H. PARKER.

PACKING FOR CYLINDER MOLDS.

APPLICATION FILED JAN. 14, 1909.

958,275.

Patented May 17, 1910.

3 SHEETS—SHEET 1.

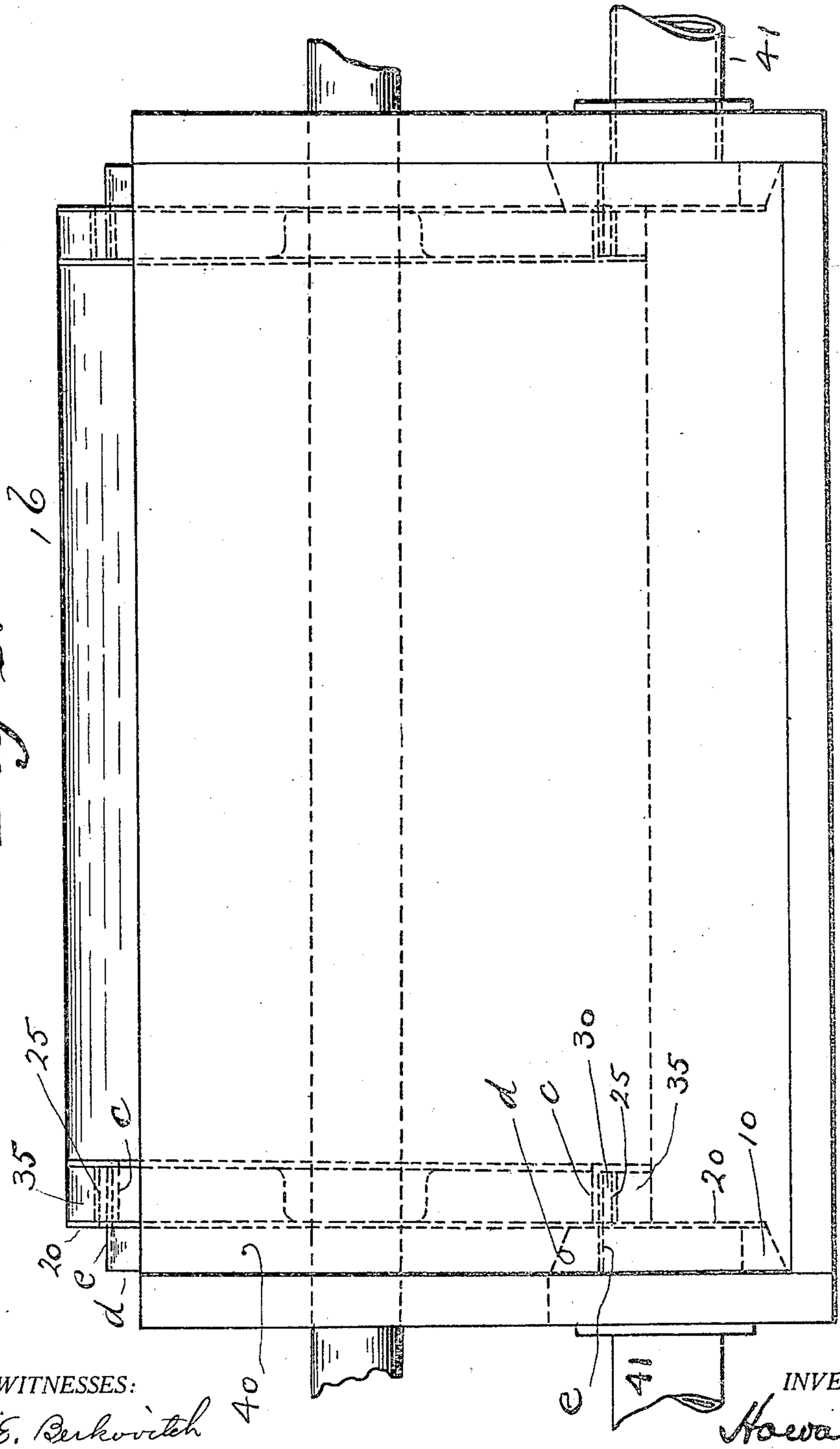

Fig. 1.

WITNESSES:

L. E. Berkovitch

D. Greenwald

INVENTOR.

Howard Parker

BY

N. E. Hall

HIS ATTORNEY.

