

(No Model.)

C. LUTOMSKI.

PIPE SYSTEM HAVING AUXILIARY LEAKAGE CONDUITS.

No. 321,905.

Patented July 7, 1885.

Fig. 1.

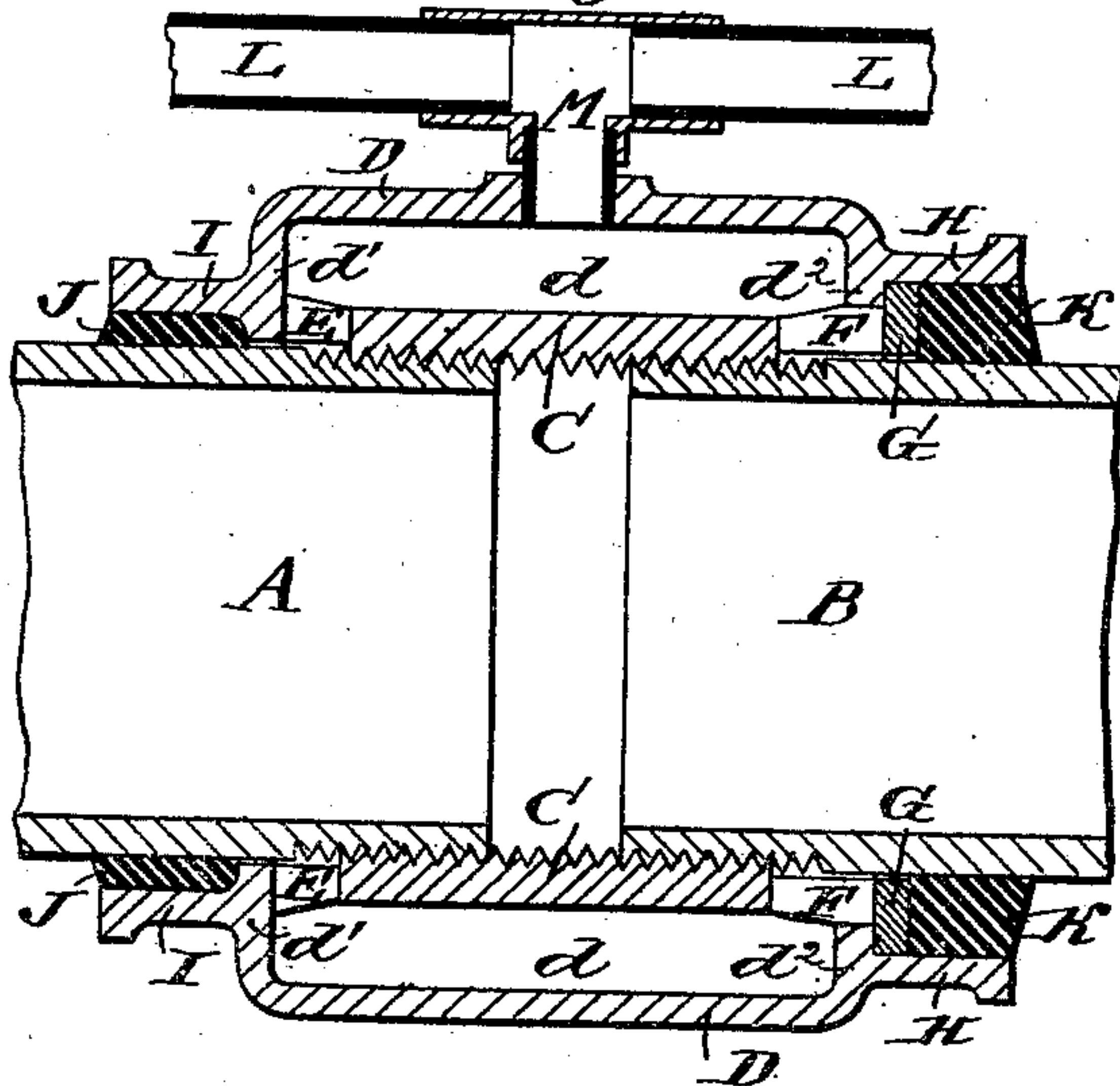


Fig. 3.

