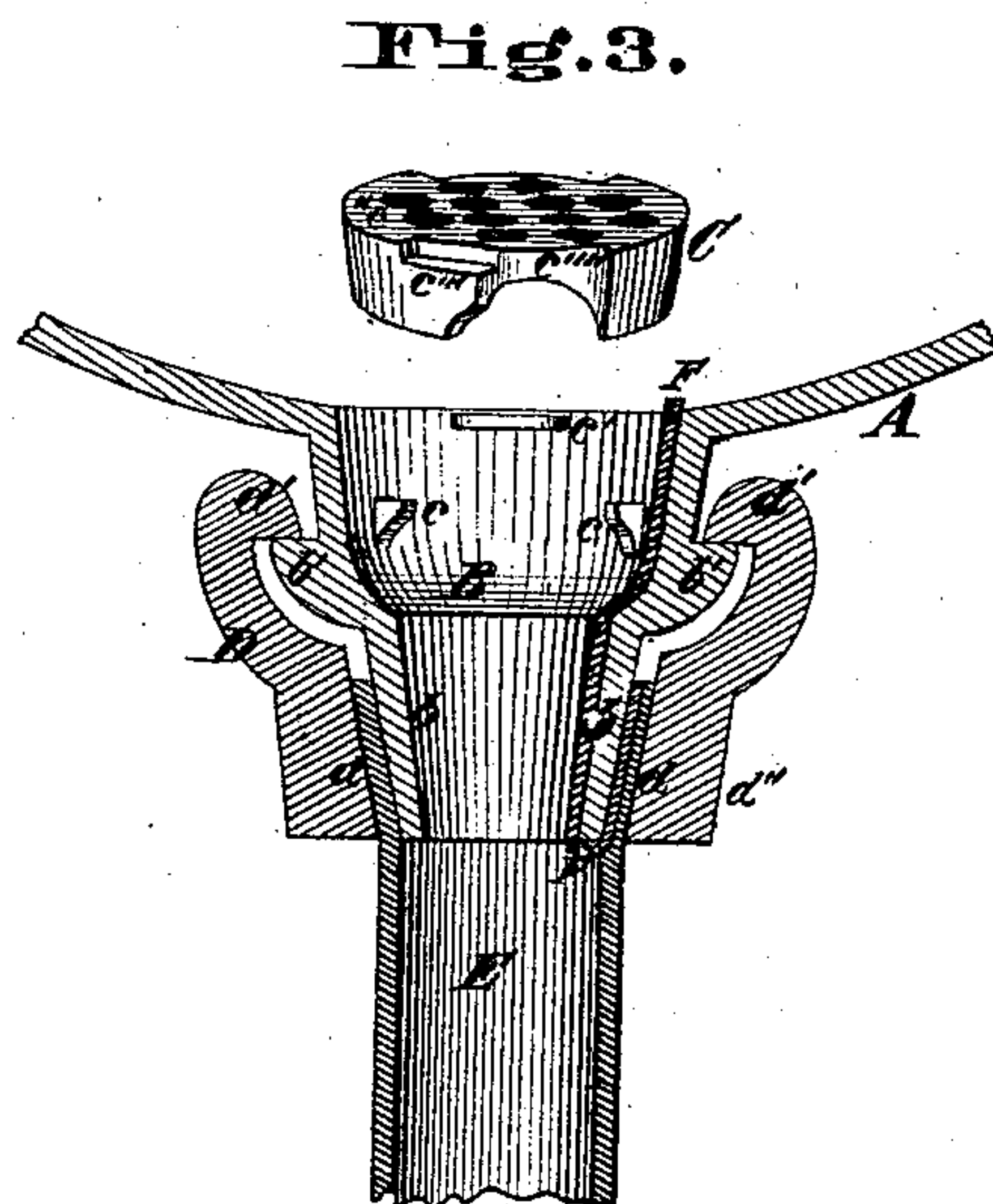
