(No Model.)

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T. TRIPP.

STUFFING BOX.

No. 415,483. Patented Nov. 19, 1889.

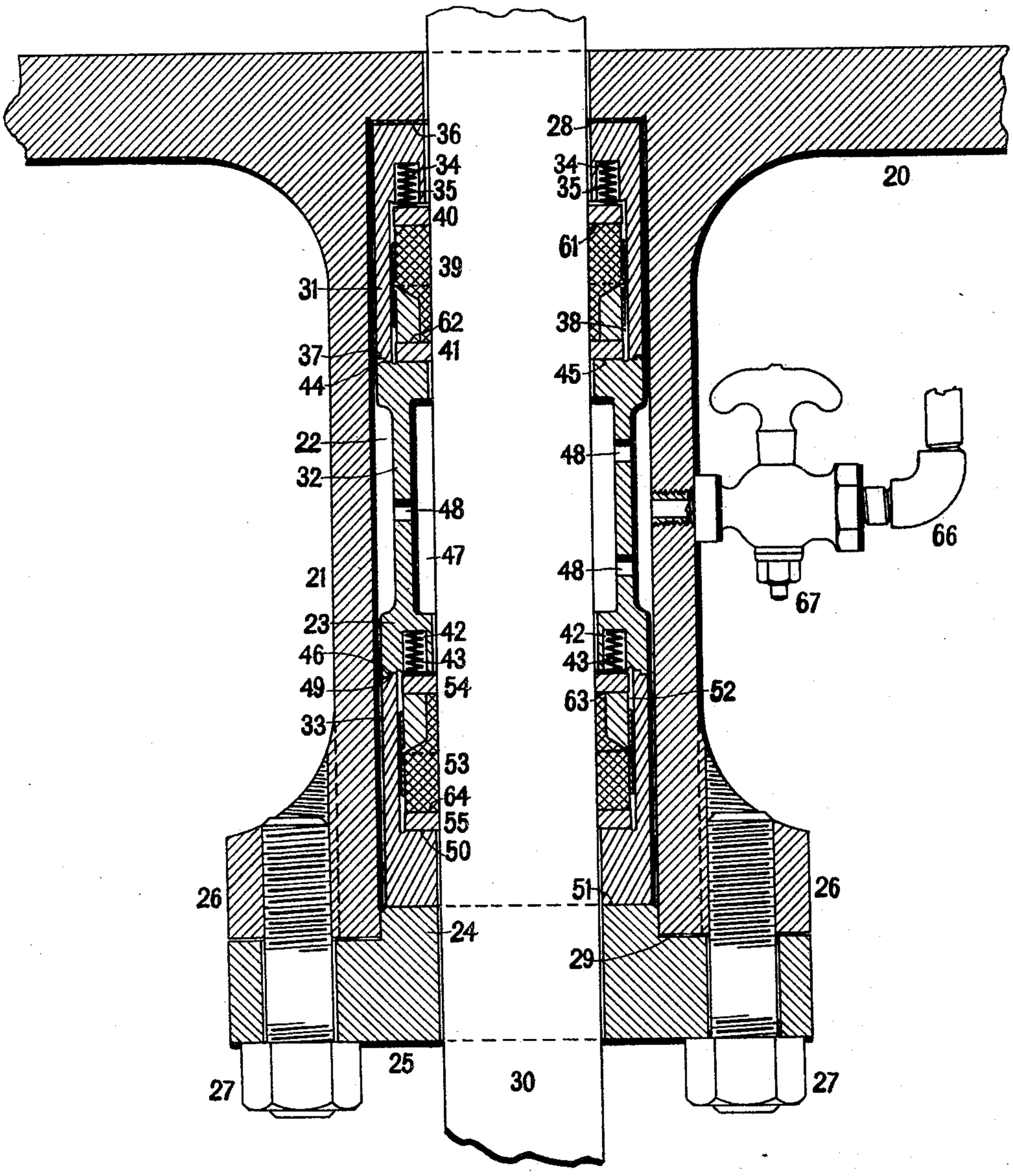

Fig. 1.

