

W. VANDERMAN.
LEAD JOINT RUNNER.
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960,604.

Patented June 7, 1910.

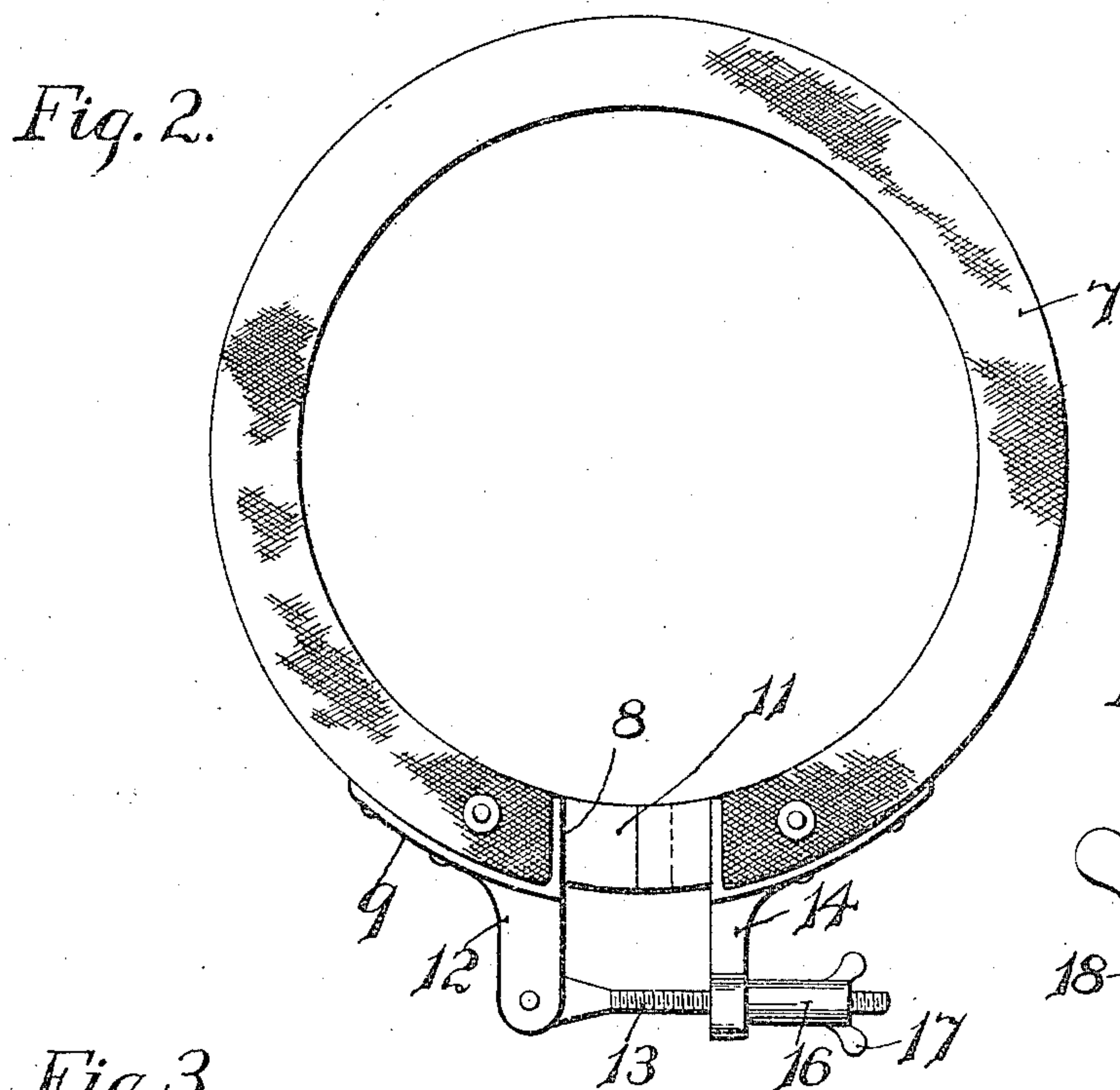
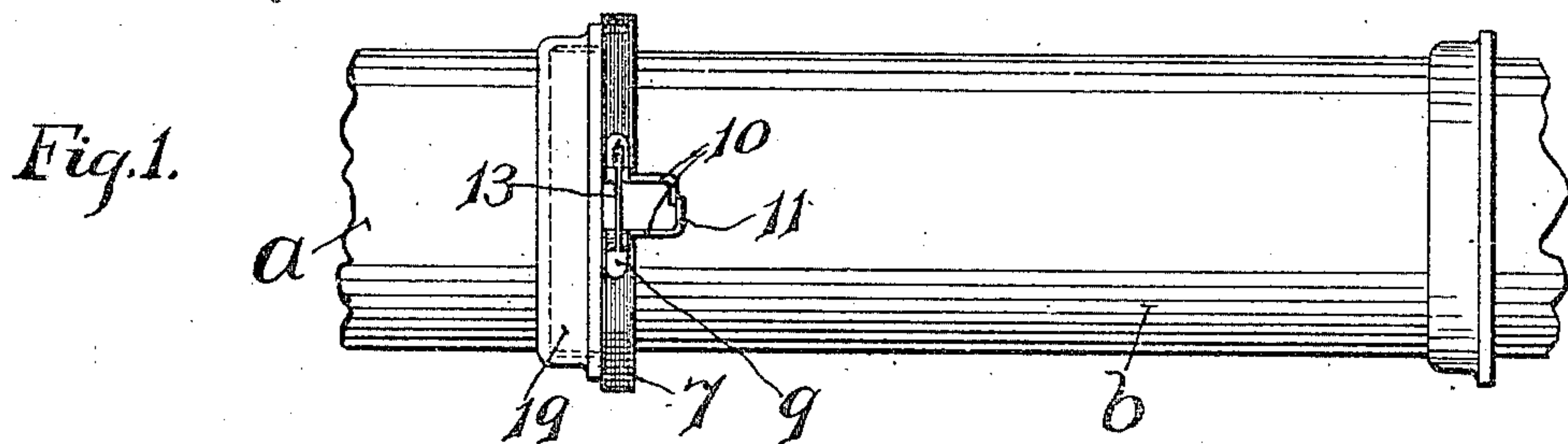


