

No. 784,182.

PATENTED MAR. 7, 1905.

L. M. SARTAIN.
TRAIN PIPE COUPLING.
APPLICATION FILED DEC. 17, 1904

Fig. 1.

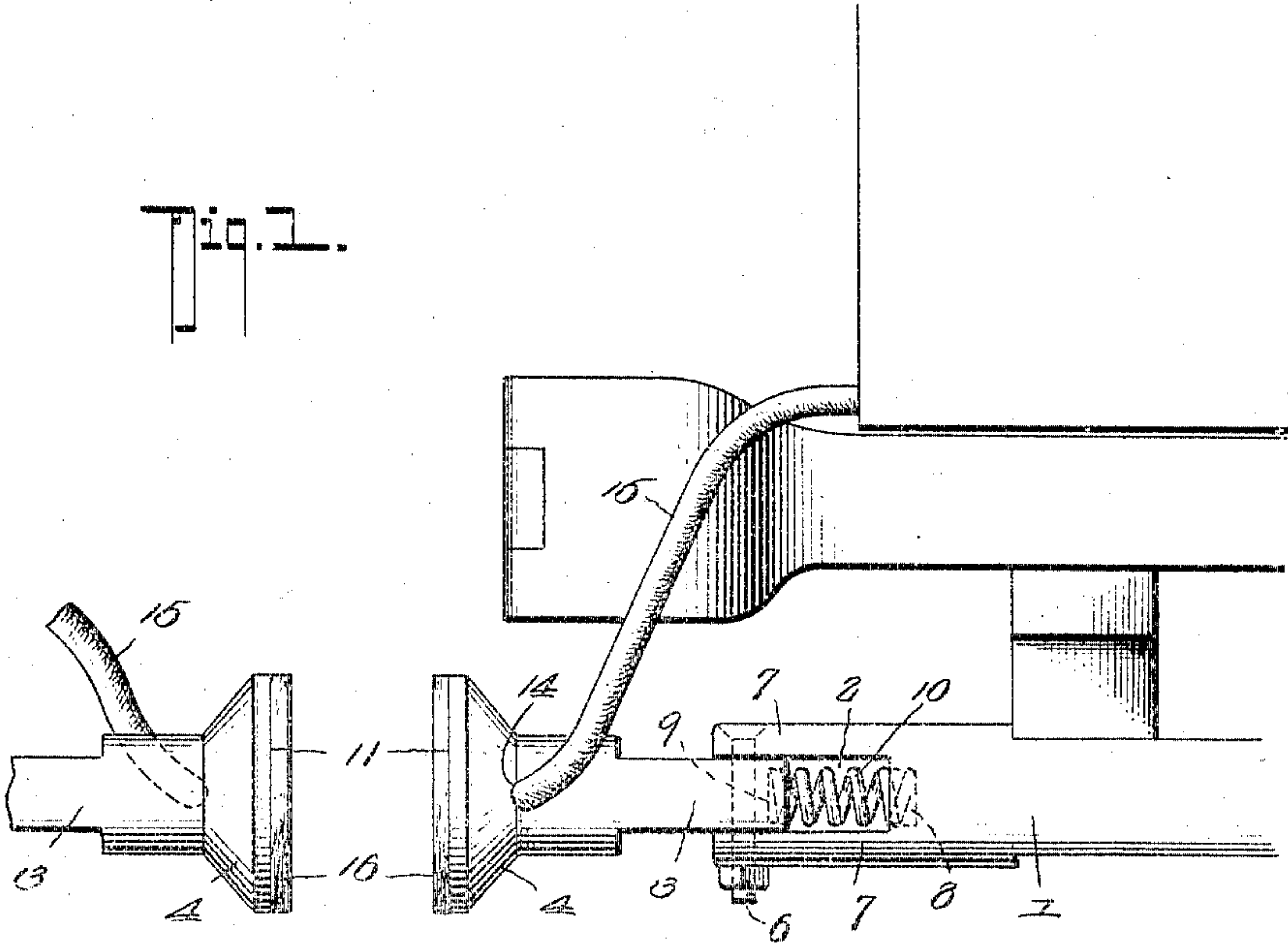


Fig. 2.