WITNESSES:

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Thomas Tripp.

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ATTORNEY.

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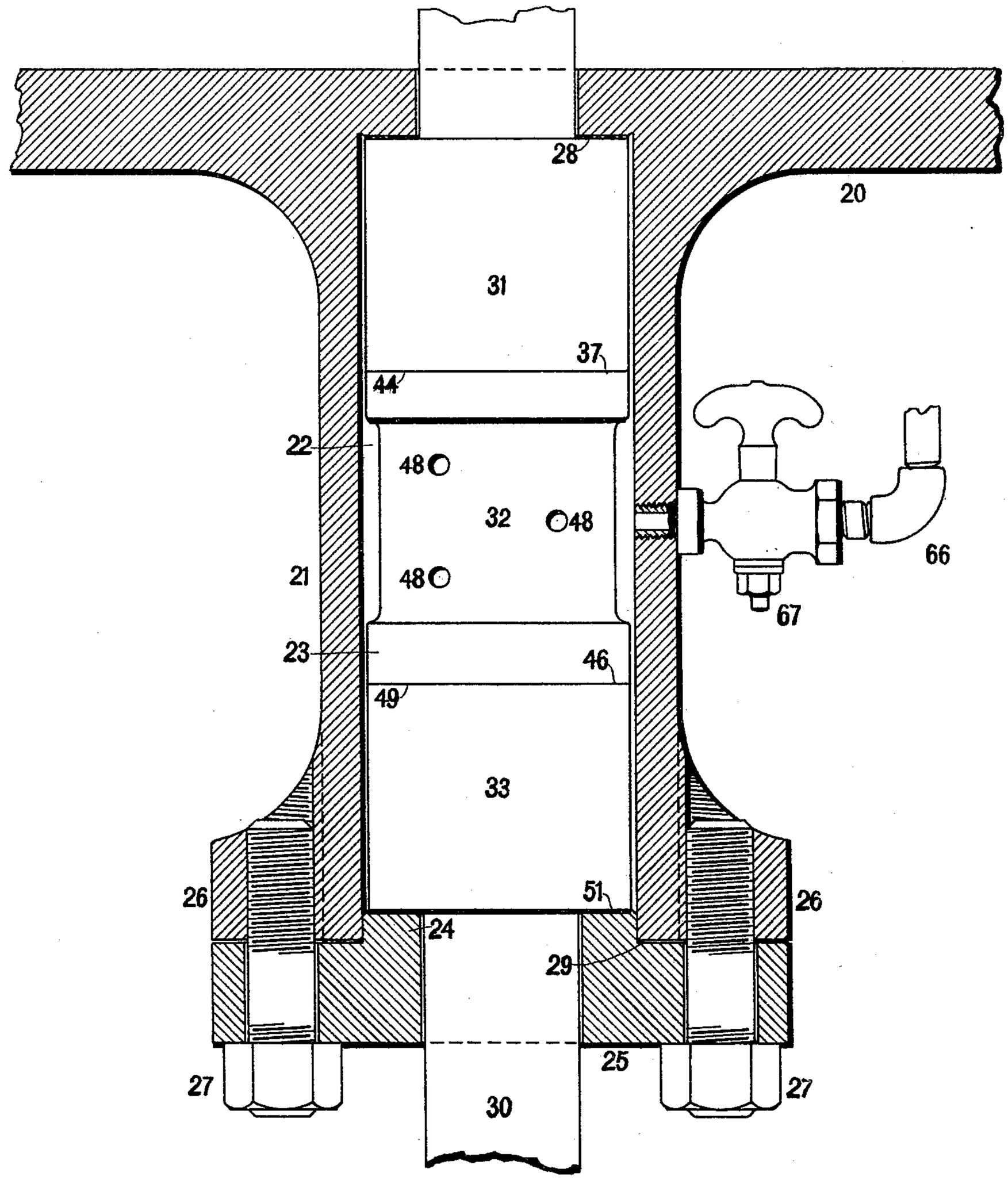

