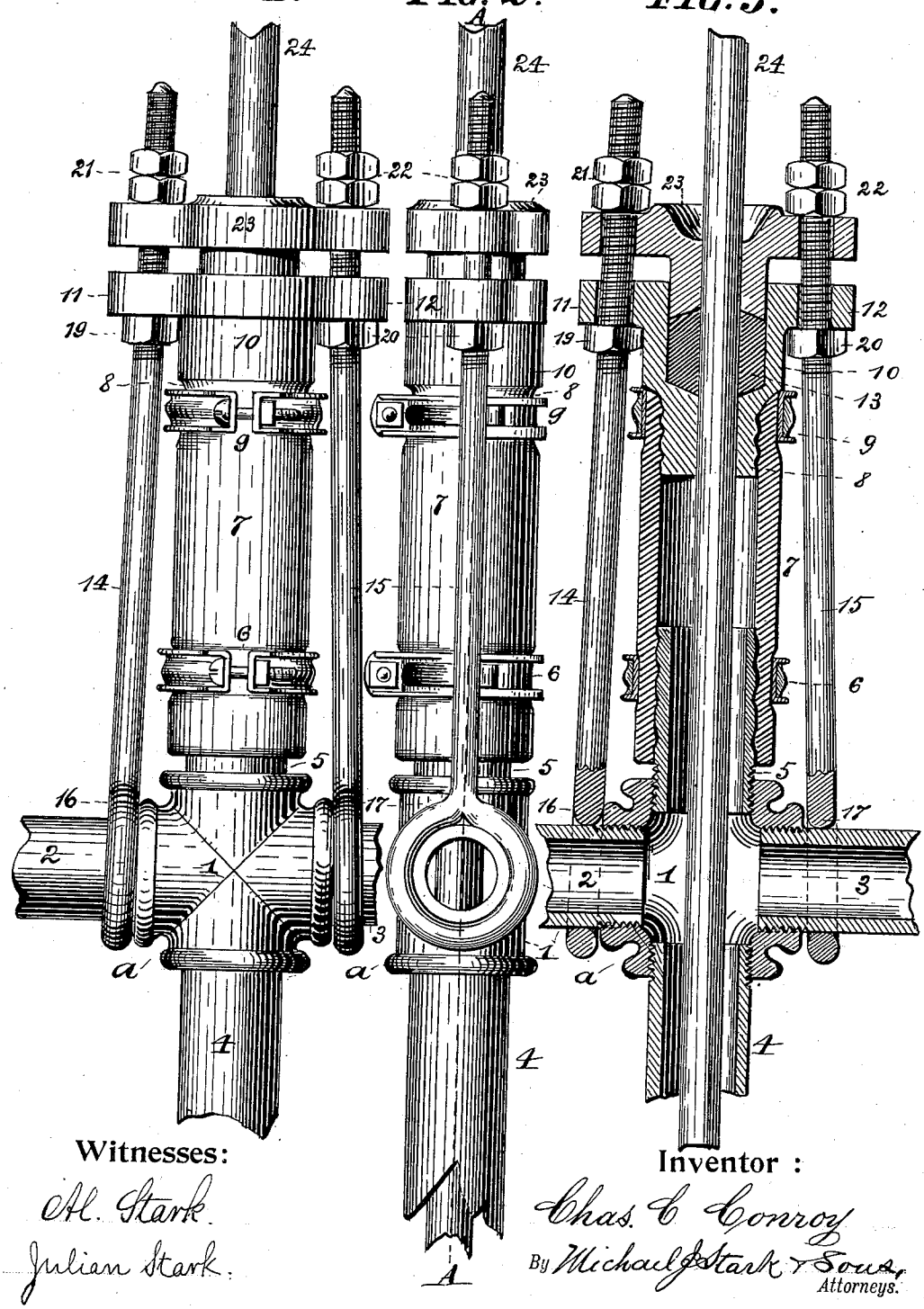
No. 658,207. Patented Sept. 18, 1900.

C. C. CONROY.

STUFFING BOX.

(No Model.) (Application filed July 5, 1900.)

FIG. 1. FIG. 2. FIG. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES CLARENCE CONROY, OF JOPLIN, MISSOURI, ASSIGNOR TO MRS. J. BOOKMILLER, OF JAVA, NEW YORK.

STUFFING-BOX.

SPECIFICATION forming part of Letters Patent No. 658,207, dated September 18, 1900.

Application filed July 5, 1900. Serial No. 22,577. (No model.)

To all whom it may concern:

Be it known that I, CHARLES CLARENCE CONROY, a citizen of the United States, and a resident of Joplin, in the county of Jasper and State of Missouri, have invented certain new and useful Improvements in Stuffing-Boxes; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to improvements in stuffing-boxes; and it consists, essentially, in the novel and peculiar combination of parts and details of construction, as hereinafter first fully set forth and described and then pointed out in the claims.

In the drawings already referred to, which serve to illustrate this invention more fully, Figure 1 is an elevation of this improved stuffing-box. Fig. 2 is a side elevation of the same, and Fig. 3 a longitudinal vertical section in line A A of Fig. 2.

Like parts are designated by corresponding symbols of reference in all the figures.