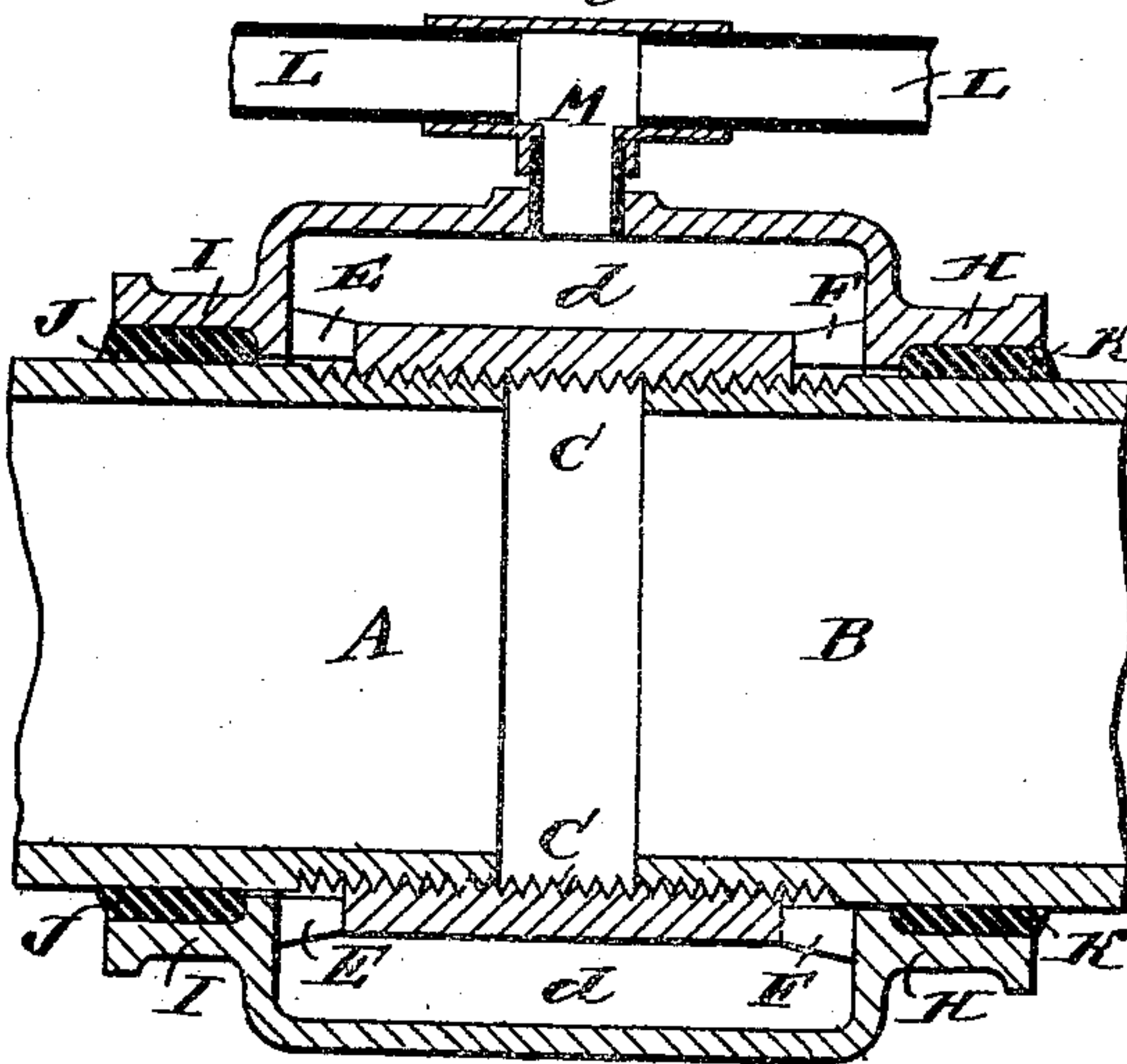


Fig. 2.

