

(No Model.)

J. CLIFFORD.
OUTLET CONNECTION FOR STEEL SINKS.

No. 512,864.

Patented Jan. 16, 1894.

Fig. 1.

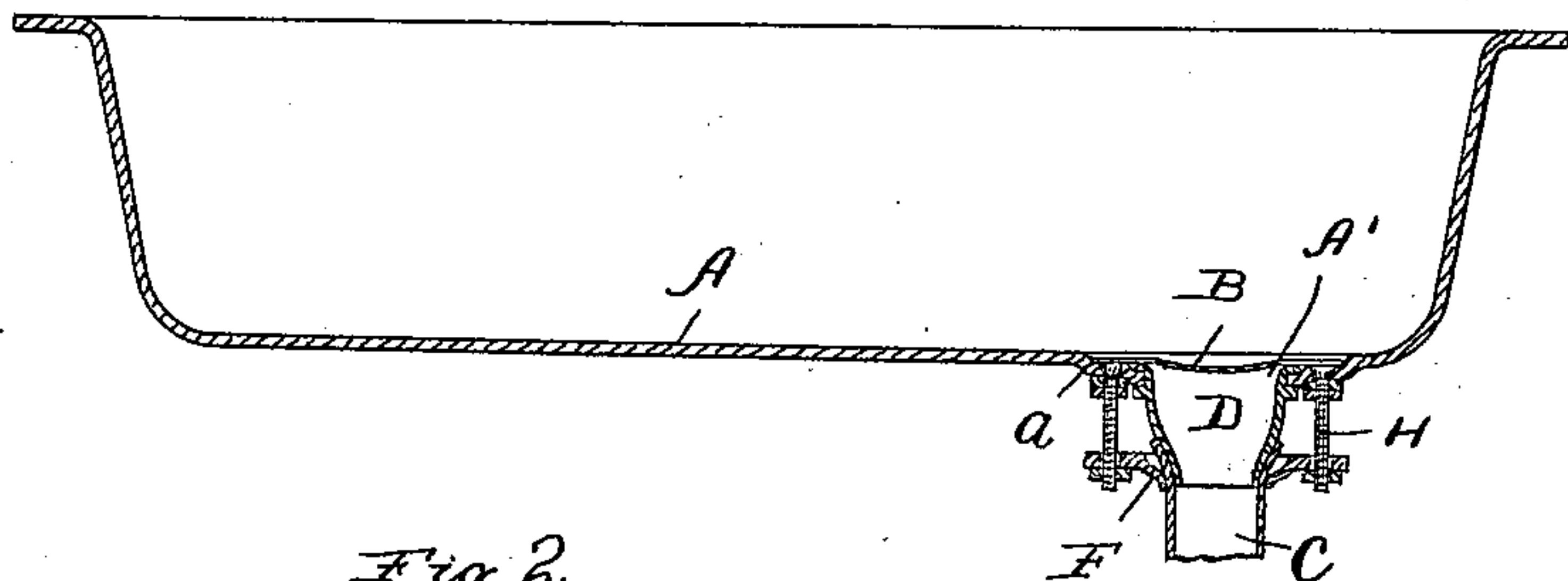


Fig. 2.