Fig-2-

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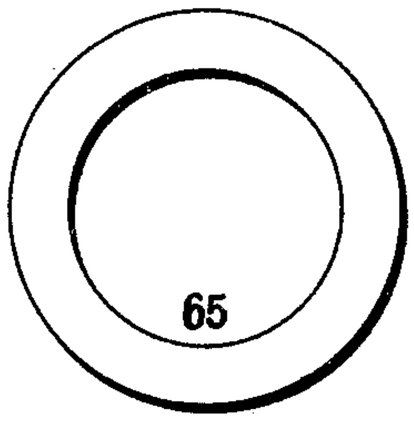

Fig-10-

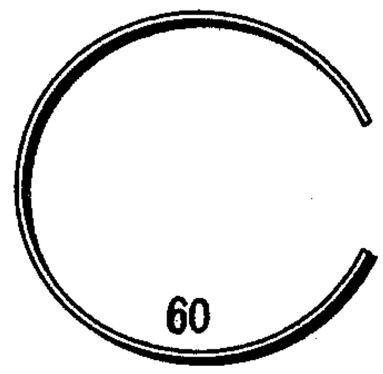

Fig-12-

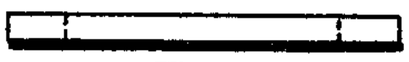

Fig-9-

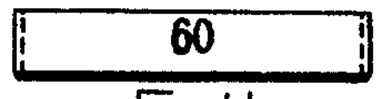

Fig-11-

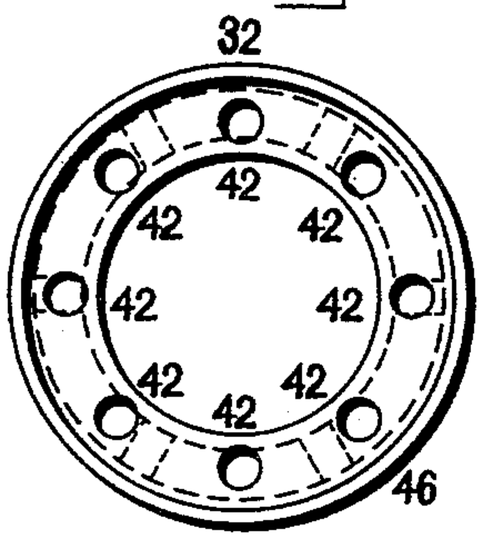

Fig-6-

