(No Model.)

J. STEEL.

PIPE.

No. 320,981. Patented June 30, 1885.

FIG. I.

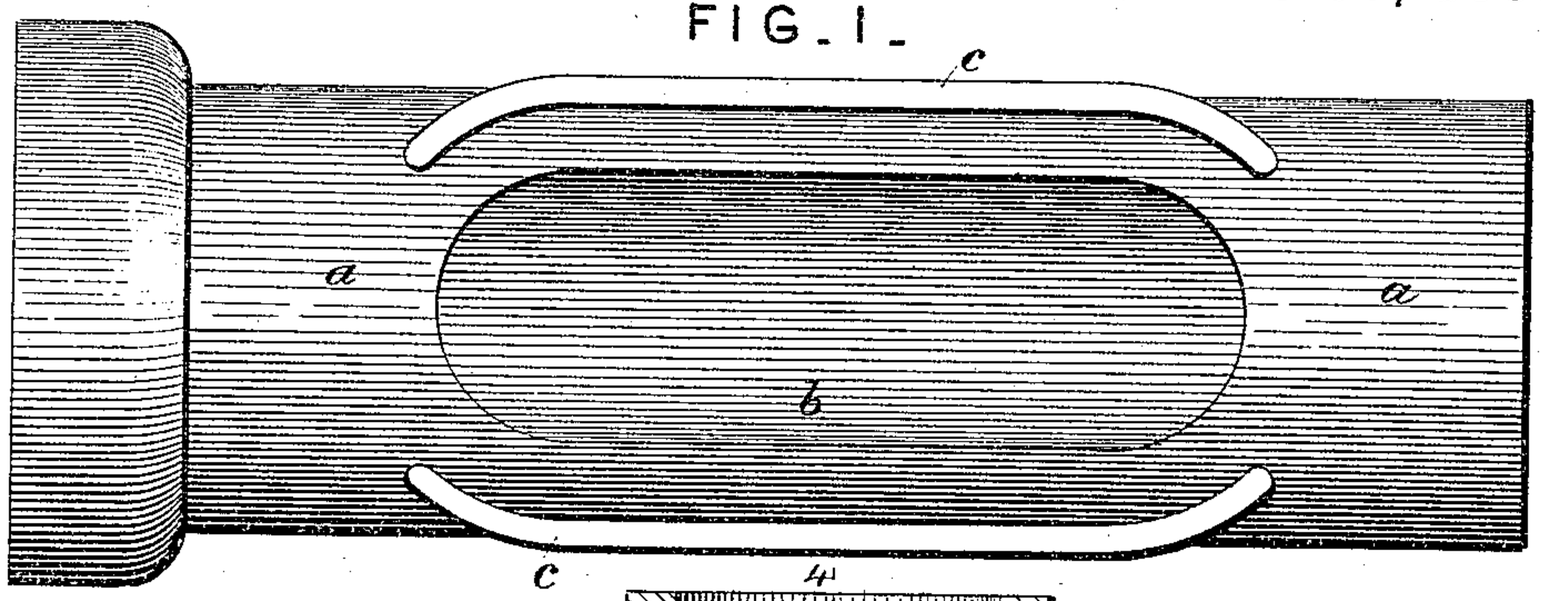


FIG. II.

