

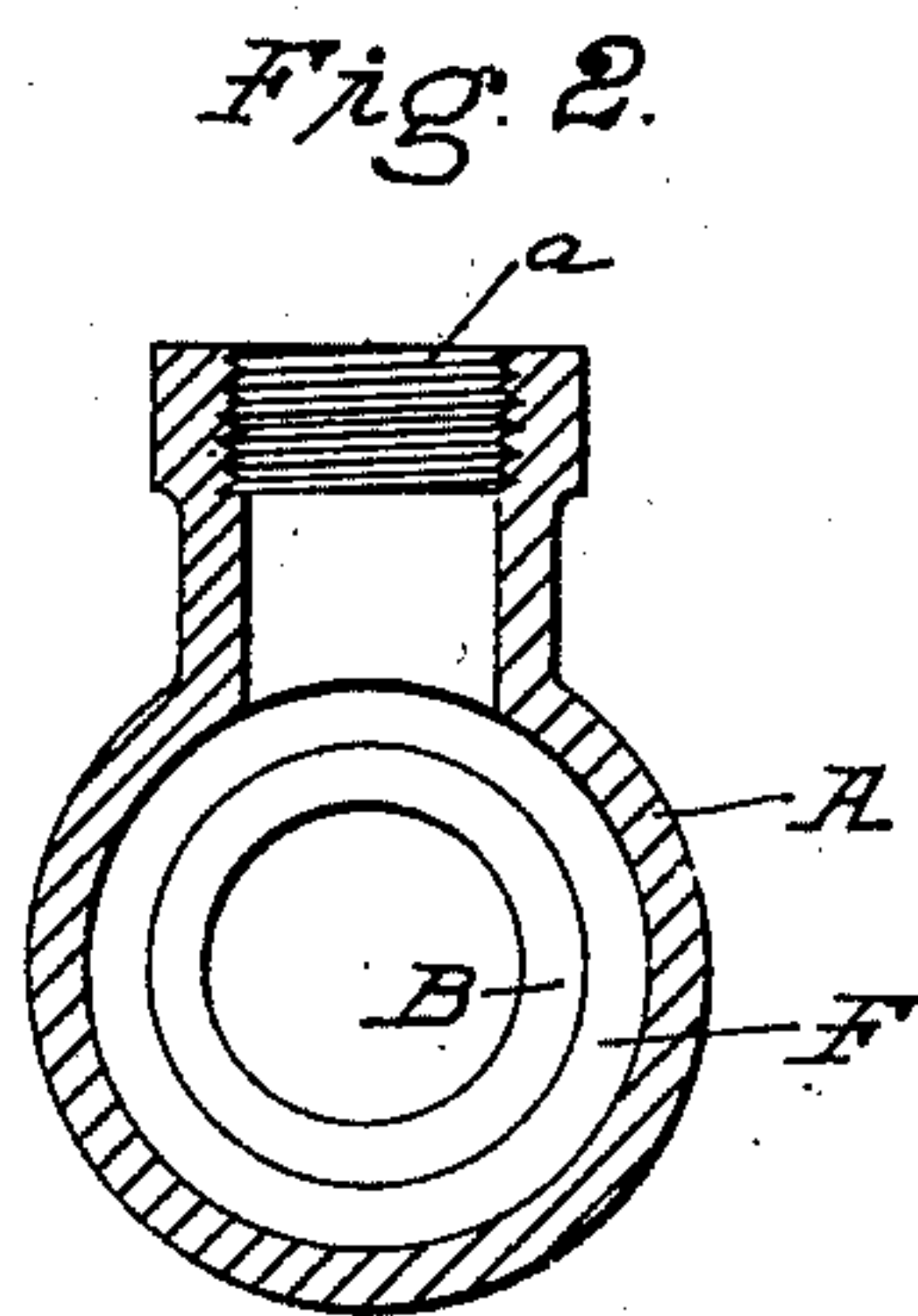