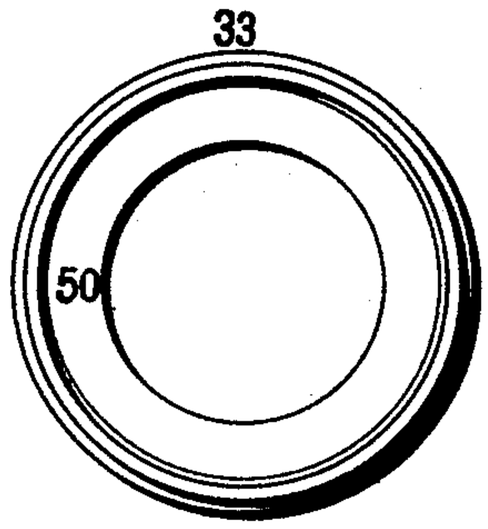

Fig-8-

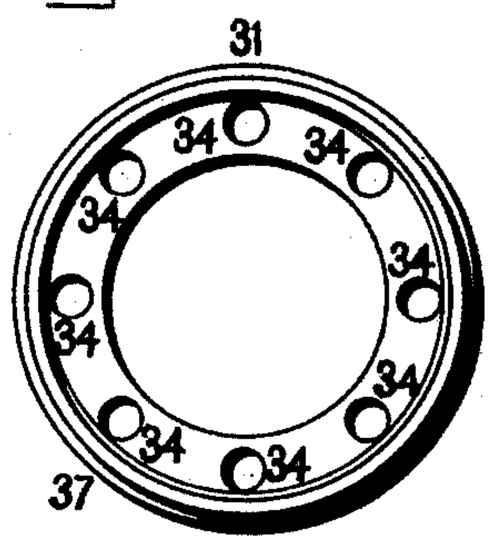

Fig-4-

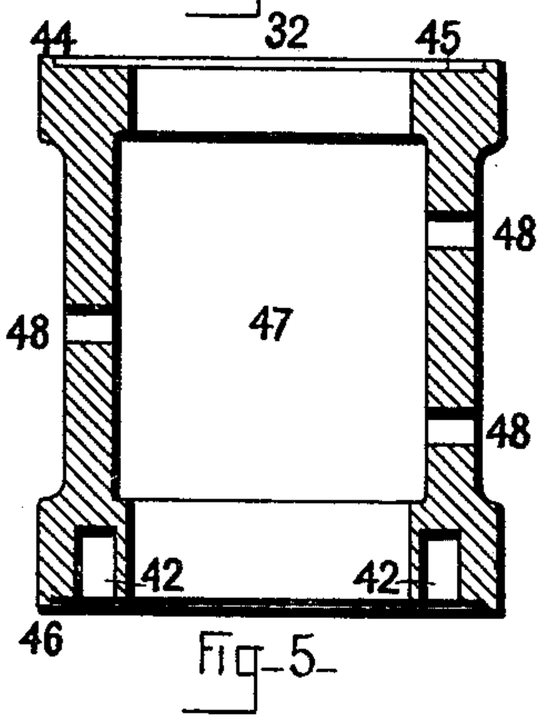

Fig-5-

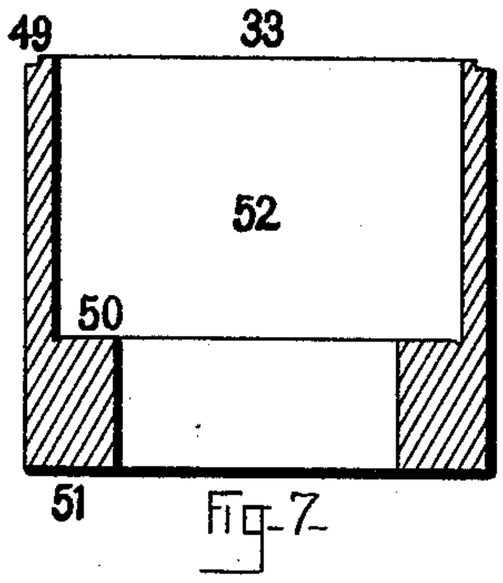

Fig-7-

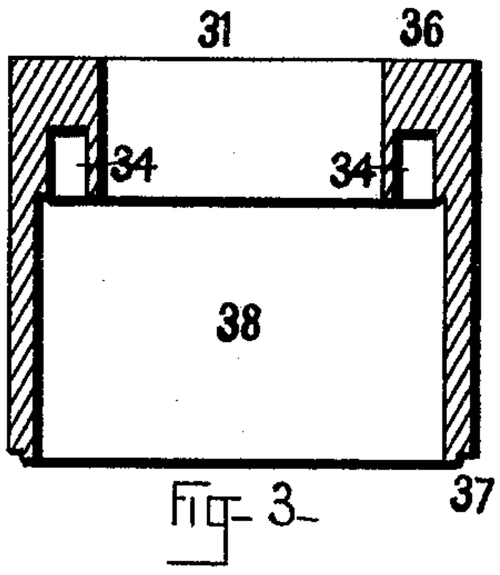

Fig-3-

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(No Model.) 4 Sheets—Sheet 4.