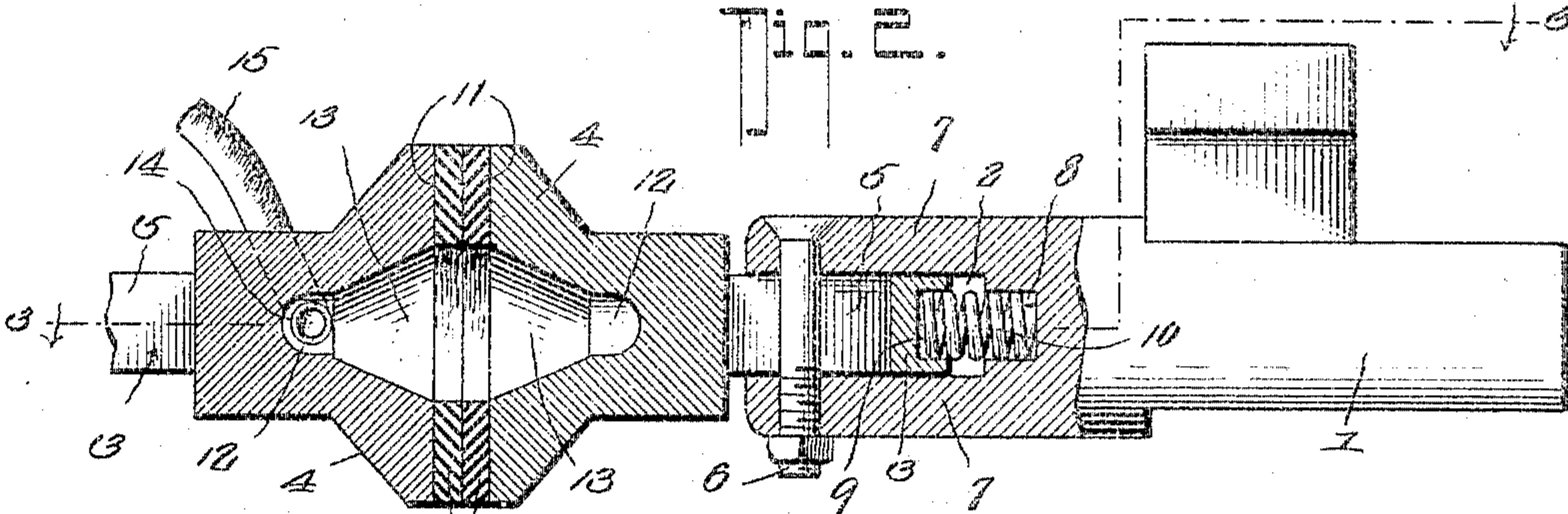
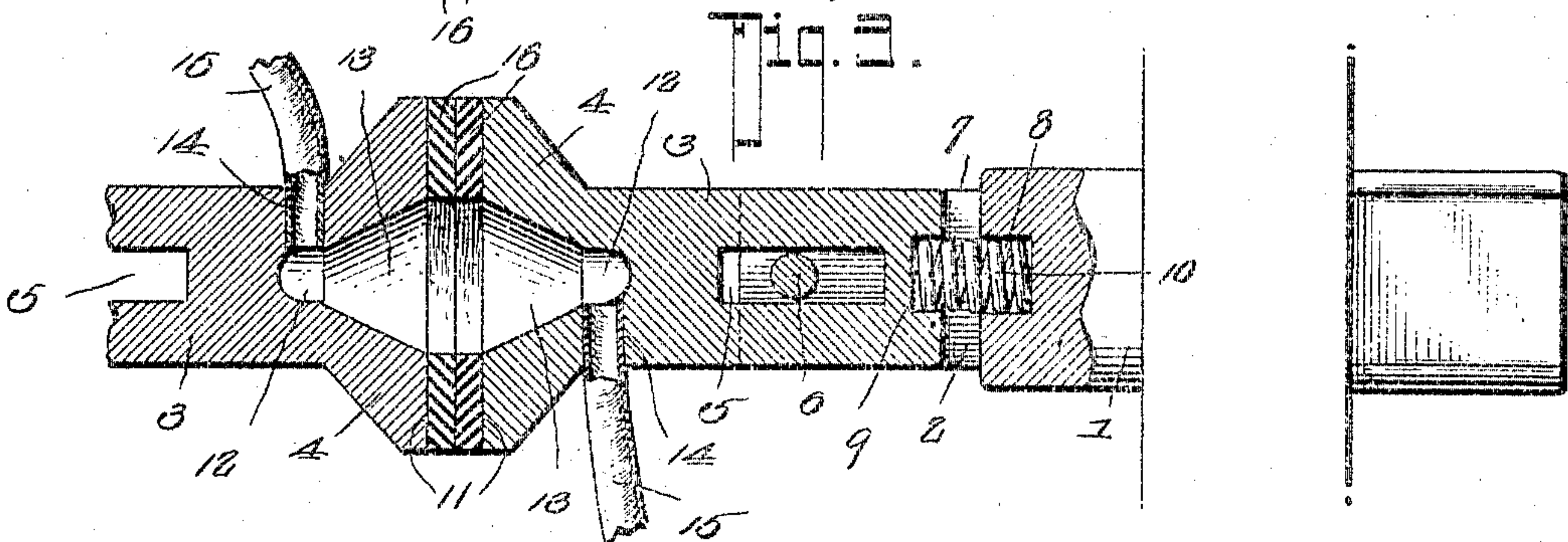