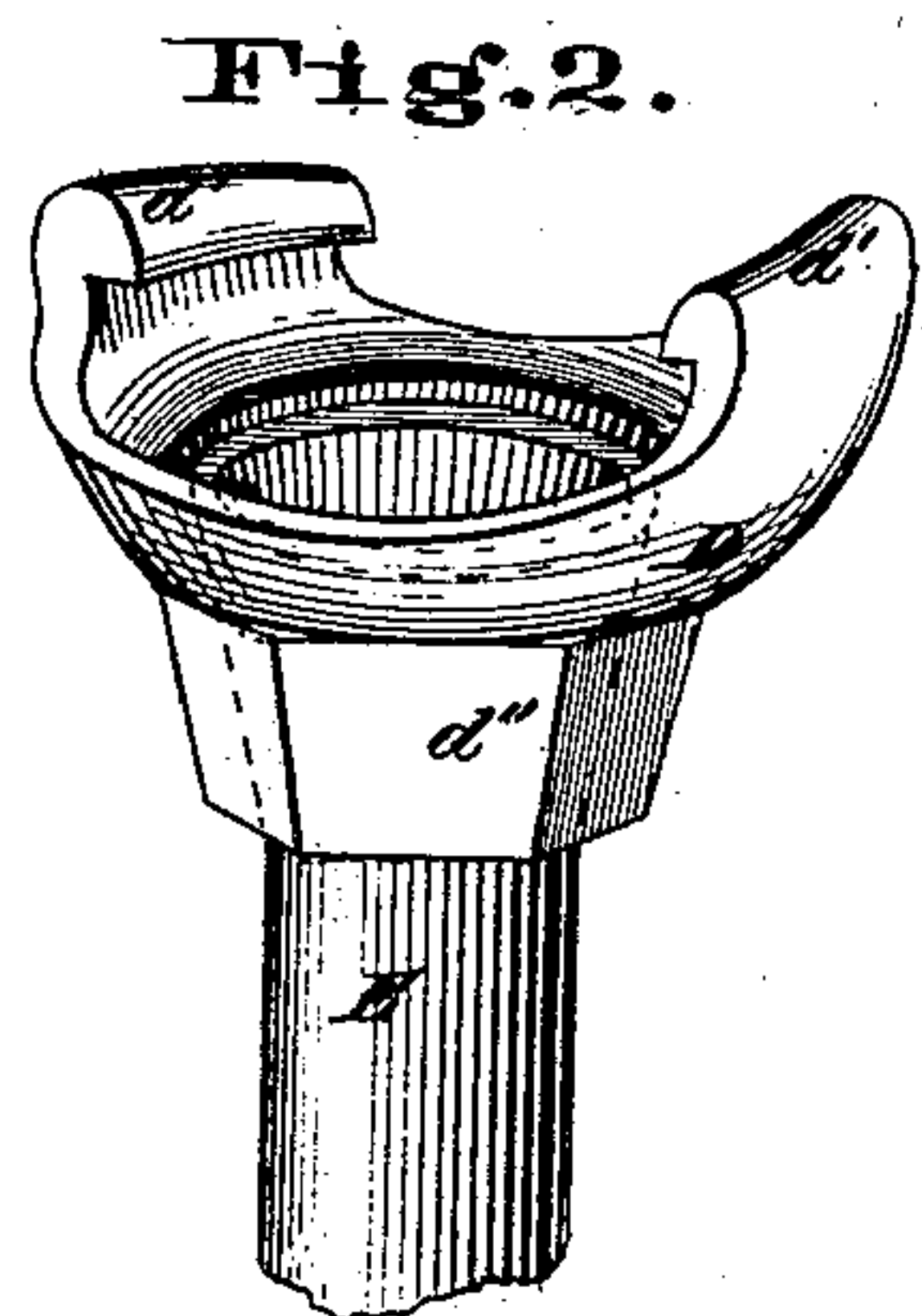