T. TRIPP.

STUFFING BOX.

No. 415,483. Patented Nov. 19, 1889.

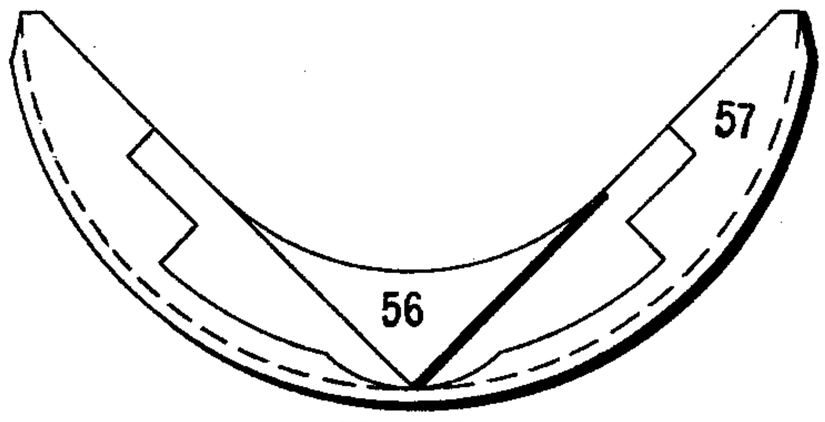

FIG. 16.

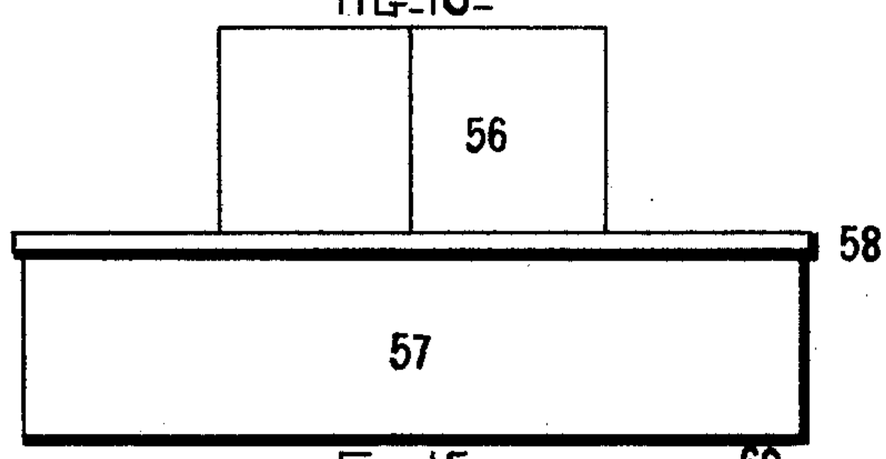

FIG. 15.