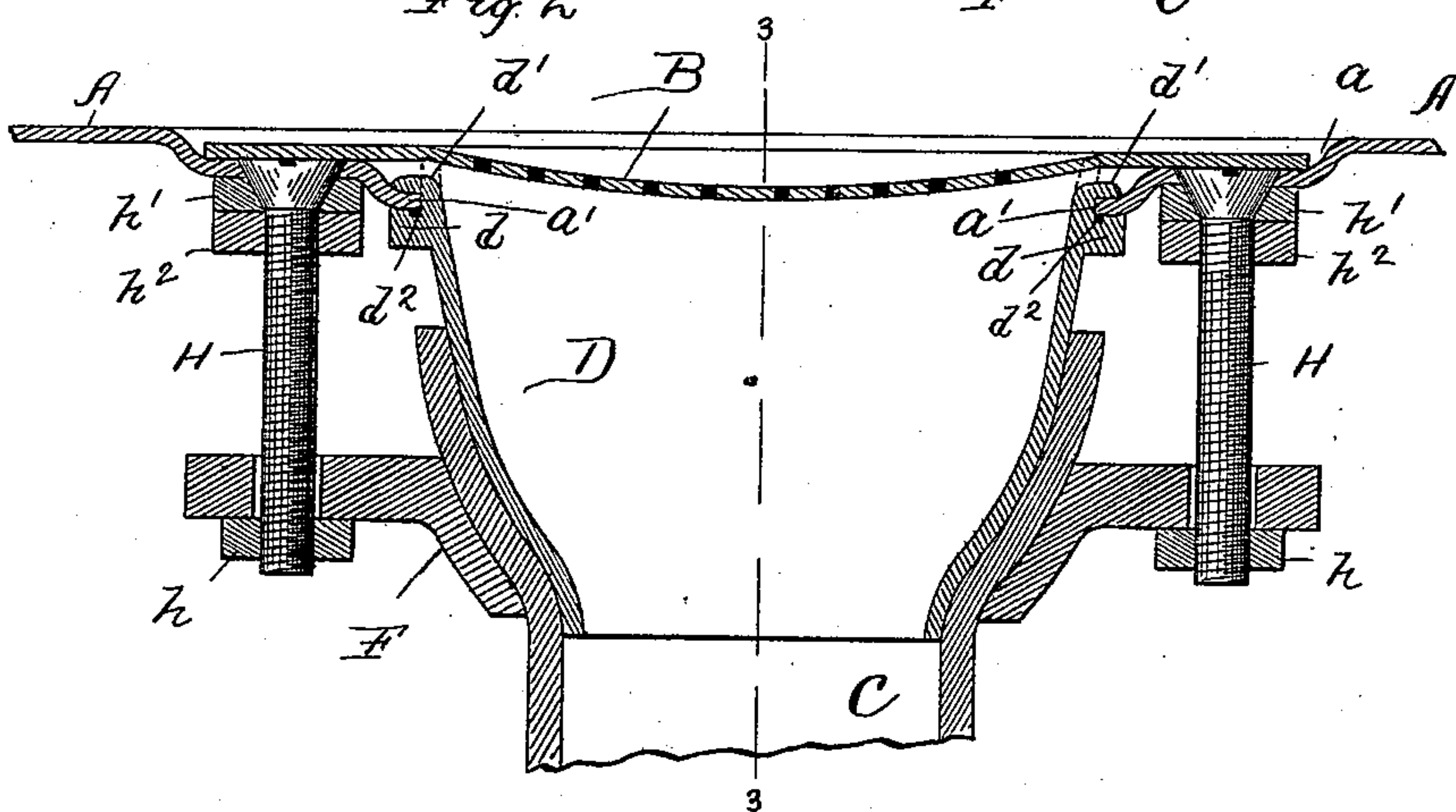
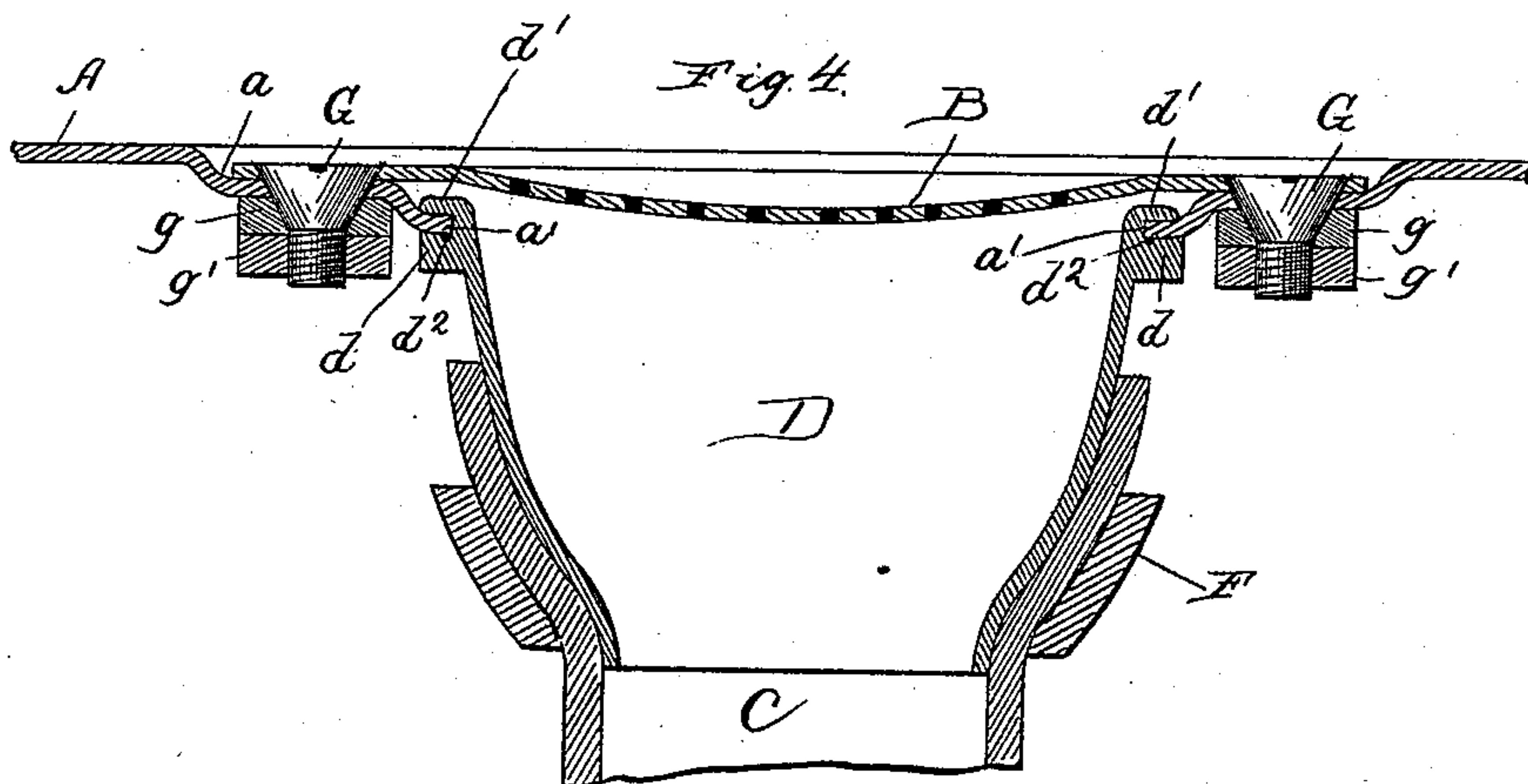