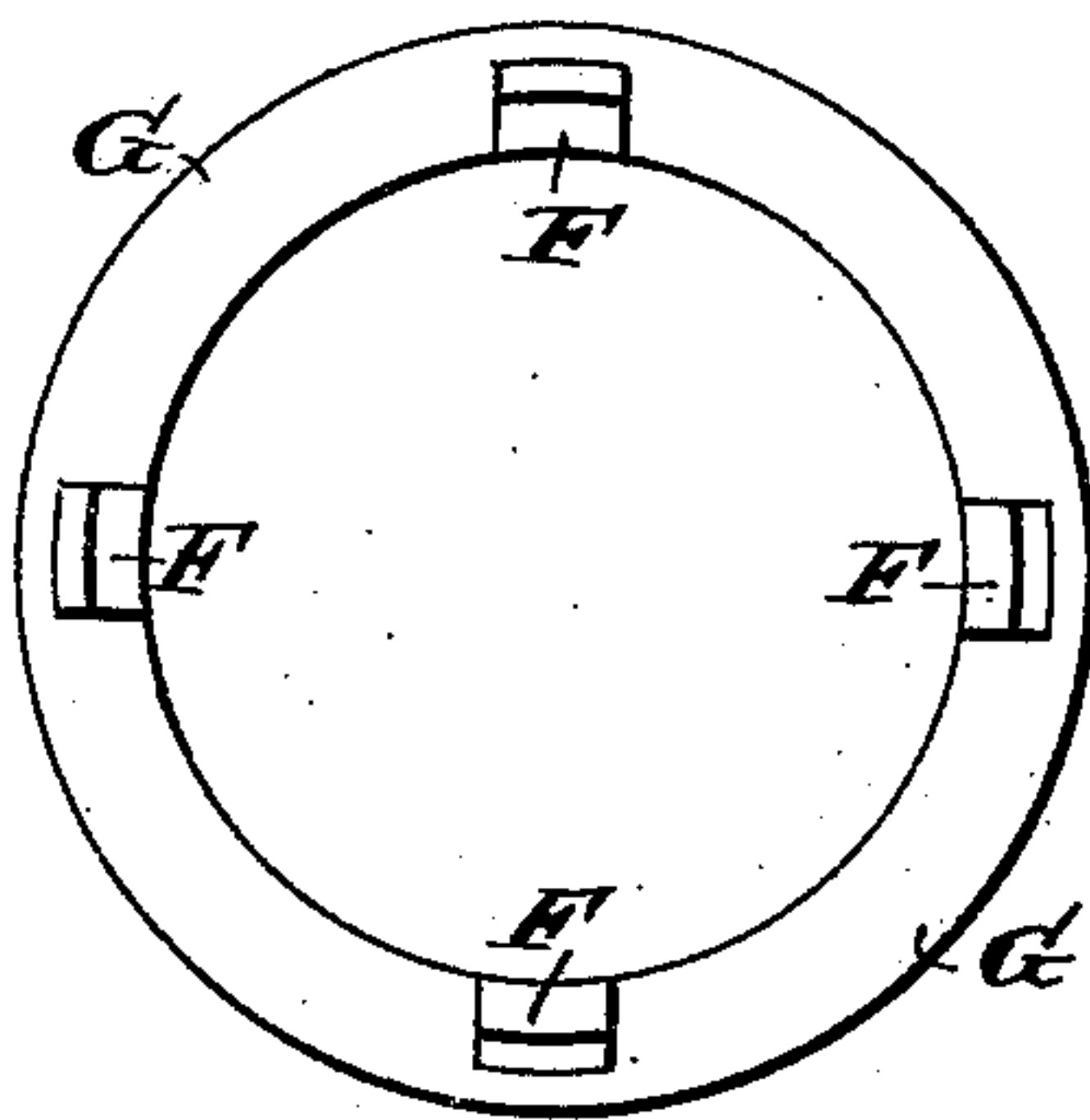
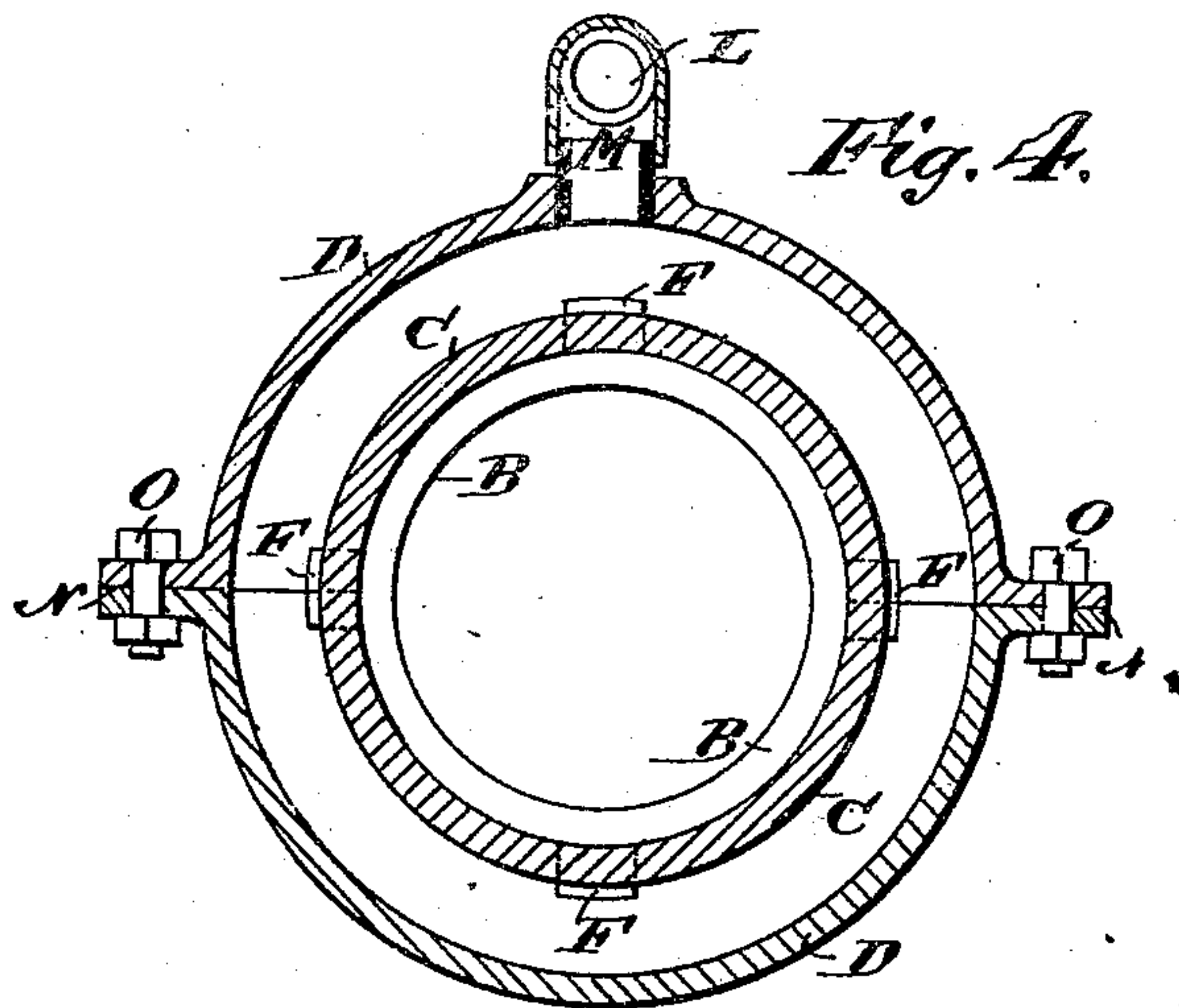