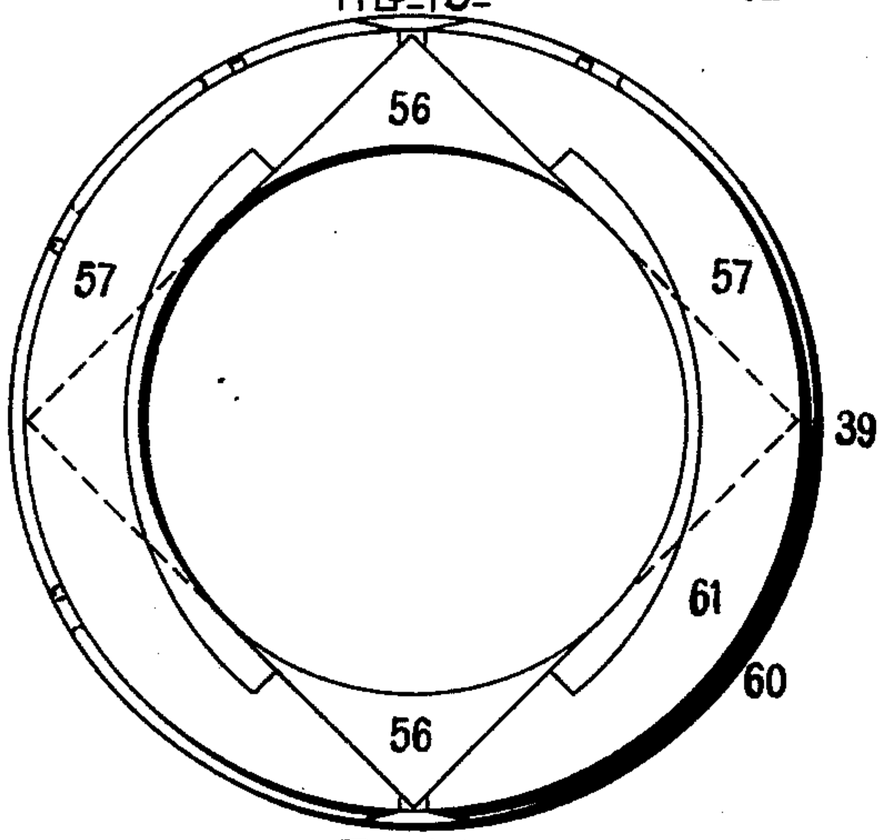

FIG. 14.

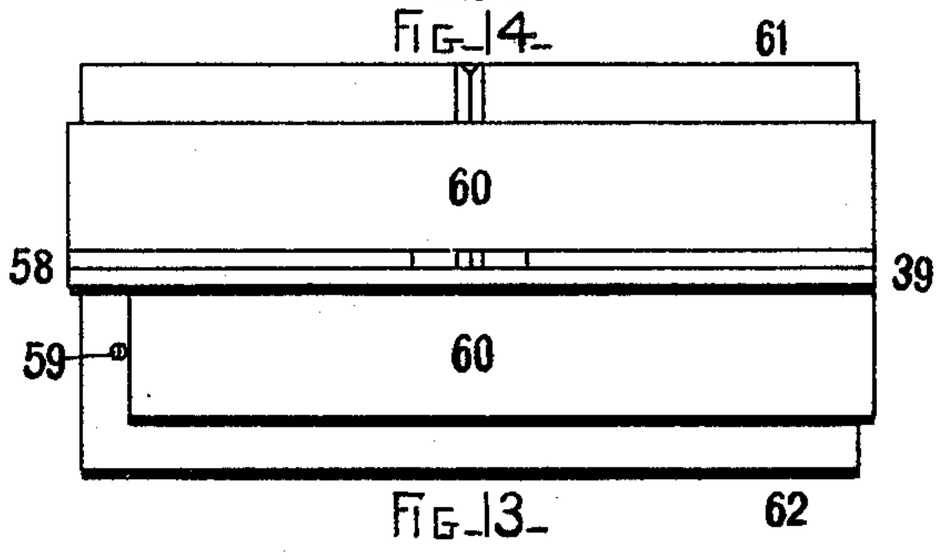

FIG. 13.

WITNESSES:

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BY

E. Frank Woodbury.

ATTORNEY.

UNITED STATES PATENT OFFICE.

THOMAS TRIPP, OF AVON, MASSACHUSETTS, ASSIGNOR TO THE TRIPP MANUFACTURING COMPANY, OF MAINE.

STUFFING-BOX.

SPECIFICATION forming part of Letters Patent No. 415,483, dated November 19, 1889.

Application filed June 24, 1889. Serial No. 315,420. (No model.)

To all whom it may concern:

Be it known that I, THOMAS TRIPP, a citizen of the United States, residing at Avon, in the county of Norfolk and State of Massachusetts, have invented a new and useful Stuffing-Box, of which the following is a specification.