Fig. 3.

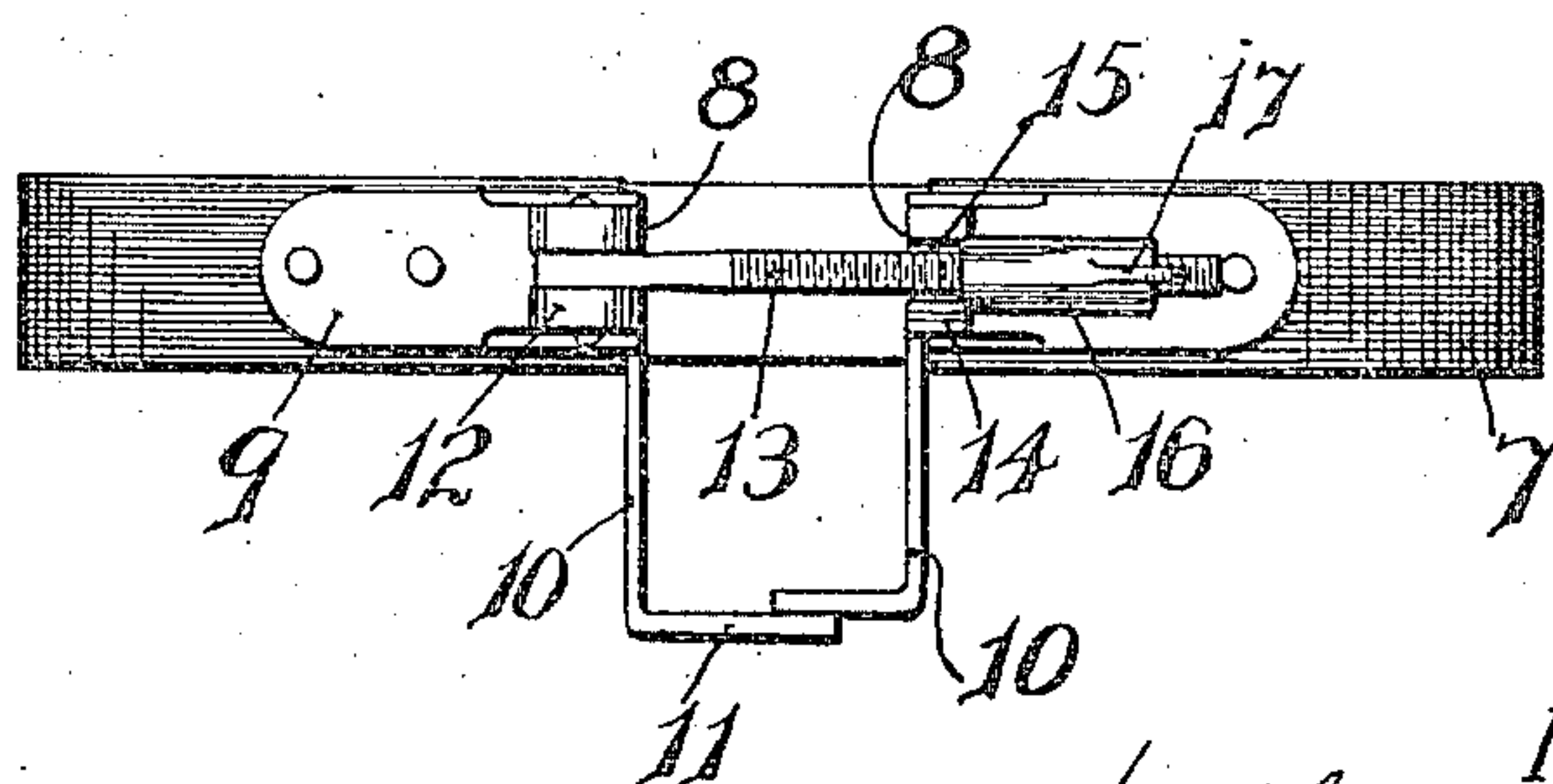
