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D. J. McGEEHIN

TEMPORARY PIPE COUPLING

Filed Feb. 19, 1926

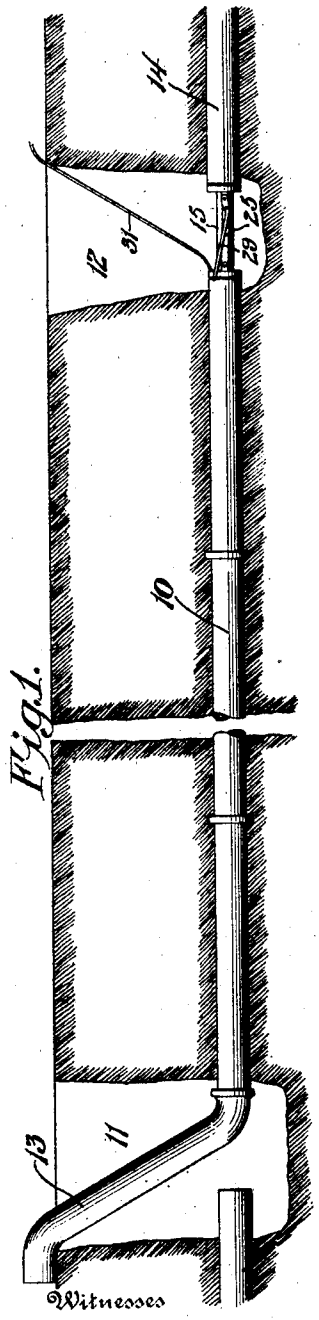


Fig. 1.

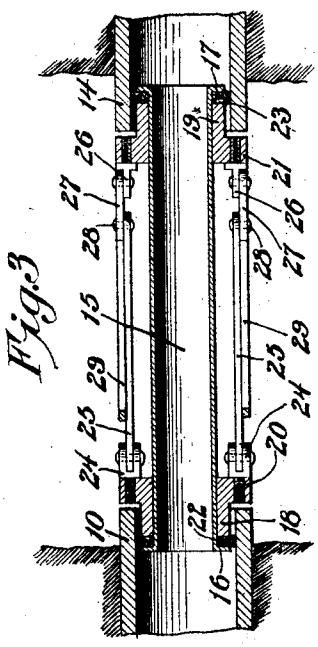


Fig. 3.

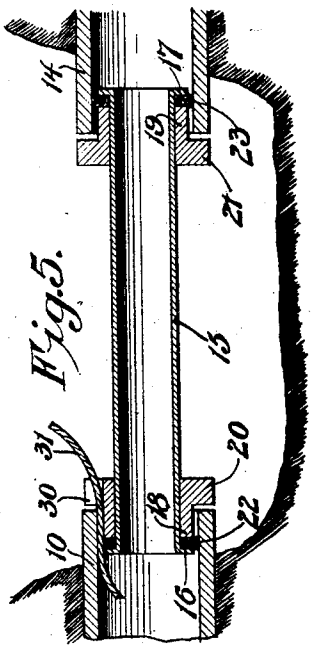


Fig. 5.

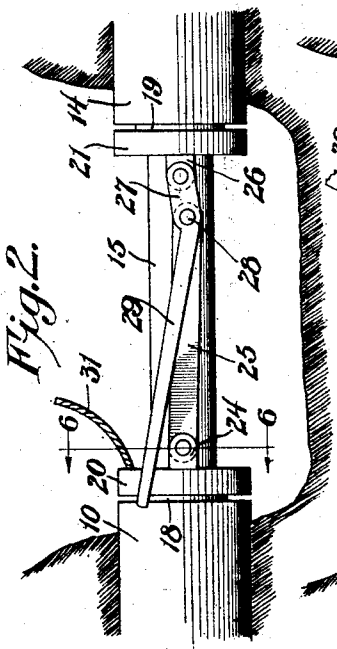


Fig. 2.

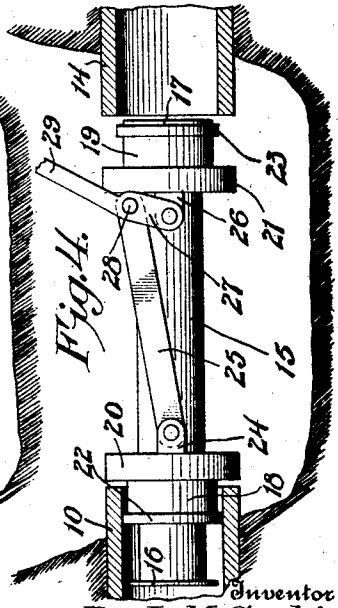


Fig. 4.

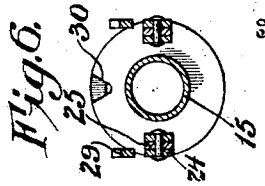


Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

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TEMPORARY PIPE COUPLING.

Application filed February 19, 1926. Serial No. 89,399.

This invention relates to a temporary pipe coupling adapted for use in a water main, sewer or the like for temporarily repairing a cut, which has been made therein for the purpose of cleaning the pipe, or repairing a broken pipe.

The object of the invention is to provide a coupling for this purpose which may be placed between the two opposed stationary ends of the pipe after the cleaner has been inserted in the pipe, or after a broken section has been removed, thus temporarily replacing the portion which is cut out, a coupling which may be easily and quickly extended longitudinally so as to form a water-tight connection with the ends of the pipe.