My invention relates to stuffing-boxes for use upon the pistons and valve rods of engines and pumps; and it has for its object the thorough packing and lubricating of such rods, especially of the piston-rods of pumps used for the pumping of noxious liquids or gases under high pressures, such as the pumping of ammonia for ice-making purposes.

It is believed that all difficulties now experienced in the packing and lubricating of the piston-rods of ammonia-pumps will be overcome by the use of my invention.

Figure 1 represents the stuffing-box in central vertical section, the rod being shown in elevation. Fig. 2 represents the stuffing-box in elevation, the nozzle and the flange being shown in central vertical section. Fig. 3 is a central vertical sectional view of the upper packing-case, and Fig. 4 is an inverted plan of the same. Fig. 5 is a central vertical sectional view of the intermediate case, and Fig. 6 is an inverted plan of same. Fig. 7 is a central vertical sectional view of the lower packing-case, and Fig. 8 is a plan of the same. Fig. 9 is an elevation of one of the sliding rings, and Fig. 10 is a plan of the same. Fig. 11 is an elevation of one of the packing-springs, and Fig. 12 is a plan of the same. Fig. 13 is an enlarged side elevation of one of the packings, and Fig. 14 is a plan of the same. Fig. 15 represents one of the packing-pieces composing the packing in side elevation, and Fig. 16 is a plan of the same.

The lower cylinder or pump head 20, represented in section, is provided with the stuffing-box 21, which is provided with the interior chamber 22, designed to receive the packing-sleeve 23, said sleeve being firmly and tightly held between the pump-head and projection 24 of the gland 25, the gland being securely bolted to the ears 26 of the nozzle by means of the stud-bolts 27. The tin washer 28 is placed between the upper end of the packing-sleeve and the pump-head, and the tin washer 29 is placed between the circular face of the stuffing-box and the inner face of the gland, for the purpose of making tight joints. The pump-rod 30 extends through the openings in the pump-head, packing-sleeve, and gland, each of the said openings having (preferably) a greater diameter than the pump-rod.

The packing-sleeve 23, made of cast-iron, is composed of the upper packing-case 31, the intermediate case 32, and the lower packing-case 33. The upper packing-case 31 is provided with the spring-pockets 34, adapted to receive the spiral springs 35, upper face 36, lower ground shoulder-face 37, and the interior packing-receiving chamber 38, designed to receive within it the packing 39 and the two sliding rings 40 and 41. The intermediate case 32 is provided with the spring-pockets 42, adapted to receive the spiral springs 43, upper ground shoulder-face 44, upper ground face 45, lower ground shoulder-face 46, and interior lubricating-chamber 47, to which the holes 48 extend through the walls of the case. The lower packing-case 33 is provided with the upper ground shoulder-face 49, ground face 50, face 51, and the interior packing-receiving chamber 52, designed to receive within it the packing 53 and the two sliding rings 54 and 55.

The packing 39 (represented on an enlarged scale by Figs. 13, 14, 15, and 16) is constructed in accordance with Letters Patent of the United States of America granted to me as follows: No. 265,470, dated October 3, 1882; No. 352,166, dated November 9, 1886, and No. 391,991, dated October 30, 1888, and it is made of cast-iron and tin with steel springs, as follows:

The packing is composed of four pieces of the single lip and flange type, each piece having a side lip 56 and a flange 57, the entire lip and the greater portion of the interior surface of the flange being of tin, the remainder being of cast-iron. Other kinds of metals or alloys may be used; but for use about rods of ammonia-pumps the packing is preferably made, as stated, of tin and iron. The small

[redacted]

3. In a stuffing-box, the packing-sleeve 23, composed of the three cases 31, 32, and 33 and provided with the spiral springs 35 and 43, in combination with the packing 39, having the sliding rings 40 and 41, and the packing 53, having the sliding rings 54 and 55, substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS TRIPP.

Witnesses:
E. FRANK WOODBURY,
WALTER L. PERRY.