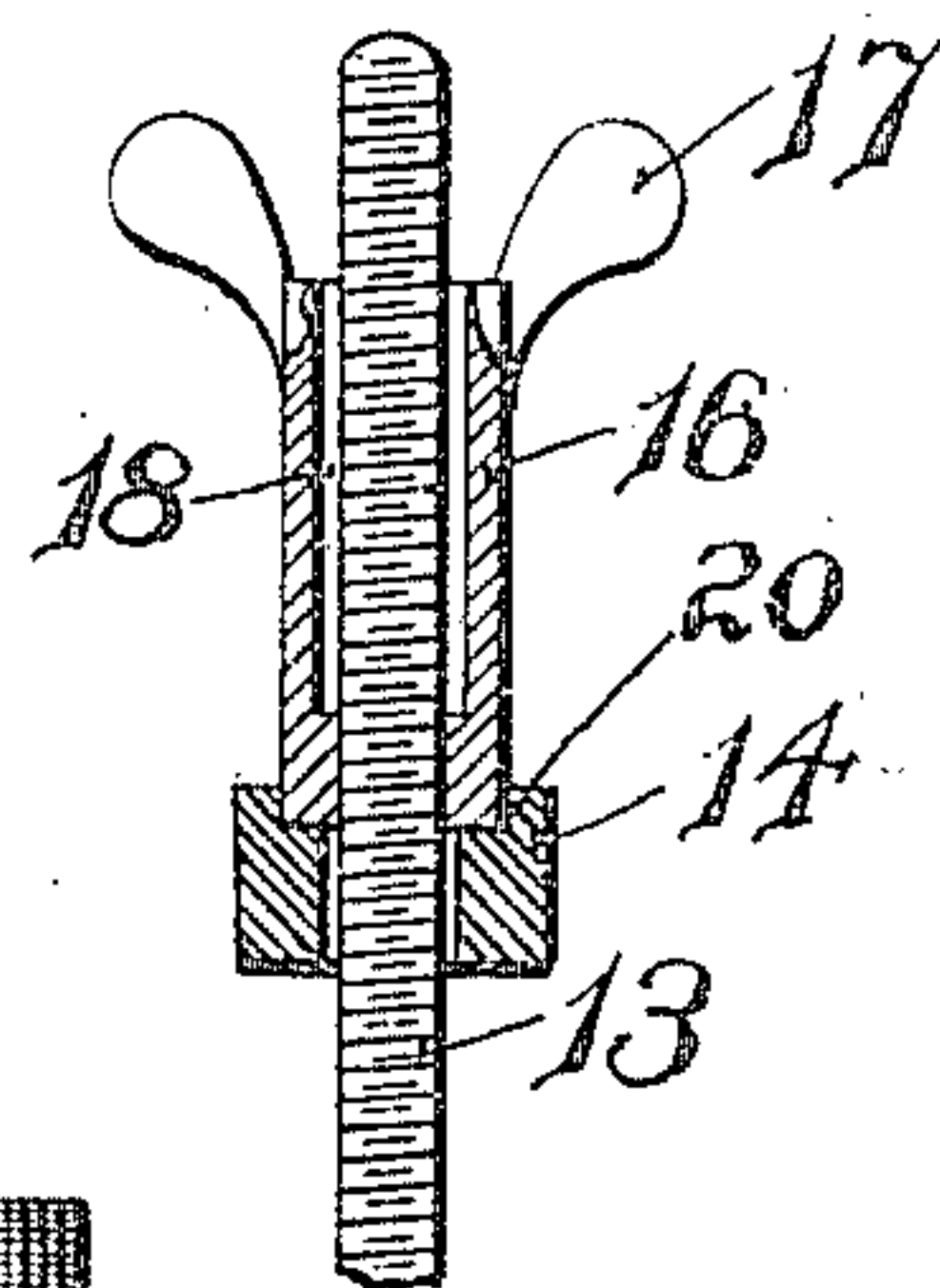