The object of this invention is the production of a stuffing-box for rotating and reciprocating rods and shafts that shall be capable of yielding, be adjustable, and to a certain degree self-adjusting to any variation in the alinement of the stuffing-box body, the pipe, and the rod or shaft moving in the same. To attain these objects, this stuffing-box, which is primarily designed for oil-well pumps, but is also capable of being used for various other purposes, consists of a body *a*, which in the present instance is composed of a standard pipe-fitting, designated a "cross" 1, into the horizontal branches of which are screwed or otherwise secured nipples 2 and 3, while the lower vertical branch is screwed upon the pump-discharge pipe 4. Into the upper vertical branch of this cross is fitted a hose-nipple 5, to which is secured, by a band or other suitable hose-pipe fastenings 6, the lower end of a short section of a comparatively-heavy rubber or other elastic tubing 7, the upper end of which is secured to a hose-nipple 8 by a band 9. This nipple 8 is either formed integral with a stuffing-box body 10 or suitably fastened thereto, said stuffing-box body having the usual laterally-projecting flanges 11 and 12 and the cavity for the reception of the rod-packing 13, and the follower or gland 23.

Instead of the usual stud-bolts by which a stuffing-box gland is arranged to compress the rod-packing there are used in this present case two eyebolts 14 and 15, consisting of round rods having their lower ends formed into eyes 16 and 17 and their upper ends screw-threaded to receive lock-nuts 19 and 20 and adjusting-nuts 21 and 22. The eyes of these bolts 14 and 15 are passed over the nipples 2 and 3 or, where necessary, the bolts are first passed through the holes in the flanges of the stuffing-box body and then the nipples 2 and 3 passed through the eyes 14 and 15 and then screwed into the horizontal branches of the cross 1, after which the lock-nuts and adjusting-nuts are properly adjusted, thereby securely holding the stuffing-box body 10 in position and preventing internal pressure from dislodging the elastic tube section 7 or the stuffing-box body 10, and at the same time enabling the follower or gland 23 being adjusted to compress the packing 13 and make a tight joint for the rod 24.

It will now be observed that in cases where the center line of the pipe 4 and that of the stuffing-box body *a* do not coincide with the rod 24—as, for instance, when this stuffing-box is used in an oil-well pump—the stuffing-box body is capable of yielding in the direction to the right and left of Fig. 2, and may be adjusted in two directions at right angles thereto by manipulating the lock-nuts 19 and 20 in the proper self-evident directions.

I have heretofore stated that this self adjusting and adjustable stuffing-box may be used for other purposes than pumps. For instance, this device may, with but a slight modification, be successfully applied as a stern-tube for the smaller types of steam vessels and pleasure crafts and boats, in which case the pipe 4 will be securely fastened in the stern-post of a ship's frame and the nipples 2 and 3 closed on their ends or solid plugs substituted therefor. The rod 24 would in this case be the propeller-shaft, and this would be tightly packed by the stuffing-box.

In steam vessels it is frequently very difficult to keep the stern-bearing tight, owing to the fact that an unequal distribution of the load, passengers moving about, &c., disturbs the alinement of the propeller-shaft and the stern-post tube. This objection is entirely overcome by the introduction of my flexible and yielding tube-section 7 and the fact that thereby the stuffing-box body is self-adjusting.

The body *a*, heretofore described as being composed of commercial pipe-fittings, may be made in one piece of casting or forging without departing from the nature of this invention.

Having thus fully described this invention, what is claimed as new, and desired to be secured by Letters Patent of the United States, is—

1. In a stuffing-box, a base part, a yielding, flexible and elastic tube-section secured thereto, a stuffing-box body secured to said tube-section, and a gland for the stuffing-box, as described.

2. In a stuffing-box, a base part, a yielding, flexible and elastic tube-section secured thereto, a stuffing-box body secured to the other end of said tube-section, a gland for said stuffing-box, and tie-rods connecting the base portion and the stuffing-box body, as set forth.

3. In a stuffing-box, a base part consisting of a commercial pipe-fitting having branches as described, an elastic tube-section secured to one of said branches, a stuffing-box body secured to said tube-section, a gland for said stuffing-box, and tie-rods secured to the horizontal branches of said base part and passing through the flanges of the stuffing-box body and its gland and provided with nuts, as stated.

4. In a stuffing-box, a base part consisting of a commercial pipe-fitting cross, a hose-pipe nipple in the upper vertical branch of said cross, an elastic, flexible and yielding tube-section secured to said nipple by a band or other suitable fastening, a stuffing-box body secured to the upper end of said tube-section, a gland for said stuffing-box, tie-rods having eyes as described, nipples passed through said eyes and secured in the horizontal branches of said cross, and nuts at the upper ends of said rods, whereby the gland may be adjusted and the stuffing-box body adjusted, as and for the object stated.

5. In a stuffing-box, a base portion, a flexible, yielding and elastic tube-section secured thereto, a stuffing-box body secured to the upper end of said tube-section, and suitable means for adjusting said stuffing-box body upon said tube-section, as set forth.

In testimony that I claim the foregoing as my invention I have hereunto set my hand in the presence of two subscribing witnesses.

CHARLES CLARENCE CONROY.

Attest:

WILLARD L. BUTTS,

R. A. PEARSON.