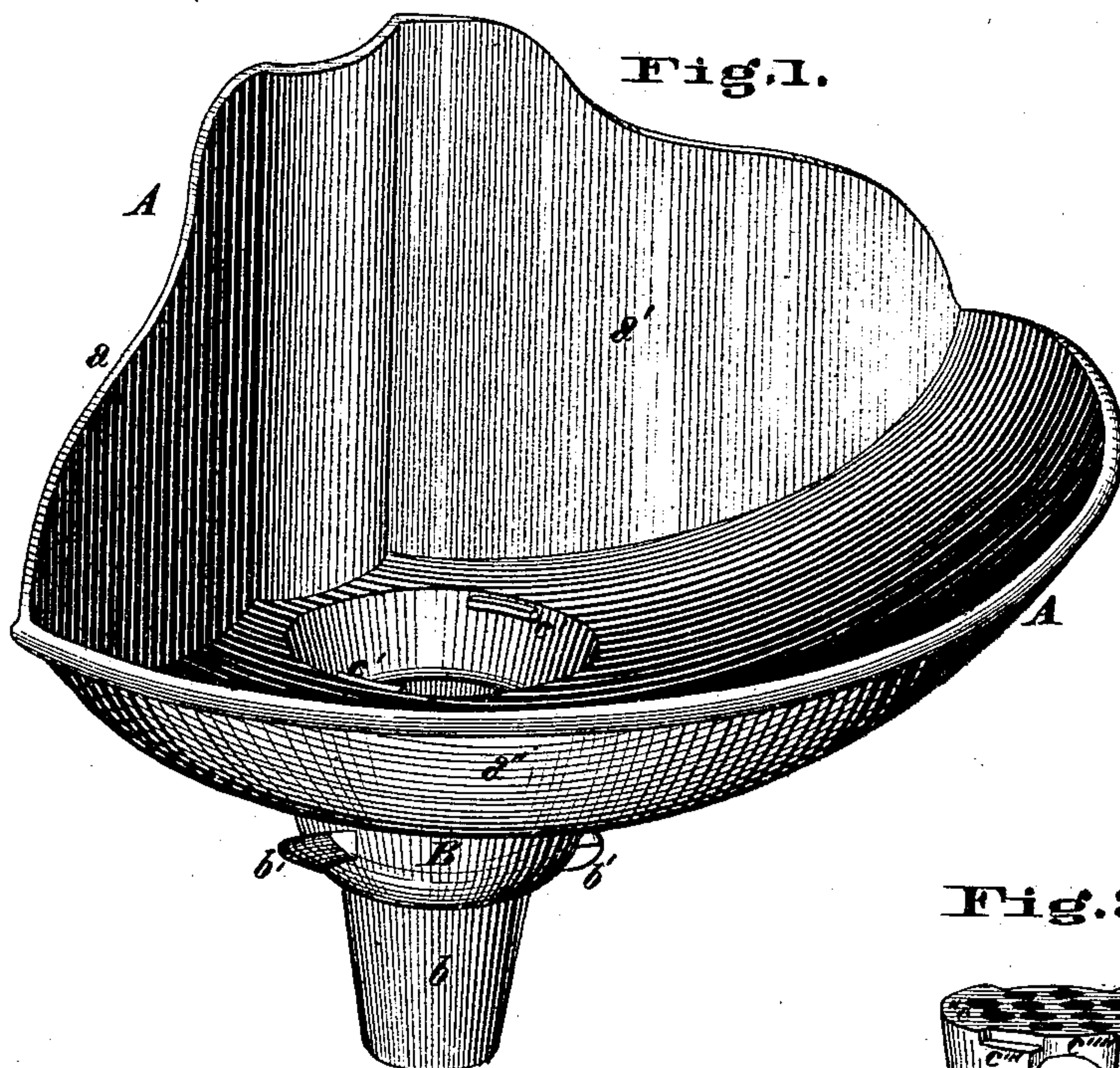