The specific construction of the invention and the method of using the same will be more particularly explained in the following description, in which reference is made to the accompanying drawing illustrating the same.

In the drawing:

Figure 1 illustrates part of a water system, and the method of using the invention in connection therewith.

Figure 2 is an enlarged view showing a side elevation of the invention in operative position.

Figure 3 is a horizontal section of the parts shown in Figure 2.

Figure 4 is a side elevation illustrating the manner of inserting the coupling in the pipe.

Figure 5 is a vertical longitudinal section through the coupling.

Figure 6 is a transverse section taken on the line 6—6 of Figure 2.

The invention will be described with particular reference to cleaning pipe, with the understanding that the same coupling may be used in repairing a broken pipe. In the drawing, therefore, it is assumed that 10 designates a section of pipe to be cleaned. In order to do this, excavations 11 and 12 are made, and the pipe to be cleaned is cut at these points. These cuts may be located a considerable distance apart, the distance sometimes being as great as 2500 feet. A discharge pipe 13 is then connected to the outlet end of the pipe section 10. After the cleaner has been inserted in the section 10, its inlet end is temporarily coupled to the pipe 14, which leads from a reservoir or other source of supply.

For the purpose of making this temporary connection, I have provided a coupling comprising a connecting pipe section 15, somewhat longer than the distance between the ends of the pipe to be coupled, and small enough in diameter to be freely insertible therein. The pipe section 15 is formed at its ends with flanges 16 and 17 respectively, which serve to centre the section 15 as it is placed in coupling position and also to retain sleeves 18 and 19 which are mounted on the section 15, and have a close sliding fit thereon. The inner ends of these sleeves are provided with flanges 20 and 21 respectively. Packing glands 22, 23 are placed between the sleeves 18, 19 and the respective flanges 16, 17, and when compressed therebetween, are adapted to expand circumferentially against the wall of the pipe and prevent leakage.

A pair of ears 24 are secured to the flange 20 at diametrically opposite points, and have links 25 pivotally connected thereto. Ears 26 are secured to the flange 21 opposite to the ears 24, and have levers 27 pivotally connected thereto. Each lever 27, at a point not far from the ear 26, is pivotally connected to the end of the corresponding link 25, as shown at 28, and the handle 29 of the lever preferably extends at an angle so that it may be more readily accessible.

Before making the connection between the pipe 14 and the section 10, a float or carrier is inserted at the inlet end of the section 10, and the flange 20 is provided with a notch 30 to permit the passage of a cord or rope 31, the end of which may be attached to the float and carried to the outlet end of the section 10. Thus is provided a line by which a cleaning device may be drawn through the pipe section 10 to clean the same. The material dislodged from the inside of the pipe is then discharged through the outlet pipe 13 into the gutter.

To connect the coupling to the pipe, one end of the section 15 is inserted into the end of the section 10, as shown in Figure 4. At this time, the levers 27 are in upright position. As the levers are now swung downwardly about their fulcrums, the coupling member is extended until the packing glands 22 and 23 are pressed tightly against the inside of the respective pipe sections to be joined. The cut is made of such a length that when the levers 27 pass dead center,

the coupling becomes automatically locked in position, but may be instantly withdrawn merely by raising the handles 29.

While I have shown and described the detailed construction of the coupling in what is deemed at present its preferred form, it is to be understood that various modifications may be made in the structure and arrangement of the various parts without any material departure from the scope of the invention as expressed in the claims.

What is claimed is:

1. A temporary pipe coupling for connecting the spaced ends of two stationary pipe sections, comprising a connecting pipe section longer than the distance between said ends and small enough in diameter to be freely insertible therein, a pair of sleeves having a close sliding fit on said connecting section and formed with peripheral flanges, a pair of levers pivotally connected to one of the flanges, a link opposed to each lever and connecting the same to the flange on the other sleeve, whereby the levers may be rocked to force the sleeves in opposite directions, and means actuated thereby to form a tight engagement with the ends to be coupled.

2. A temporary pipe coupling for connecting the spaced ends of two stationary pipe sections, comprising a connecting pipe section adapted to be inserted in the ends of the section to be coupled, a pair of sleeves having a close sliding fit on said connecting section and formed with peripheral flanges, flanges on the ends of the connecting section serving to retain the sleeves thereon and to centre said connecting section after it has been placed in coupling position, a pair of levers pivotally connected to one of the sleeve flanges at diametrically opposite points, a link opposed to each lever and connecting the same to the flange on the other sleeve, whereby the levers may be rocked to force the sleeves in opposite directions, and means actuated thereby to form a tight engagement with the ends to be coupled.

3. A temporary pipe coupling for connecting the spaced ends of two stationary pipe sections, comprising a connecting pipe section whose ends are adapted to be inserted in the ends of the sections to be coupled, a pair of sleeves having a close sliding fit on said connecting section and formed with peripheral flanges, means connected with said flanges for forcing the sleeves in opposite directions into the ends to be coupled, and means actuated by said sleeves, when so moved, to effect a tight engagement with the ends to be coupled, the flange on one of the sleeves being provided with a notch to permit the passage of a line for hauling a cleaning device through the pipe.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature.

DANIEL J. McGEEHIN.