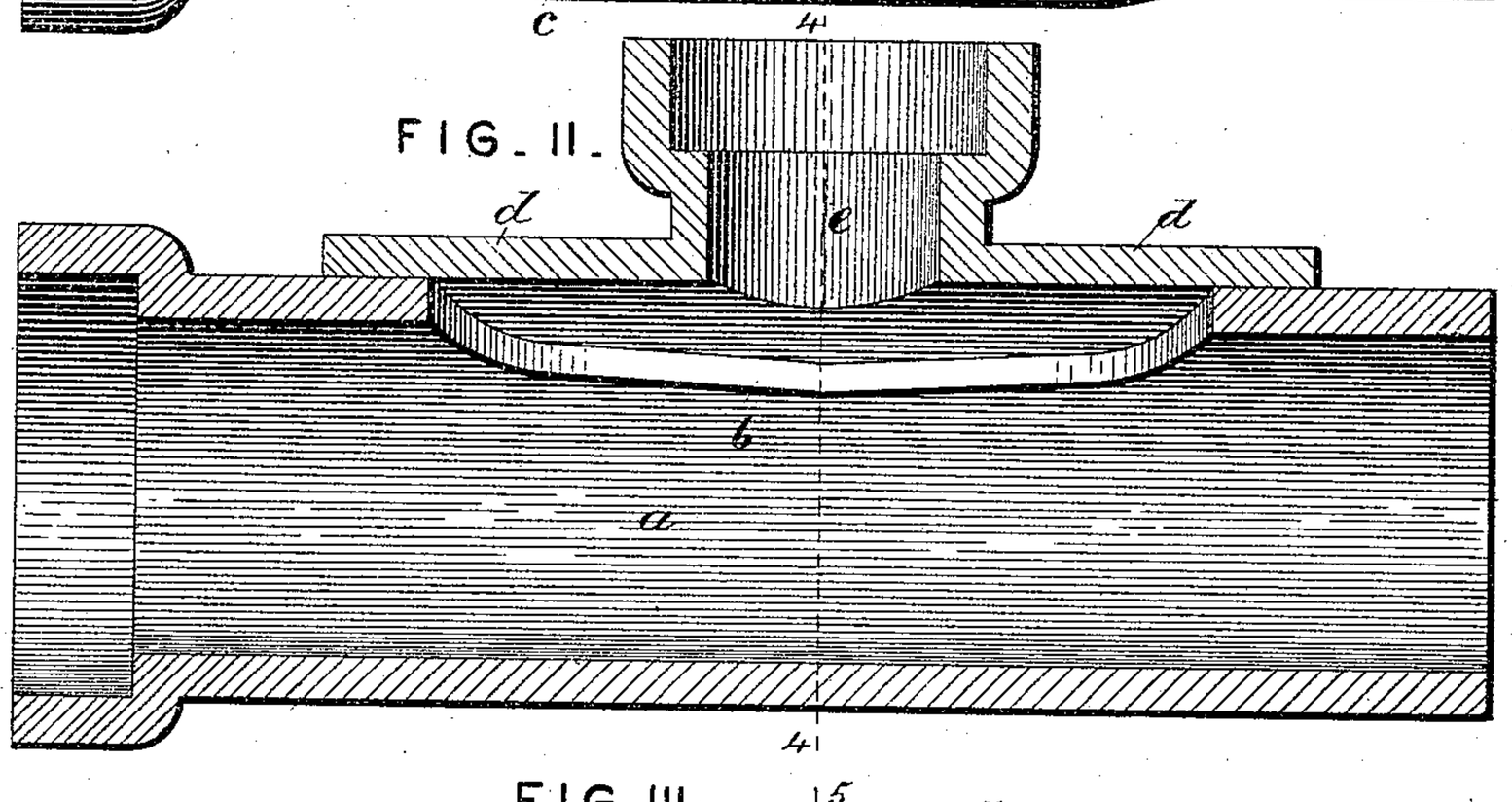


FIG. III.