Fig. 3.



Witnesses

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LOUIS MARTAIN SARTAIN, OF CLOUSE HILL, TENNESSEE, ASSIGNOR TO
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TRAIN-PIPE COUPLING.

SPECIFICATION forming part of Letters Patent No. 784,182, dated March 7, 1905.

Application filed December 17, 1904. Serial No. 237,308.

To all whom it may concern:

Be it known that I, LOUIS MARTAIN SARTAIN, a citizen of the United States, residing at Clouse Hill, in the county of Grundy and State of Tennessee, have invented a new and useful Train-Pipe Coupling, of which the following is a specification.

This invention relates to train-pipe couplings, among the objects of the invention being to simplify the construction and to improve the operation of this class of devices, as well as to reduce the expense of manufacture of the same.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which recourse may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a side elevation showing the improved train-pipe coupling applied in operative position. Fig. 2 is a longitudinal vertical sectional view of the same. Fig. 3 is a horizontal sectional view taken on the plane indicated by the line 3 3 in Fig. 2.

Corresponding parts in the several figures are indicated by like characters of reference.

The improved train-pipe coupling comprises a body 1, provided at its front end with a horizontal recess 2 for the reception of the shank 3 of a flaring or bell-shaped coupling member 4. The shank 3 is provided with a vertical recess or slot 5 for the reception of a coupling-pin 6, which passes vertically through the jaws 7, formed by the recess 2 at the front end of the body 1. At the inner end of the

recess 2 is a socket 8, and a corresponding comparatively shallow socket 9 is formed in the extremity of the shank 3. These sockets are for the reception of a spring 10, which normally forces the coupling member 4 in an outward direction, but which will yield to compression to permit said coupling member to move inward in the direction of the body 1. It will also be seen that the coupling member is capable of free movement pivotally upon the coupling-pin 6. When such movement takes place, the spring 10 will be retained in position owing to the ends of said spring being seated in the sockets 8 and 9. It is to be understood, however, that other means for retaining the spring in position may be resorted to within the scope of the invention.

The flaring or bell-shaped coupling member 4 has a flat face 11, in which is formed a centrally-disposed recess or socket 12, the outer end of which is countersunk, as shown at 13. Said coupling member is also provided in one side thereof with a transverse opening 14, communicating with the recess or socket 12. The outer end of the transverse opening 14 is connected in any suitable and convenient manner with the terminal of the train-pipe 15.

