J. G. HAYES.

CLEAN-OUT PLUG.

APPLICATION FILED FEB. 12, 1912.

1,112,136. Patented Sept. 29, 1914.

Fig. 1.

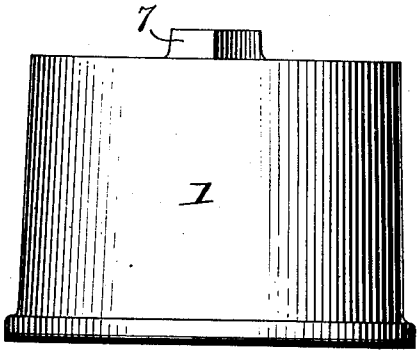



Fig. 2.

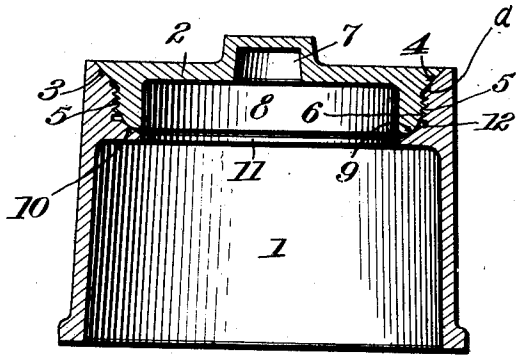
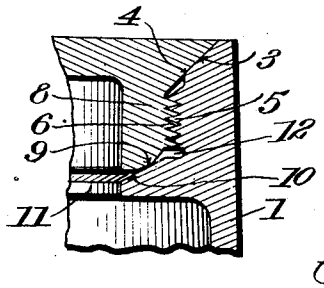



Fig. 3.




WITNESSES

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# UNITED STATES PATENT OFFICE.

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## CLEAN-OUT PLUG.

1,112,136. Specification of Letters Patent. Patented Sept. 29, 1914.

Application filed February 12, 1912. Serial No. 676,946.

*To all whom it may concern:*

Be it known that I, JOSEPH G. HAYES, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Clean-Out Plugs, of which the following is a specification.

My invention relates to plugs for clean-outs for pipes, and its object is to provide a readily removable closure effective to tightly close the clean-out without the use of gaskets, washers or other packing-means at the joint, and to also permit the escape of foreign matter between the plug and the clean-out, and thus prevent erosion.

With this end and others in view, my invention is embodied in preferable form in the device hereinafter described and illustrated in the accompanying drawings.

In these drawings Figure 1 is an exterior side view in elevation of a clean-out with my improved plug applied thereto, Fig. 2 is a vertical section through the plug and clean-out and Fig. 3 is an enlarged detail vertical section through a part of the clean-out body.

Referring to the drawings, 1 is a substantially cylindrical body member of a clean-out, adapted to be secured at its lower end to a pipe. The upper or outer end of the body is adapted to be closed by a removable plug 2. The body 1 is preferably provided with an outer smooth beveled end portion 3, extending from the outer edge inwardly, and affording a ground joint bearing or seat for a corresponding and complementary beveled edge of the top flange portion 4 of the plug, whereby a tight, ground joint may be provided at the outer ends of the plug and clean-out. The body 1 is also provided with interior screw threads 5 to engage with a screw threaded portion 6 formed on the outer peripheral surface of the plug 2, and extending to the inner end of the beveled portion 4, an annular recess *a* being formed at the inner edge of the beveled seat above the screw-threads of the body 1 to receive any dirt or foreign substance sliding off the beveled seat as the plug is screwed to position, so that any such dirt or foreign substance will not interfere with the seating and a perfect fitting joint. By this means, when the plug is screwed into closing position, the outer face thereof will be flush with the surface of the end of the body 1, and the two beveled portions will bear tightly against one another. The plug is provided with polygonal tool engaging means offset from the plane of the exterior face of the plug, either by countersinking a recess therein, or by forming a projecting member and in the form shown, an exterior integral polygonal head 7 is provided, which is adapted to be engaged by a suitable wrench to enable the plug to be unscrewed from the body and thereby removed. Offsetting the tool engaging means from the plane of the plug face permits the application of a tool thereto without removal of the adjacent flush surface of the floor.

Projecting inwardly from the inner face of the plug below the screw threaded portion 6, is an integral flange 8, having an outer smooth beveled surface 9, which is adapted to bear against the beveled surface 10 of an annular flange or ledge 11 integral with the body member 1, and projecting into the interior of the latter. The portion of the body member between the screw threads and the beginning of the beveled portion 10, is grooved or countersunk, thereby providing an annular pocket 12 deeper than the screw threads, and in which grit, dirt or other foreign matter is adapted to collect and be retained, thus preventing the entrance of such matter between the screw threads of the plug and body. This construction not only provides a pocket to collect the grit, etc., but the screwing of the plug to its seat operates by the grinding motion upon said seat to remove all such grit and either crowd it into said pocket or force it off the tapered edge of the body.

In the use of this device, it will be seen that when the plug is screwed tightly into place, the beveled surfaces 3 and 4 and 9 and 10 of the plug and body member, respectively, will form tight, ground joints, which serve effectively to close the entrance to the clean-out, while by forming these beveled joint portions and the screw threaded fastening portion of the plug in an integral piece, it is rendered possible to avoid the use of a separate packing member and by providing interior screw threads on the body of the clean-out to engage the plug a

clamping member separate from the plug is also unnecessary. In practice, if desired, either the upper or lower beveled ground joint surfaces may be dispensed with, the remaining surfaces constituting a sufficiently effective closing means.

Having thus described my invention what I claim is,

1. A clean out device for pipes comprising a body member with a closing plug, said body member being formed at its outer end with a beveled seat and at a distance from said outer end with an inwardly projecting annular flange having a second tapered seat, the portion intermediate of said tapered seats being formed with screw-threads, a recess or pocket being formed on each side of the screw-threaded portion, and said plug being formed with a tapered flange at its outer end adapted to fit upon the outer seat of the body and with a tapered inner edge adapted to seat upon the tapered seat of the flange, with exterior screw-threads adapted to engage and cooperate with the screw-threads of the body, and means for engagement of a tool with said plug for turning the same, substantially as set forth.

2. A clean out device for pipes comprising a body member having interior screw-threads near its outer end, an internal circumferential flange below the screw-threaded portion with a tapered upper face, a recess or pocket between said flange and the threaded portion, an integral plug member provided with exterior screw-threads adapted to engage the screw-threads of the body member and formed at its inner end with a tapered face adapted to seat upon the tapered face of the flange of the body member, and means for attachment of an operating device for turning said plug member, substantially as set forth.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Ind. this 22nd day of January, A. D. nineteen hundred and twelve.

JOSEPH G. HAYES. [L. S.]

Witnesses:
H. P. Doolittle,
Ruth Selig.