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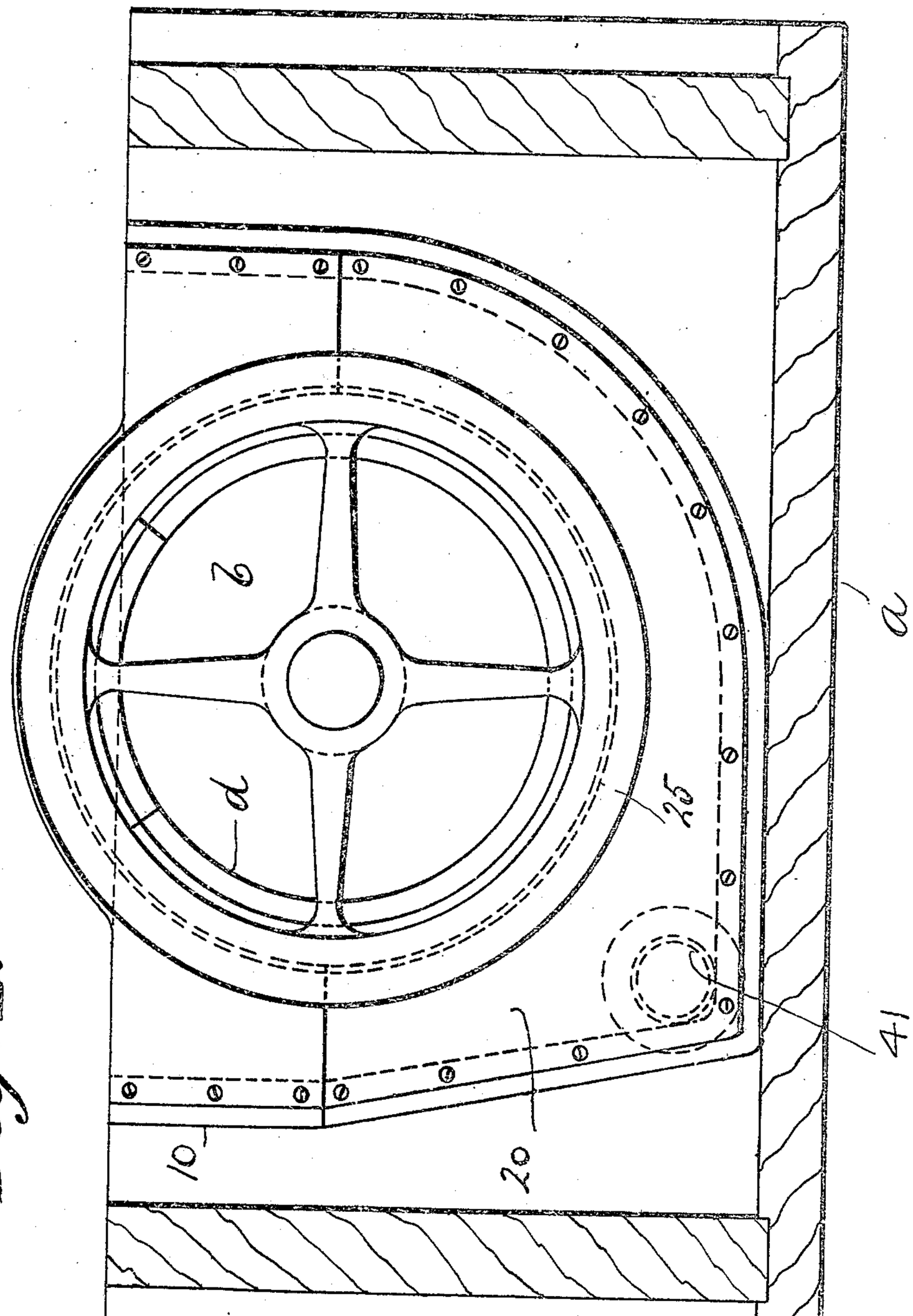

Fig. 2.

WITNESSES:

L. E. Berkowitch

H. Greenendale

INVENTOR.

Howard Parker

BY

N. F. Hoar

his ATTORNEY.

H. PARKER.

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3 SHEETS—SHEET 3.