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

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LEAD JOINT-RUNNER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM VANDERMAN, a citizen of the United States, and a resident of Willimantic, in the county of Windham and State of Connecticut, have invented a new and Improved Lead Joint-Runner, of which the following is a specification.

My invention relates to the class of devices more commonly used by plumbers for packing the joints of piping, such as soil pipes and the like with molten metal, and the object of the invention is to provide a device of this class having numerous novel features of advantage and utility.

One form of device embodying my invention and in the use of which the objects and advantages herein set out may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a section of soil pipe showing the manner of use of my improved device. Fig. 2 is a face view on enlarged scale of my improved joint runner. Fig. 3 is an edge view of the same. Fig. 4 is a detail view showing the construction of the fastening means.

In the work of laying water, gas or soil pipe or the like, a common method of securing the joint between two sections of pipe is to pour molten metal as lead into the space between the outer surface of the spigot end of a section and the inner surface of the hub end within which the spigot end of a section is inserted. The diameter of such pipes differ even in the same size of piping owing in some instances to defective casting, but more especially from the fact that pipe of greater thickness is required for certain uses than for others. For instance, a two inch pipe made for use as a soil pipe will measure less in diameter than a pipe of the same size constructed for use as a water pipe, for the reason that the latter is much thicker owing to the higher pressure which it must withstand. In the operation of completing joints between these sections of piping it is essential that the mouth of the opening or space within the hub of the section be thoroughly closed except for a small opening through which the molten metal is poured, and that the device shall be so constructed that this gate or opening shall always be present when the device is used on different sizes of pipe.

The requirements of the device as to flexibility necessitates the use of material which

is liable to be more or less affected by the hot molten metal, and my improved device is so constructed that the material of the runner is thoroughly shielded at those points where the molten metal is hottest, and I also provide means whereby the gate is always present and there is no obstruction to the pouring of the metal into the gate, and the device is also so constructed that it hugs the shoulder of the hub end of a pipe snugly and prevents any outflow of the molten metal.