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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OUTLET CONNECTION FOR STEEL SINKS.

SPECIFICATION forming part of Letters Patent No. 512,864, dated January 16, 1894.

Application filed August 29, 1891. Serial No. 404,063. (No model.)

To all whom it may concern:

Be it known that I, JOHN CLIFFORD, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Outlet Connections for Steel Sinks, of which the following is a specification.

My invention relates to steel or other wrought metal sinks which are stamped or drawn up into shape from sheets.

Heretofore in the manufacture of stamped or drawn steel sinks attempts have been made to form the bell to which the waste pipe is connected integral with the sink itself by stamping or drawing. This construction is difficult and expensive and attended with danger of cracking or breaking the metal and thus destroying the sink. In other constructions the strainer is made integral with the sink and the bell is made in a separate piece and secured by riveting to the bottom of the sink. This is a slow, difficult and expensive construction to make, and the strainer cannot be removed.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a vertical sectional view of a device embodying my invention. Figs. 2 and 3 are enlarged detail sectional views, Fig. 3 being taken on the line 3—3 of Fig. 2.

In said drawings A represents a steel sink, or other sink made from a sheet of metal by stamping or drawing with suitable dies. At its bottom it is provided with an annular depressed seat *a* to receive the removable strainer B.

C is the waste pipe, and D is the bell, surrounding the waste opening A' in the sink and to which the waste pipe C is jointed or connected. The bell D is made of malleable metal and preferably cast in the required shape. It is furnished with a shoulder *d* at its upper end above which is the projecting flange *d'* adapted to be turned down over the rim *a'* surrounding the outlet opening A' in the sink A. The form of the upwardly projecting flange *d'* is shown in dotted lines at Fig. 2 before it is stamped or curved over the rim *a'*.