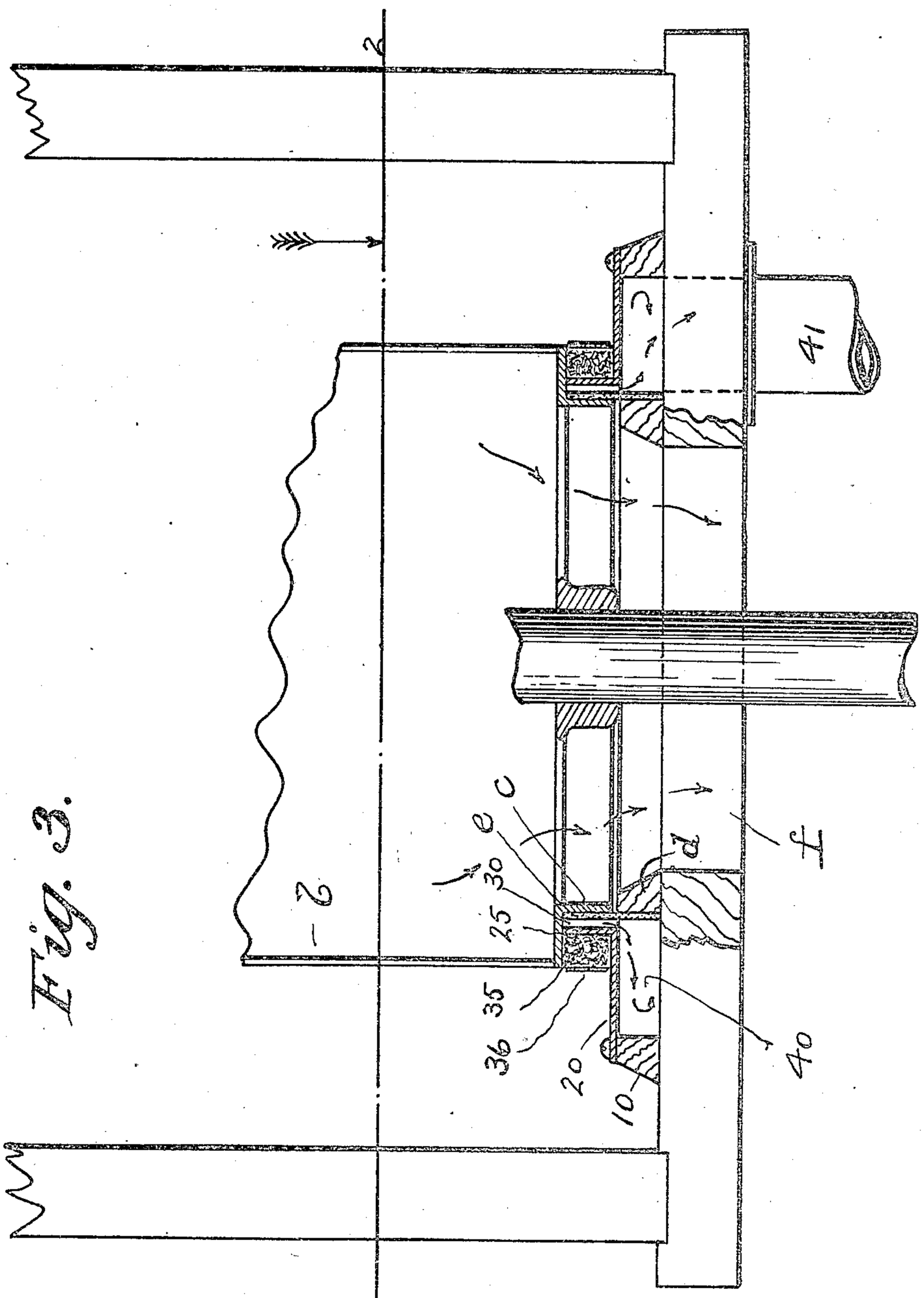

Fig. 3.

WITNESSES:

L. E. Berkowitch

A. Steinendahl

INVENTOR.

Howard Parker

BY

H. G. Saal

his ATTORNEY.

ANDREW B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HOWARD PARKER, OF NASHUA, NEW HAMPSHIRE.

PACKING FOR CYLINDER-MOLDS.

958,275. Specification of Letters Patent. Patented May 17, 1910.

Application filed January 14, 1909. Serial No. 472,252.

To all whom it may concern:

Be it known that I, HOWARD PARKER, a citizen of the United States, and a resident of Nashua, in the county of Hillsboro and State of New Hampshire, have invented certain new and useful Improvements in Packing for Cylinder-Molds, of which the following is a specification.

A well known step in the process of manufacturing pulp or paper is to collect the finely divided particles of pulp which are held in suspension in water into sheet form by picking them up on the surface of a cylinder mold rotatably mounted in a tank which contains the water holding the suspended particles of pulp. These cylinder molds have foraminous shells so that the white water extracted from the pulp can pass into the interior of the mold and be withdrawn from the end thereof. A simple and inexpensive way of carrying this white water away from the mold and tank has been to form a flange at each end of the cylinder mold near its periphery, which flange lies opposite annular rings secured to the inside of the end walls of the tank. A heavy packing ring is then bound down onto these two flanges to seal the joint. The end of the tank is then cut away inside of these flanges and the white water is free to pour out through the ends of the tank to be taken care of as may be desired. The packing ring is usually bound onto the annular ring on the end of the tank and the flange on the mold turns inside of the packing ring. Unless this joint is very securely and carefully made the pressure of the water in the tank will cause some of the pulp to work through between the packing ring and the mold flanges and mix with the white water.