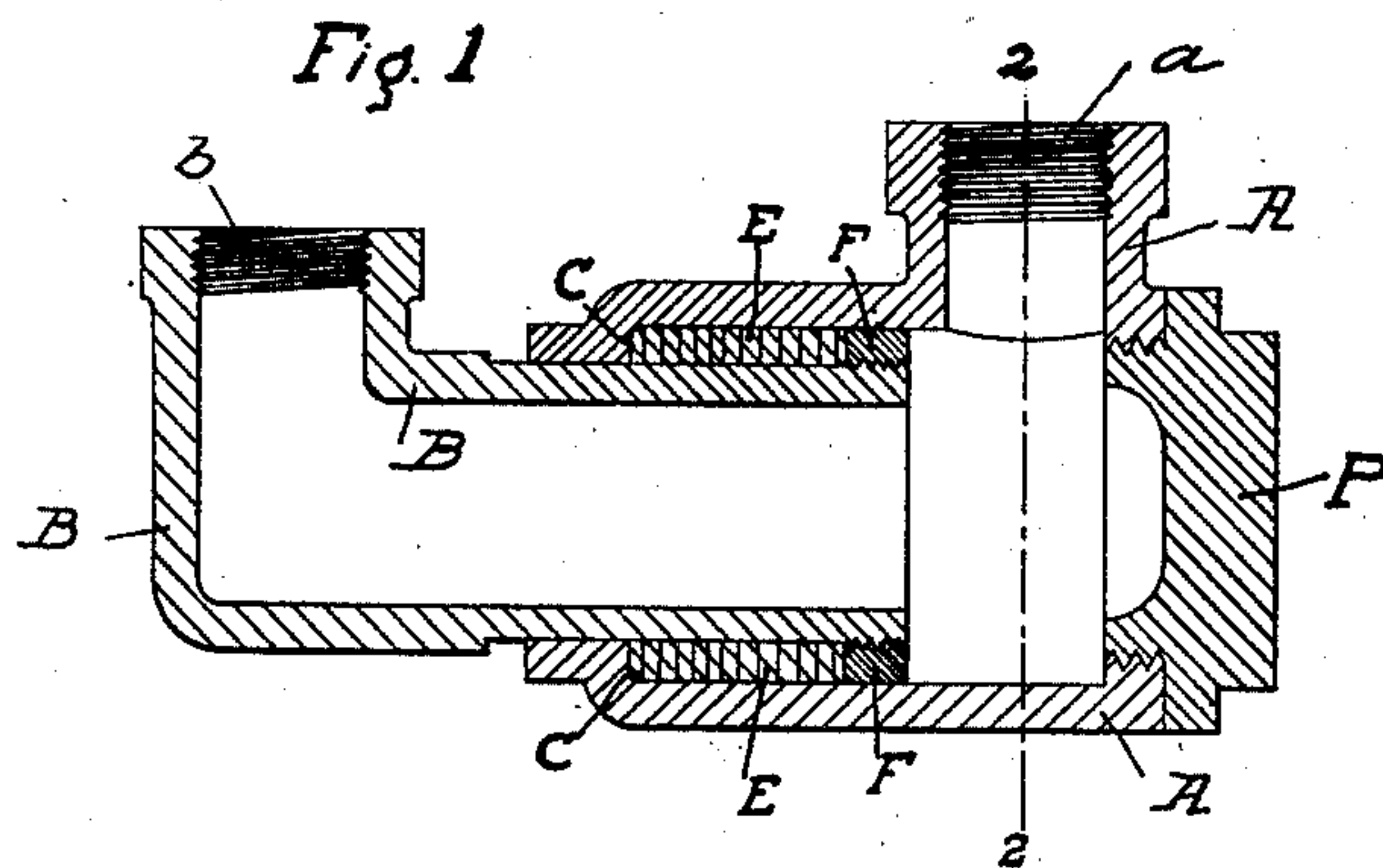
No. 757,992.