Fig. 4.



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CONRAD LUTOMSKI, OF PITTSBURG, PENNSYLVANIA.

PIPE SYSTEM HAVING AUXILIARY LEAKAGE-CONDUIT.

SPECIFICATION forming part of Letters Patent No. 321,905, dated July 7, 1885.

Application filed February 4, 1885. (No model.)

To all whom it may concern:

Be it known that I, CONRAD LUTOMSKI, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Pipe Systems Having Auxiliary Leakage-Conduits, of which the following is a full, clear, and exact description.

The object of my invention is to improve the construction and arrangement of pipe systems having auxiliary leakage-conduits, and used for the conveyance under pressure of natural gases or other fluids, and in such manner as shall strengthen the main-pipe joints, lessen the first cost of the pipe system, and also the expense of repairs or renewals.

The invention consists in the peculiar construction and arrangement of parts as herein-after fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical sectional elevation through a pipe-joint and auxiliary leakage-conduit made in accordance with my invention, and Fig. 2 is an inside face view of the separate end stop and centering-ring thereof. Fig. 3 is a vertical sectional elevation of a joint and conduit as arranged with the gas-leakage receiving-chamber, formed in two half-sections, and Fig. 4 is a cross-sectional elevation thereof.

The letters A B indicate the adjacent ends of two lengths of gas-pipe which are connected by the ordinary exterior screw-sleeve or coupling, C.

Referring to Figs. 1 and 2, the letter D indicates a casing which is sufficiently larger than the pipes A B and coupling C, to form a chamber, d , around them, into which may pass any gas leaking through the joint from the pipes A B or gas-main.