S. Males,

Urinal.

No. 107,188,

Patented Sept. 6. 1870.



Attest,

*Henry Millward
John H. McCarroll*

Inventor.

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UNITED STATES PATENT OFFICE

SAMUEL MALES, OF CINCINNATI, OHIO.

IMPROVEMENT IN URINALS.

Specification forming part of Letters Patent No. 107,188, dated September 6, 1870.

To all whom it may concern:

Be it known that I, SAMUEL MALES, of Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Bowls or Sinks and Connections for Urinals, Kitchen-Sinks, &c.; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable one skilled in the art to which my invention appertains to make and use it, reference being had to the accompanying drawings making part of this specification.

My invention consists in a peculiar construction of the bowl or sink casting and attachments by which the discharge-pipe and strainer are simply and conveniently connected in such a way as to be readily detachable; the object of my invention being to provide connecting devices which dispense with the use of screws or other devices liable to rust fast in use, and at the same time afford simple and convenient means of connection or disconnection for the strainer and discharge-pipe of the bowl or sink.

Figure 1 is a perspective view of the bowl-casting. Fig. 2 represents, in perspective, the part of the discharge-pipe coupling which surrounds and retains in a peculiar manner the end of the pipe. Fig. 3 is a vertical section, showing the device for coupling the pipe, and a detached perspective view of the strainer.

The bowl A shown in the drawing is adapted for attaching in a corner, having two sides, *a a'*, at right angles to each other, and a concave projecting bottom and front, *a''*. This bowl, however, may be made of any desirable form, and adapted for attachment to plain straight walls or corners of buildings, &c. The bowl A has a downwardly-projecting neck, B, formed upon it, which terminates in a conical tube, *b*. On the exterior of the neck B spiral lugs *b'* are provided, and on the interior surface of the neck projecting ledges *c* are formed to support the strainer C, and lugs *c'* to prevent the accidental displacement of strainer C. The strainer C is formed with perforations *c''*, recesses *c'''* to engage with the lugs *c'*, and side notches *c''''* large enough to allow the lugs *c'* to pass. The strainer is of conical shape on the exterior, and fits snugly into the conical top of the neck B, the exterior surface or rim around it being of sufficient depth to prevent the strainer from tilting when dropped

into place. A slight rotary motion of the strainer after it is in place suffices to pass the recess *c'''* under the lugs *c'*, and thus lock the strainer in such a way that it cannot be accidentally displaced. To secure it against wilful displacement a piece of thin lead, or other pliable non-corrosive material, F, may be passed through the recess *c''''* on one side only of the strainer, and connect between the lead pipe and bottom of the bowl hook fashion. The strainer may be connected or disconnected after the removal of the lead fastening, if used, by the use of a forked handle or wrench, which engages in two of the perforations *c''*. D is a coupling-ring, which is formed with a conical socket, *d*, and spiral hook-shaped projections *d'*. The projections *d'* engage over the spiral projections *b'* on the neck B, and the pipe E, being widened out to fit the conical socket *d* on the outside, and the conical pipe *b* on the inside, is drawn tightly over the tubular conical end *b* by the simple partial rotation of the ring D. This ring can be operated by a wrench on the hexagon part *d''*.

It will be seen that by reason of the provision of the conical tube *b*, and conical shape of the interior of the ring D, that the lead pipe is thus forced into a conical shape, which not only permits the coupling to make the joint between pipe E and bowl A tightly, but prevents the ring from being taken off the pipe E when the coupling is disconnected.

A great advantage resulting from the use of my improvement is, that it permits of the bowl or sink being galvanized or enameled inside and out without materially affecting the connections, and thus exposes no part of the bowl or fastenings to the corrosive action of urine or water.

By the old methods of connection for the pipe and strainer, (which chiefly consist of bolts which pass entirely through the bowl-casting, compelling the use of a putty or other gasket-joint,) the fastenings are constantly exposed to oxidation, and become rusted so tightly together that it is impossible to disconnect without the destruction of the bolts and other parts, and often the destruction of the bowl or sink itself. These bolt connections moreover are constantly leaking more or less, owing to the presence of holes through the bowl-casting.

If deemed desirable, the bowl or sink may be made of "wedgewood" or other earthen ware; but where this is used it may be necessary to insert gaskets or strips of rubber between the rubbing-surfaces of the connecting devices.

I claim—

1. In the described connection with the bowl or sink A, having lugs or ears *c* in the discharge-opening, the strainer C *c'* *c''* *c'''* *c''''*, constructed and connected substantially in the manner and for the purpose specified.

2. In combination with the elements of the preceding clause of claim, the hooked locking-strip F, as described, and for the purpose specified.

In testimony of which invention I hereunto set my hand.

SAMUEL MALES.

Witnesses:

FRANK. MILLWARD,
J. L. WARTMANN.