To secure the bell D to the sink all that is

required to be done is to insert the flange *d'* through the outlet opening A' in the sink and then place the bell and sink in a press or die suitably constructed for the purpose and forge or curve the flange *d'* down upon the rim *a'*, thus firmly clamping said rim between the shoulder *d* and the curved flange *d'*, as is clearly shown in the drawings. I preferably provide the shoulder *d* with a slight annular groove *d²*, as shown in the drawings, as by so doing a tight joint may be more readily secured with certainty.

F is the clamp collar having a bearing shoulder *f* by which the mouthed end *c* of the waste pipe C is clamped or secured to the bell D.

Screw threaded bolts H, extending through holes in the sink A and clamp ring F, serve to secure the clamp ring in position. These clamp bolts H are furnished with nuts *h* which bear against the clamp ring F, and also with a leather or other packing washer *h'* and nut *h²* which serve to make a tight joint where the clamp bolts pass through the bottom of the sink. I prefer not to use the clamp bolts H for securing the strainer B in place, but to employ separate screw bolts G, which extend simply through the strainer and sink for this purpose, as by this means I am enabled to remove the strainer when desired without loosening the bolts H or disconnecting the waste pipe C from the sink or removing its support. This is a great convenience in removing or forcing out obstructions from the waste pipe, as the strainer may thus be very readily removed and as the waste pipe remains not only connected to the sink but firmly supported by the clamp ring F, so that the pressure or force used in removing the obstruction will produce no disturbance or injury to the parts. The small screw threaded bolts G which secure the strainer in place are furnished with packing washers *g* and nuts *g'*. The wall of the bell D is materially thickened at the annular shoulder or rim *d*, and the shoulder has a flat upper face or ledge for the annular rim *a'* of the stamped steel sink to rest upon so as to insure a water tight joint when the annular lip or flange *d'* of the bell D is turned or crimped over and down upon the same.

I claim—

1. The combination with a stamped sheet

sink A of steel or other metal having an integral imperforate annular rim a' surrounding its outlet opening, of a malleable cast metal bell D furnished with an exterior horizontally projecting imperforate shoulder d and an upwardly projecting imperforate rim d' turned or crimped over and down upon said rim a' of the sink, said shoulder d having an upper face or ledge fitting said rim a' , and said rim a' being securely clamped between said horizontally projecting shoulder d and said turned flange d' , whereby said stamped sheet metal sink and bell are secured together by a water tight joint, substantially as specified.

2. The combination with a stamped sheet sink A of steel or other metal having an integral imperforate annular rim a' surrounding its outlet opening, of a malleable cast metal bell D furnished with an exterior horizontally projecting imperforate shoulder d and an upwardly projecting imperforate flange or rim d' turned or crimped over and down upon said rim a' of the sink, said shoulder d having an upper face or ledge fitting said rim a' , and said rim a' being securely clamped between said horizontally projecting shoulder d and said turned flange d' , whereby said sheet metal sink and bell are secured together by a water tight joint, waste pipe C, clamp ring F and clamp bolts H, substantially as specified.

3. The combination with a steel or stamped metal sink A having a rim a' surrounding its outlet opening, of a malleable metal bell D

furnished with an exterior shoulder d and a flange or rim d' turned or crimped over and down upon said rim a' of the sink, whereby the sink and bell are secured together by a tight joint, waste pipe C, clamping ring F, clamp bolts H, and removable strainer B having separate bolts G for securing the same in place so that the strainer may be removed without interfering with the connection of the waste pipe, substantially as specified.

4. The combination with a stamped sheet sink A of steel or other metal having an integral depressed imperforate annular rim a' surrounding its outlet opening and a depressed seat a of a malleable metal bell D furnished with an exterior horizontally projecting imperforate shoulder d and an imperforate flange or rim d' turned or clamped over and down upon said rim a' of the sink, said shoulder d having an upper face or ledge fitting said rim a' , and said rim a' being securely clamped between said shoulder d and said turned flange d' , whereby the sheet metal sink and bell are secured together by a water tight joint and the upper edge or mouth of the bell secured to the sink below the level of the bottom thereof, and a strainer fitting in said depressed seat a above the mouth or upper edge of said bell, substantially as specified.

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Witnesses:

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