

(No Model.)

J. HUNTER.  
GAS CONDUCTOR.

No.315,788.

Patented Apr. 14, 1885.

Fig. 1.

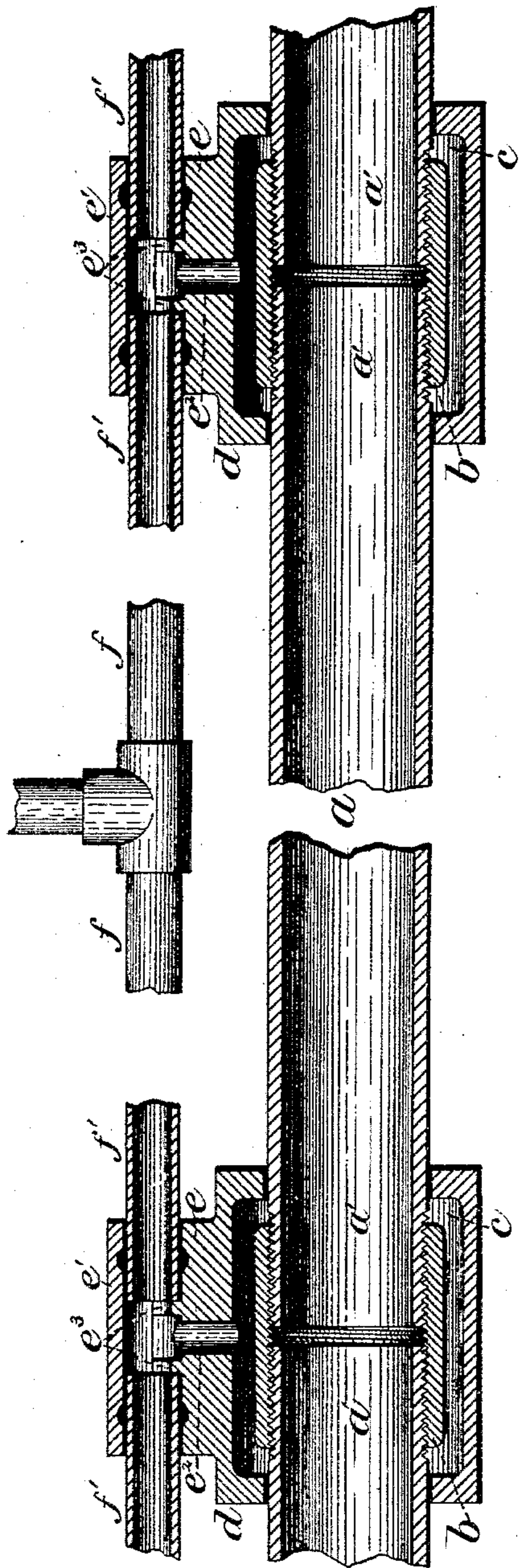
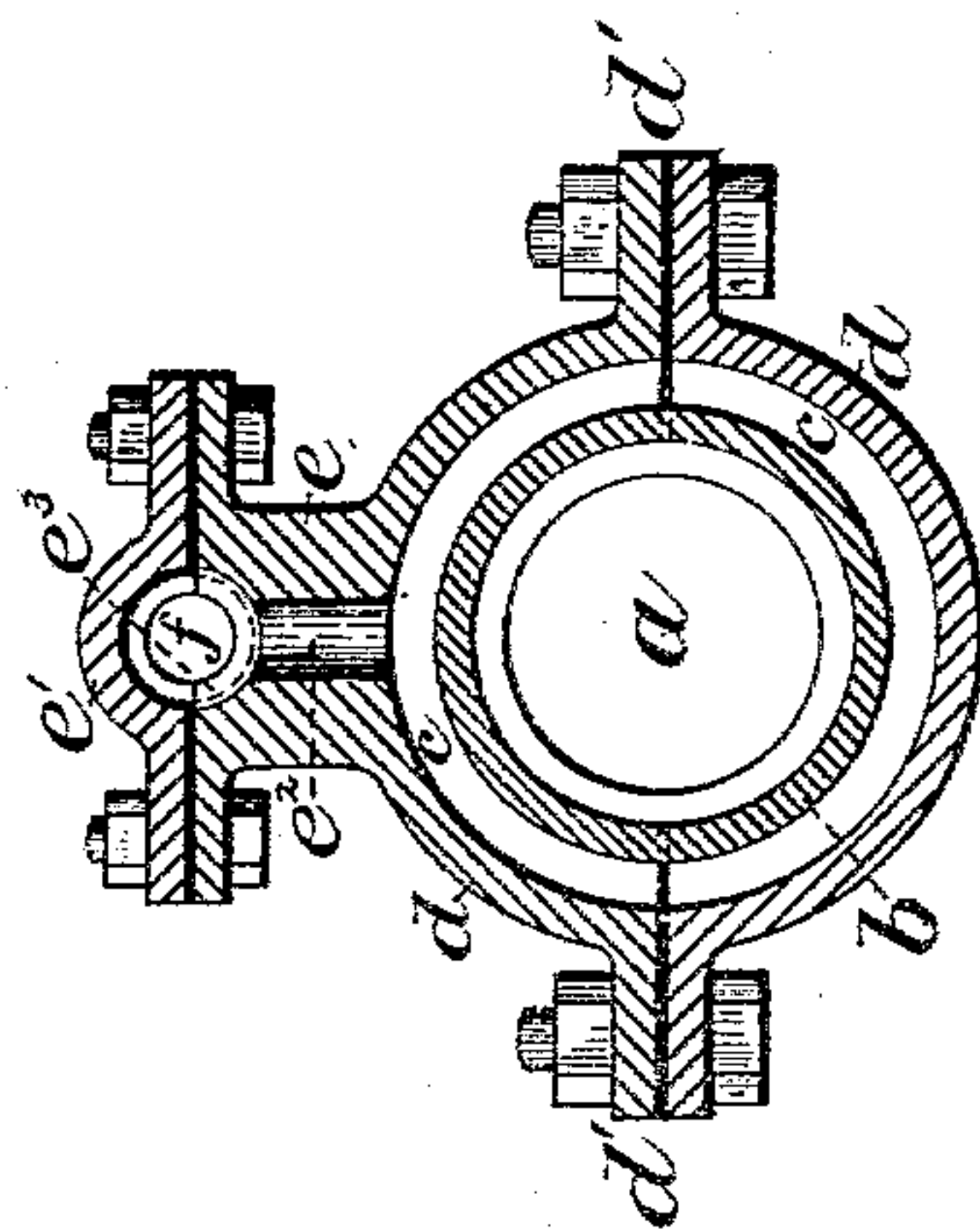