The casing D is formed in one piece, and its inwardly-extending flange, d' , at one end reaches quite to the exterior of pipe A, and its inwardly-extending flange, d'' , at the other end is enough larger than the coupling-sleeve C to allow the casing D to be passed upon the

coupled pipes to a position centrally lengthwise over their joint and to hold the casing in this position, so that the gas shall have free escape all around the joint at both ends of sleeve C into the chamber d . I provide lugs E—say four of them—at various points around the pipe-joint at one end of the coupling-sleeve C, so the lugs abut the sleeve, and lugs F, which abut the other end of the coupling-sleeve.

I show the lugs E cast upon the inner face of the casing-flange d' , and the lugs F cast upon a ring or collar, G, which is slipped within the end flange, H, of the casing, and it may be against the outer face of the casing-flange d'' , which construction is adapted to a casing, D, made in one piece; but it will be understood that a collar, G, having lugs, as at F, may be used at both ends of the casing D, if desired.

The end flange, I, of casing D stands away from the pipe A a sufficient distance to allow insertion of the packing J, and a packing, K, is inserted between the casing-flange H and pipe B, whereby both end joints of the casing with the gas-main are sealed gas-tight.

I connect an auxiliary gas-pipe or conduit, L, with the gas-chambers d of the gas-main joints by suitable T or other couplings, M, so that the gas leaking past the couplings C from the main into the chambers d may be conducted by pipe L to any place for utilization in any way, or may be discharged from pipe L into the atmosphere at a proper place, and in any case the gas-leakage will not impregnate the ground or vitiate the air adjacent to the gas-main, which, if allowed, would endanger life and property.

Figs. 3 and 4 of the drawings show a modified construction of the pipe-joint casing D, and illustrate how it may be made in two half-sections provided with lugs or flanges N, through which bolts O may be passed for binding the parts together around the pipe-joint. In this case the centering-lugs E F of the casing D may be cast solidly on the opposite parts of the casing, and the end flanges, H I, may be made of like size to receive their packings K J, respectively.

The casings D may be made of cast-iron or

composition-metal, or it may be of earthenware; but cast-iron is at present preferred, and the packings J K may be of lead poured in and calked when cold, but cement, resin, fire-clay, plaster-of-paris, or any other suitable packing material may be employed.

It is evident that by inclosing the joints only of the gas-main by the casings D, forming gas-receiving chambers *d* for the leakage, and connecting the chambers by a comparatively small pipe of sufficient capacity to convey the escaping gas to a point of use or discharge, far less outlay of time, labor, and material are required to construct, repair, or renew a pipe system comprising a gas-main and separate gas-leakage conduit than are required when the main is inclosed for its whole length in a larger pipe, which receives and conveys the leakage from it. Furthermore, my system of separate chambered casings at the joints of the gas-main, as shown and above described, has a direct tendency to stiffen and strengthen the joints of the main pipes, which a continuous inclosing-pipe in which the main rests does not do, as will readily be understood.

My improvement may advantageously be used with pipe systems designed for the conveyance of oils or other liquid or gaseous fluids.

It is evident that my improved chambered casings may be fitted to the joints of a gas-main at curves of the main pipes or on branches thereof, and may also be fitted around pipe joints made otherwise than by the screw-coupling.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

1. In a system of pipes for conveying gases or other fluids, the combination, with the main pipe-joints or couplings, of casings inclosing the joints and provided with chambers which receive the leakage from said joints, an auxiliary pipe or conduit ranging along the main pipes and connected with the chambers of the casings to carry off the leakage from the main pipe-joints to a point of use or discharge, and said casings provided with lugs or projections which center them lengthwise around the main pipe-joints, substantially as herein set forth.

2. In a system of pipes for conveying gases or other fluids, the combination of the pipes A B, coupling-sleeve C, a casing, D, surrounding the pipe-joint and chambered at *d*, the pipe L, communicating with the chamber *d*, and the lugs E F, held to or by the casing D, and abutting the opposite ends of sleeve C, substantially as herein set forth.

3. In a system of pipes for conveying gases or other fluids, the combination of the pipes A B, coupling-sleeve C, a casing, D, formed in one piece and surrounding the pipe-joints and provided with a chamber, *d*, lugs E, fixed to one end flange of the casing, and the collar G, having attached lugs E, and inserted at the other end of the casing, and the packings J K, substantially as herein set forth.

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Witnesses:

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