PATENTED APR. 19, 1904.

F. B. CLARK.  
PACKED JOINT.

APPLICATION FILED SEPT. 24, 1901.

NO MODEL.



WITNESSES

*R. A. Wright.*

*F. W. Wright.*

INVENTOR

FREDERICK B. CLARK

BY *Horton & Horton*

HIS ATTORNEYS

# UNITED STATES PATENT OFFICE.

FREDERICK B. CLARK, OF STAMFORD, CONNECTICUT, ASSIGNOR OF ONE-HALF TO EDGAR S. WEED, OF STAMFORD, CONNECTICUT.

## PACKED JOINT.

SPECIFICATION forming part of Letters Patent No. 757,992, dated April 19, 1904.

Application filed September 24, 1901. Serial No. 76,435. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK B. CLARK, a citizen of the United States, residing at Stamford, county of Fairfield, State of Connecticut, have invented a new and useful Packed Joint, of which the following is a specification.

My invention has for its object to provide a packed joint adapted for use in steam, gas, or water connections, more especially where it is required that a part have movement in the joint—as, for example, in a swing-joint—the essential feature of my novel joint being that it is so constructed as to be practically self-tightening—that is to say, the action of internal pressure is to compress the packing, so that the greater the pressure the more the packing will be compressed, thereby insuring durable and perfectly tight joints even under the most trying conditions of ordinary use.

My present invention has been given a thorough test in a steam swing-joint and is found to be inexpensive to construct, exceedingly durable, and practically steam-tight. In brief, I have provided a steam swing-joint which is able to fully meet the requirements of continued practical use.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of my improved joint; and Fig. 2 is a transverse section on the line 2 2, Fig. 1.

A denotes one member of a swing-joint, ordinarily stationary, which for convenience I will term the “outer” casing, and B the oscillating member of a swing-joint, which for convenience I will term the “inner” tube. In the present instance this tube B is an elbow-pipe. The special construction and design, however, of both members of the joint may be varied to an almost unlimited extent without departing from the principle of my invention.

C denotes a packing-chamber in the casing A.

The inner end of the tube B fits so as to be free to move within an opening in one end of the casing A, and the tube extends within the packing-chamber and is surrounded by packing E of any ordinary or preferred quality—for example, packing rings or washers—as in-

dicated in the drawings. The tube B is provided at its inner end with a collar or nut F, which engages an external thread on the said tube and fits the interior of the outer casing, so as to be free to slide therein, however. The end of the casing A opposite that through which the tube is fitted has an opening, closed by a screw-plug P, for the introduction of the packing E and collar F. The casing A has a branch at *a*, while the pipe B has an elbow at *b*, for the usual pipe connections. Steam or any other fluid within the casing A will act against the tube B and against the wall of the casing A and will tend to move said joint members outward away from each other—that is, to separate them—so that collar F will bear against the packing and will compress the packing against the bottom and side wall of the casing, thereby preventing the escape of steam through the joint. The greater the steam-pressure and consequent tendency of steam to escape through the joint the greater will be the pressure against collar F and consequent compression of the packing, so that the joint will be self-tightening under all conditions of use, no matter whether the pressure is light or heavy, the tube B remaining free to oscillate within the casing A.

The joint thus constructed has but few parts, being thus inexpensive to make and little liable to get out of order.

I claim as my invention—

1. A pipe-joint comprising an outer casing having a pipe connection thereon, an inner tube entering one end of said casing and longitudinally slidable therein, a collar on said tube slidably fitting against the interior of the casing and exposed to any fluid-pressure in the same, packing compressed between said ring and the casing, and a plug closing the other end of the casing, substantially as described.

2. A pipe-joint, comprising an outer casing, an opening at one end of less diameter than the interior of the casing, a screw-plug at the other end of the casing of a diameter as great as the interior diameter of said casing, a branch opening in the wall of said casing adjacent to said plug, an elbow-pipe fitting,



but free to move through, the opening of less  
diameter, said pipe being threaded at its end,  
packing between the part of the pipe within  
the casing and the interior walls of the cas-  
5 ing, and a collar of substantially the diameter  
of the casing screwed onto the inner end of  
the pipe.

In testimony whereof I affix my signature in  
presence of two witnesses.

FREDERICK B. CLARK.

Witnesses:

SETH G. FESSENDEN,  
EDGAR S. WEED.