In the accompanying drawings of an approved form of my device the numeral 7 indicates the body of the runner, which is composed of any suitable flexible fibrous material. This body is of proper length, and the ends of each are fitted with shields, consisting preferably of metal cast to shape and each having an end wall 8 to cover the end of the body part, a lip 9 extending from the end wall for a considerable distance backward along the body. The end wall 8 completely covers the end of the body 7 and a gate is formed by projections from each of these end walls, these projections extending at about right-angles to the body 7 and having inturned ends 11 located preferably parallel with the body 7 and lapping past each other, as shown in Fig. 3 of the drawings.

An ear 12 projects upward from one of the lips 9 and at the outer end of this ear a bolt 13 is pivotally secured, this bolt being adapted to rest in a slot 15 in an ear 14 projecting from the opposite lip of the shield.

A thumb nut 16 is secured upon the screw-threaded end of the bolt 13, this nut being of sufficient length to locate the wings 17 at a point where turning action will not be interfered with by the body 7. In order to lighten the nut and also reduce the amount of engaging screw-threaded parts and thus lessen the friction, the nut has a recess 18 extending from its outer end for a considerable distance inward, as shown in Fig. 4.

The ears 12 and 14 being located upon lips secured to the outer edge of the body 7 are brought directly in line, so that when the nut 16 is tightened to draw the ends of the body part 7 together the force exerted by the nut upon the ears 12 and 14 is in a direct line with the length of the body part and parallel with the edge of the hub 19 of the section of pipe *a* which is being united with the section of the pipe *b*. The consequence is that the side of the body part is

maintained close against the edge of the hub, thus securely closing the mouth.

The ear 14 has a recess 20 immediately underlying the nut 16 within which the end of the latter projects to lock the bolt 13 and prevent swinging movement and consequent accidental disengagement from the ear.

I do not limit my invention and the scope of the following claims to the foregoing illustration and description of the preferred form in which it has been embodied.

I claim—

1. A joint runner including a flexible body part, a shield secured to each end of said body part, a gate including two members each secured to one of said shields, the outer end of each member being bent, said bent ends both lying in a plane substantially parallel with the side of the body part and lapping one past the other, and means borne by said shield for drawing the ends of the body part toward each other.

2. A joint runner including a flexible body part, a shield secured to each end of said body part, ears rising from each of said shields, a bolt pivotally mounted on one of said ears and extending through an opening in the opposite ear, means upon the bolt for drawing the ears together, and a gate including two members each integrally formed with one of said shields, the outer end of each member being bent and lying in a straight plane approximately parallel with the bent end of the other part and lapping one past the other.

3. A joint runner including a body part arranged to be bent into circular form and having a shield completely covering the meeting ends, a sectional gate formed one

section integral with each of said shields, ears rising from each of said shields, a bolt pivotally secured to the outer end of one of said ears and engaging an opening in the outer end of the other ear, a nut fitted on said bolt and having wings located at the outer end of the nut, said nut having a recess extending from the outer end inward to a point near its inward end.

4. A joint runner including a flexible body part, a shield secured to and covering each end of the body part, each shield having a lip extending backwardly along the edge of the body part, ears rising from said lips in a line substantially parallel with the sides of the body part, a bolt pivoted to the outer end of one of said ears and passing into an opening in the outer end of the opposite ear, the latter having a recess in its face adjacent to said opening, and a nut fitted on said bolt and with its end adapted to rest in said recess whereby accidental disengagement of the bolt from the ear is prevented.

5. A joint runner including a body part arranged to be bent into circular form and having a metallic gate member secured to each end thereof, ears rising from each of said metallic members, a bolt pivotally secured to the outer end of one of said ears and engaging an opening in the outer end of the other ear, and a nut fitted on said bolt and having wings located at the outer end thereof, said nut having a recess extending from the outer end inward to a point near its inner end.

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Witnesses:

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