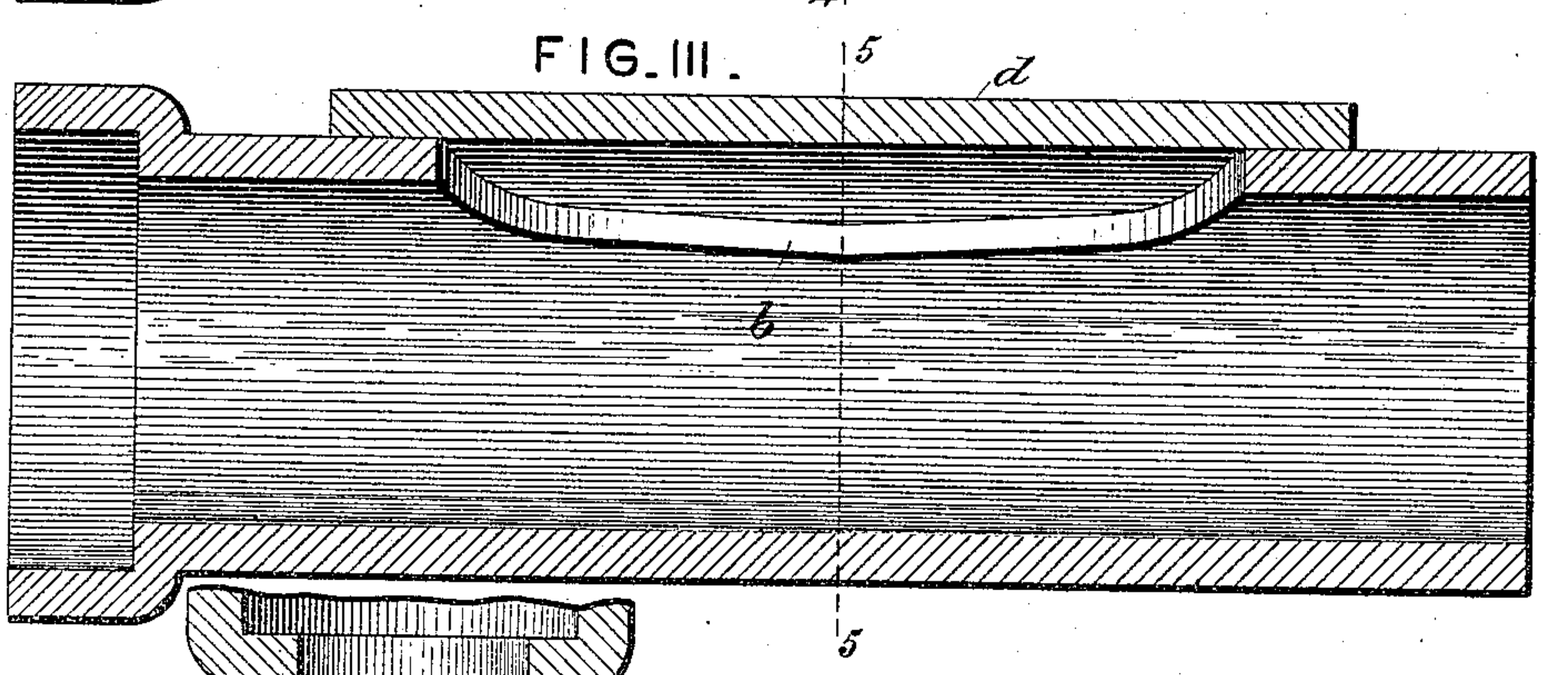


FIG. IV.

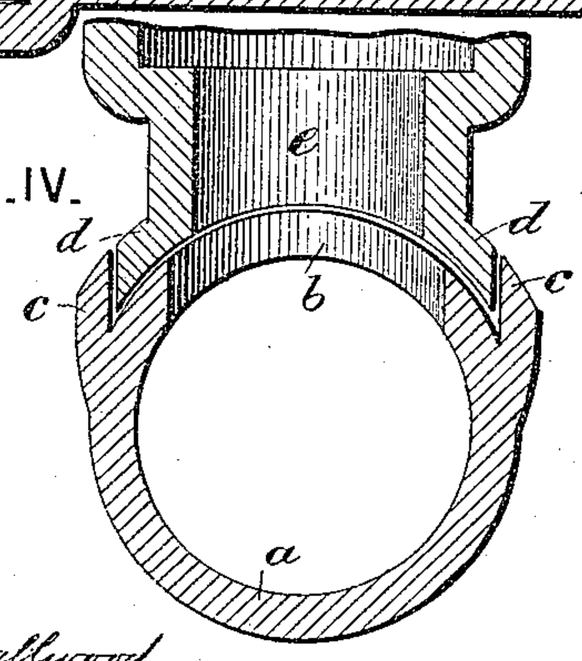
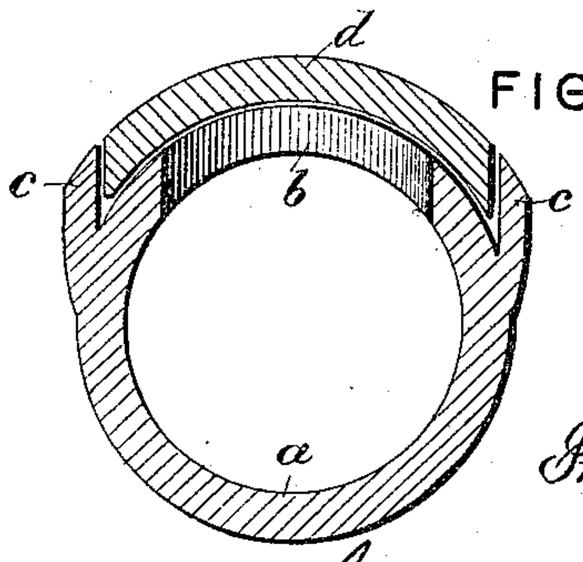