Fig. 2.



Witnesses.

*W. B. Corwin*  
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Inventor.

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by his attys  
*Bakewell & Ken*



# UNITED STATES PATENT OFFICE.

JAMES HUNTER, OF PITTSBURG, PENNSYLVANIA.

## GAS-CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 315,788, dated April 12, 1885.

Application filed March 16, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES HUNTER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Natural-Gas Conductors; and I do hereby declare the following to be a full, clear, and exact description thereof.

In the construction of underground lines for the conduction of natural gas it was the practice in some instances to provide the joints of the conducting-pipe with a surrounding chamber for the purpose of collecting and preventing the free escape of the leakage from the conducting-pipe, and to connect such chambers either directly with each other by means of small pipes or with a line of small pipe extending above and parallel to the main conducting-pipe, and at proper intervals to provide a stand-pipe for the purpose of carrying off into the free atmosphere or to some place of use the leakage gas from said smaller pipes. It has been customary to screw the sections of smaller pipe into the said waste-chambers at the joints; but as these lines of conductors require to be taken up for repairs and other reasons, it is necessary to uncouple the main pipe or to take off the waste-chambers in order to remove the sections of waste-pipe, and as the waste-pipe requires to be accurately fitted in its couplings, it is necessary, in order to follow a bend or curve in the main conductor, to provide the waste-pipe also with a T or other fitting.

My improvement consists in so placing and securing the waste-pipe to the main conductor that sections may be removed without disturbing the main conductor and without waste of time, or difficulty, and it has the further advantage of not requiring the use of fittings to make a turn or angle in the waste-pipe, and dispenses with much of the care which is now necessary in making the joints.

It is found desirable and in many cases absolutely necessary to remove the waste-pipe in order to make a new connection with the main conductor. Under the former practice this was a matter of great difficulty, involving the uncoupling of the waste-chambers, in order to remove the waste-pipe, while with my improvement any section of the latter can be taken off without trouble or difficulty.

To enable others skilled in the art to make and use my invention, I will now describe it by reference to the accompanying drawings, 55 in which—

Figure 1 is a longitudinal vertical section of my improvement. Fig. 2 is a cross-section.

Like letters of reference indicate like parts.

The main pipe *a* is of the usual construction, being formed of sections *a'*, secured together by couplings *b*, in the usual manner. Around each joint is a chamber, *c*, formed by an external casing, *d*, composed of two semi-circular pieces bolted together, as at *d'*, around 65 the pipe *a*.

Formed on the upper side of the shell *d* is a box, *e*, for the waste-pipe *f*, and fitted on the box *e* is a cap, *e'*, secured by bolts or in any other suitable way. The inner faces of the box *e* and cap *e'* are grooved longitudinally, so that when placed together said grooves form a round bore or opening for the reception of the ends of the sections *f'* of the waste-pipe *f*. Extending vertically from the waste-chamber *c* up into the bore of the coupling *e* 75 is a hole, *e<sup>2</sup>*, to permit the escape of the leakage from the waste chamber, and on each side of the hole *e<sup>2</sup>* is a boss, *e<sup>3</sup>*, to prevent the ends of the pipe-sections *f'* from going over hole *e<sup>2</sup>*. 80 The side flanges of the box *e* and cap *e'* are provided with an interposed layer of packing material to make a tight joint, and the ends of the pipe-sections are surrounded by cement or packing, or they may be provided with a packing-ring, which allows them to slip in the coupling *e*, so as to provide for the expansion and contraction. The pipe *f* is provided with a suitable stand-pipe at proper intervals for carrying away the leakage. 90

It is apparent that it is only necessary to unscrew the caps *e'* in order to remove any section of the pipe *f*, and that by the use of the smooth-ended sections *e'*, with a suitable cement or packing, it is not necessary to have 95 the coupling so accurately fitted as when a screw-coupling is used.

In case it is desired to make an angle in the pipe *f*, all that is necessary to be done is to bend the pipe, because by the use of removable caps *e'* such bent sections can be taken out as easily as a straight one, whereas if the pipe had to be unscrewed it would be impossible to use bent sections. 100

My invention reduces the expense and trouble attendant upon the use of a line of conductors with a waste-pipe extending between the waste-chambers formed around the joints  
5 of the conducting-pipe, to a minimum.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of a main conducting-pipe having waste-chambers around the joints,  
10 with a waste-conductor supported on said

main conductor in coupling-boxes formed on said waste-chambers, and provided with removable caps, substantially as and for the purposes described.

In testimony whereof I have hereunto set  
my hand this 7th day of March, A. D. 1885.

JAMES HUNTER.

Witnesses:

W. B. CORWIN,  
THOMAS B. KERR.