The face of the bell-shaped member 4 is preferably provided with and protected by a cushion or plate 16, of rubber or other suitable flexible material, in order that when two coupling members come together a practically leak-proof joint may be formed.

The body 1, coupling member 4, pin 6, and spring 10 form together what may be termed a "unit" of the improved coupling. This unit is to be suitably mounted for operation upon the end of a car, the preferred location being just below the draw-head or draw-bar and the disposition being such that the coupling member 4 shall project some distance beyond or in front of the head of the car-coupling, it being understood, of course, that said coupling member 4 shall be capable of a sliding movement with relation to the body 1 of greater extent than the extent of its projection beyond the car-coupling in order that the parts may not be injuriously affected when the cars come together. It is obvious that the

units of the pipe-coupling being disposed upon the cars in alinement with each other when the cars come together the flat meeting faces of the coupling members 4 will engage and will be held firmly in contact with each other by the action of the springs 10, which when the cars are coupled remain in a compressed state. Communication will thus be established between the train-pipes 15 through the openings 14 and sockets 12, and the countersunk outer ends of said sockets will cause the air-passage to remain unobstructed, even if the coupling members of the units connected with two cars should be somewhat out of alinement.

This improved pipe-coupling is, as will be seen, extremely simple and easily made. It is entirely automatic in its action, requiring no attendants whatever, but causing the coupling of the train-pipes to be effected automatically when the cars come together. The units are all of identical construction and in this respect differ from many devices of this class which are provided with right and left or male and female members. For this reason it is obvious that cars equipped with this device may be reversed end for end without interfering with the successful operation of the pipe-couplings, provided, of course, the latter are placed in proper alinement upon the ends of the cars. Where a plurality of pipes are used, a plurality of couplings may likewise be employed, and when this is the case the units of said couplings will be mounted in any position that shall be deemed suitable and advantageous.

It will be seen that by reason of the pivotal arrangement of the coupling member 4 the device will readily adapt itself to the position assumed by the cars in turning curves and that the springs 10 will readily flex or bend in accordance with the various positions assumed by said coupling members, said springs also serving to restore the coupling members to normal engaging position when released from unusual pressure in any direction.

Having thus described the invention, what is claimed is—

1. In a train-pipe coupling, a coupling member having in the face thereof a recess countersunk at its outer end and provided in the side thereof with a transverse opening communicating at its inner end with said recess and at its outer end with a train-pipe.

2. In a train-pipe coupling, a coupling mem-

ber having a flat engaging face and a recess therein countersunk at its outer end, and a train-pipe having direct communication with said recess through a transverse opening in the coupling member.

3. In a train-pipe coupling, a slidably and pivotally supported spring-pressed coupling member having a flat engaging face provided with a recess, and a train-pipe communicating with said recess through an opening in the side of said coupling member.

4. In a train-pipe coupling, a movably-supported spring-pressed coupling member having a flat engaging face provided with a recess, a flexible cushion upon said engaging face, and a train-pipe communicating with said recess through an opening in the side of the coupling member.

5. In a train-pipe coupling, a movably-supported spring-pressed coupling member having a flat engaging face provided with a recess countersunk at its outer end, a flexible cushion upon said engaging face, and a train-pipe communicating with the recess through an opening in the side of the coupling member.

6. In a train-pipe coupling, a body having a horizontal recess and a coupling member having a slotted shank engaging said recess; a connecting-pin extending through the jaws of the body member and through the slot of the coupling member the latter being provided with a recess in its engaging face; and a train-pipe communicating with the recess in the engaging face of the coupling member through an opening in the side of the latter.

7. In a train-pipe coupling, a body member having a slot or recess and a socket at the inner end of said recess, a coupling member having a slotted shank engaging the recess of the body member, said shank being provided with a socket at its inner end, a coupling-pin connecting the body member with the coupling member and extending through the slot in the shank of the latter, and a compressible spring member seated in the sockets of the body member and the coupling member.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LOUIS MARTAIN SARTAIN.

Witnesses:

JAMES O'NEILL,
J. W. MARLER.