or detached from the tub.

I am aware that an attempt has been essayed to accomplished the results attained by my invention, by securing a grooved foot-board to the ordinary tub. A moment's reflection will clearly show the entire impracticability of the proposed plan, and the vast superiority of my arrangement.

One objection alone that can be truthfully advanced is fatal to its success, and demonstrates its entire impracticability as well as the impossibility of its going into general use.

The objection is this: In the plan alluded to, you cannot obtain a tight joint, and without which it is idle to think of its satisfactory working. The grooved board is secured to the foot-board of the tub. This grooved board must be constructed with a flange passing under the tub, so as to form a connection with the waste-pipe A tight joint cannot be formed by any known means with either the waste-pipe or "overflowopening." You cannot solder the metal to the wood. No metallic or other connection whatever is suggested between the groove and the waste-pipe or "overflowopening." Nor are washers, or any other equivalent device, suggested as proper to be inserted between the tub and additional foot-board. It is impossible to securely guard against the shrinking of this board, which will render leakage inevitable, as the only connection contemplated are the screws, rivets, or nails by which it may be attached to the tub.

My arrangement is certainly far superior to the one alluded to. It is cheap, secure, ornamental, can be attached to any tub now in use, and above all, is so constructed that is impossible to become disarranged, or get out of order.

Having thus stated the advantages of my invention, and the points wherein it is considered superior to all other methods now in use, I will now subjoin a short and detailed description of its several features, which will readily enable any one skilled in the art to which it appertains, to make and use the same.

A is an ordinary bath-tub, having a metallic lining, A'.

On the lower portion of the tub and around the ordinary opening, through which is carried off the waste water, is a circular metallic flange, a. This flange is provided with a female-screw thread, a.

C is a brass screw-plug, and is provided at its ends and on its outer surface with screw-threads c c'.

The screw-thread c fits in the female-screw thread a' of the flange a, and forms a tight joint.

The screw-thread c receives and forms a tight joint with the ordinary screw-coupling d.

This coupling d is provided with a circular inner lip or flange, d', which forms a scat for a flange or lip on

the outer surface of the upper section of the wastepipe D.

In the side of the connecting-pipe C there is an opening, C', around which fits and is firmly soldered

the curved end  $b^1$  of the pipe B.

The upper curved end  $b^2$  of this pipe B fits tightly around and is firmly soldered, or otherwise attached, to the overflow-opening b in the upper section of the foot-board of the tub A.

B is a metallic pipe, straight along it main section, and provided with curved or elbow ends  $b^1$   $b^2$ .

While this arrangement allows the pipe, throughout almost its entire length, to run nearly parallel with the foot of the tub and in close proximity thereto, thus occupying but little space or room, at the same time, it affords the means whereby a neat, tight, and secure attachment is furnished with the plug C and the overflow-opening b.

In the drawing, the several features are distinctly shown, and their general arrangement fully illustrated.

Having thus fully described my invention,

What I claim therein as new, and desire to secure by Letters Patent of the United States, is—

The tub A, having a female-screw flange, a, screw connecting-pipe C, when the same is provided with screw-threads c c' and opening C', and the pipe B, with its curved or elbow ends  $b^1$   $b^2$ , when the same are so combined and arranged as to operate substantially as herein described, as and for the purpose specified.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing

witnesses.

CHAS. A. BLESSING.

Witnesses:
WM. J. DELLEKER,
FRANK P. STEITZ.