FIG. V.



Attest:
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By Knight Bros. Attys.

UNITED STATES PATENT OFFICE.

JAMES STEEL, OF MEMPHIS, TENNESSEE, ASSIGNOR OF ONE-HALF TO GEORGE MAHAN, OF SAME PLACE.

PIPE.

SPECIFICATION forming part of Letters Patent No. 320,981, dated June 30, 1885.

Application filed May 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES STEEL, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Pipes, of which the following is a specification.

The invention relates to that class of pipes which are provided with traps for the insertion of instruments for cleaning them.

Heretofore such pipes have been provided with elongated openings, from the margins of which openings rise flanges for a distance of five or six inches, said flanges being cast or molded integrally with the body of the pipe. The slot thus surrounded by a flange is covered by a flat plate, which is clamped to the top of the said flange. In practice this means for covering the openings has been found objectionable, as the flanges are liable to warp in baking, or if baked successfully are liable to be broken off in handling.

The object of my invention is, therefore, to obviate these difficulties, and in order that the said invention may be fully understood I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a plan view of a pipe-section, showing the elongated opening, the covering-plate being removed. Fig. II is a vertical longitudinal section of the same, showing the opening covered by a plate having a socket for a branch pipe formed integrally therewith. Fig. III is a similar view showing the opening covered by a simple plate. Figs. IV and V are vertical transverse sections on the lines 4 4 and 5 5, Figs. II and III, respectively.

a represents the body of the pipe, which is cast or molded with an elongated slot or opening, *b*, the ends of which may be of any form, but are preferably curved. *c* represents two flanges or lips cast or molded integrally with the body *a* of the pipe at a short distance from the margin of the slot *b*, said lips preferably extending the whole length of the sides of the slot, and being curved at their ends, so as to follow the curved ends thereof for a sufficient distance to prevent the longitudinal displacement of the covering-plate, which is represented at *d*. This plate consists of a casting the inner curve of which is of the same radius as the outer curve of the pipe *a*, so that it fits snugly thereon, being held from lateral displacement by the side flanges, *c*, and from longitudinal displacement by the inturned ends thereof.

The advantages of this form of cap over those heretofore employed are numerous, among which may be mentioned that the curved plates will resist greater pressure or shock than flat plates, and pipes thus constructed require less care in molding, and when molded occupy less room in kilns, warehouses, &c., and are considerably lighter, thereby effecting a considerable saving in shipment, &c.

If it is desired to let in a branch pipe the covering-plate *d* is cast or molded with a hub or socket, *e*, adapted to receive the end of the branch pipe.

It is obvious that the functions of the plate, so far as my invention is concerned, are not altered by the addition of the hub or socket *e*, and both forms of the device, whether with or without such hub, are hereinafter designated by the single word "plate."

Having thus described my invention, the following is what I claim as new therein, and desire to secure by Letters Patent—

1. A pipe having an opening in the side thereof, in combination with a plate for covering said opening having a curved bearing-surface for engaging with the pipe beyond the edges of the slot, substantially as described.

2. A pipe having an opening in the side thereof and a flange projecting therefrom a suitable distance from the edges of said opening, in combination with a plate having a curved bearing-surface for engaging with the pipe beyond the edges of said opening, held from displacement by the flanges, substantially in the manner set forth.

JAMES STEEL.

Witnesses:
ANTHONY RETZ,
A. J. MURRAY.