The object of my invention is to provide a packing for the cylinder mold which will prevent such leakage of pulp into the white water as there may be.

In the drawings—Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is an inside end view of the tank and roll taken on the line 2—2 of Fig. 3 and looking in the direction of the arrow. Fig. 3 is a detail view on a horizontal section of one end of the tank and roll, some parts being broken away to show the construction.

Referring to the drawings *a* is the tank, *b* the cylinder mold, *c* an annular flange projecting from the end of the mold near its periphery, *d* an annular ring secured to the inside end wall of the tank, *e* a packing ring extending between the end of the mold and the end of the tank and bound down onto the flange and ring to seal the joint between them. The end of the tank is cut away as indicated at *f* so as to give an outlet for the white water.

My invention, broadly speaking, consists in providing a second packing ring between the end wall of the tank and the end of the mold outside of the above mentioned packing ring with a space between the two packing rings.

In carrying out my invention I secure to the end wall of the tank a second parti-annular ring 10 outside of the first annular ring. To this annular ring I secure a stiff metal plate 20 having a right-angle flange 25 which projects toward and almost into contact with the end of the cylinder mold, thus forming an annular pocket between the end of the mold and this plate 20. It will be noted that the right-angle flange 25 is separated from the packing ring 10, leaving an annular space 30. A packing material 35 is located in this pocket, the material being of a character which under compression spreads laterally, and this packing material is bound into place as by a tightly drawn tape 36 so as to crowd it into the pocket and expand it laterally in order that it will wedge in between the end of the mold and the plate 20.

It will be noted that the plate 20 forms what is in fact a false end wall. The end wall of the tank might be formed so as to provide a solid projection in place of the form outlined in the drawings, but the construction herein illustrated and described provides a pocket 40 into which any pulp which chances to seep by the packing 35 will be deposited. It will be seen that providing the double packing rings spaced apart there is no pressure of water on the inner ring *e* and so no tendency of the pulp to work under this packing ring *e* and mix with the white water. I have shown an outlet pipe 41 from the pocket 40 so that any pulp which does get into the pocket can be taken out and used over again. In practice I prefer to make the metal plate 20 in two parts divided horizontally on the axis of the mold so that the mold can be readily removed from the tank by merely removing the upper part of the plate.

In case the pocket 40 is done away with an

opening can be made through the wall of the tank to permit the pulp which seeps by the packing 35 to work out of the tank where it can be collected in a pail or pan or in any other way so that it will not be lost. This packing device may or may not be used at each end of the roll, as is desired.

This construction provides a pocket at either or both ends of the tank adjacent to the ends of the mold which is useful in case the stock in the tank or collected on the mold is too thick, in which event it will be deposited in these pockets and brought back into the stuff chest.

I claim:—

1. The combination with a tank and a cylinder mold rotatably mounted in said tank, of a pair of packings located between an end wall of the tank and an end of said cylinder mold, said packings being separated to form an annular space between them.

2. The combination with a tank and a cylinder mold rotatably mounted therein, an annular flange on an end of said mold near its periphery, an annular ring on an end of said tank opposite said flange, a packing ring overlying said flanges, a second annular packing ring located outside of and spaced from said first mentioned packing ring, substantially as described.

3. The combination with a tank and a cylinder mold mounted therein, of an annular flange on an end of said cylinder mold, an annular ring on an end wall of said tank opposite said flange, a packing ring laid on said flange and ring and covering the joint between them, a parti-annular ring secured to the end wall of said tank outside of said first mentioned ring, a plate secured to said parti-annular ring and extending toward said packing ring, an annular flange secured to said plate outside of said packing ring and separated therefrom to form an annular space, a packing strip located on said flange, and a binder to hold said packing strip and expand it laterally into contact with said plate and the end of said roll, substantially as described and for the purposes set forth.

4. The combination with a tank and a cylinder mold rotatably mounted therein, a packing ring located between an end of said mold and a corresponding end of said tank, a parti-annular ring secured to the end wall of said tank outside of said packing ring, a plate secured to said ring and forming a pocket and having an annular flange projecting toward the end of said mold, said flange being separated from said packing ring to form an annular space in communication with said pocket, and a packing strip located on said annular flange between the end of said mold and said plate.

HOWARD PARKER.

Witnesses:
WILLARD C. FOLLES,
ROBERT A. FRENCH.