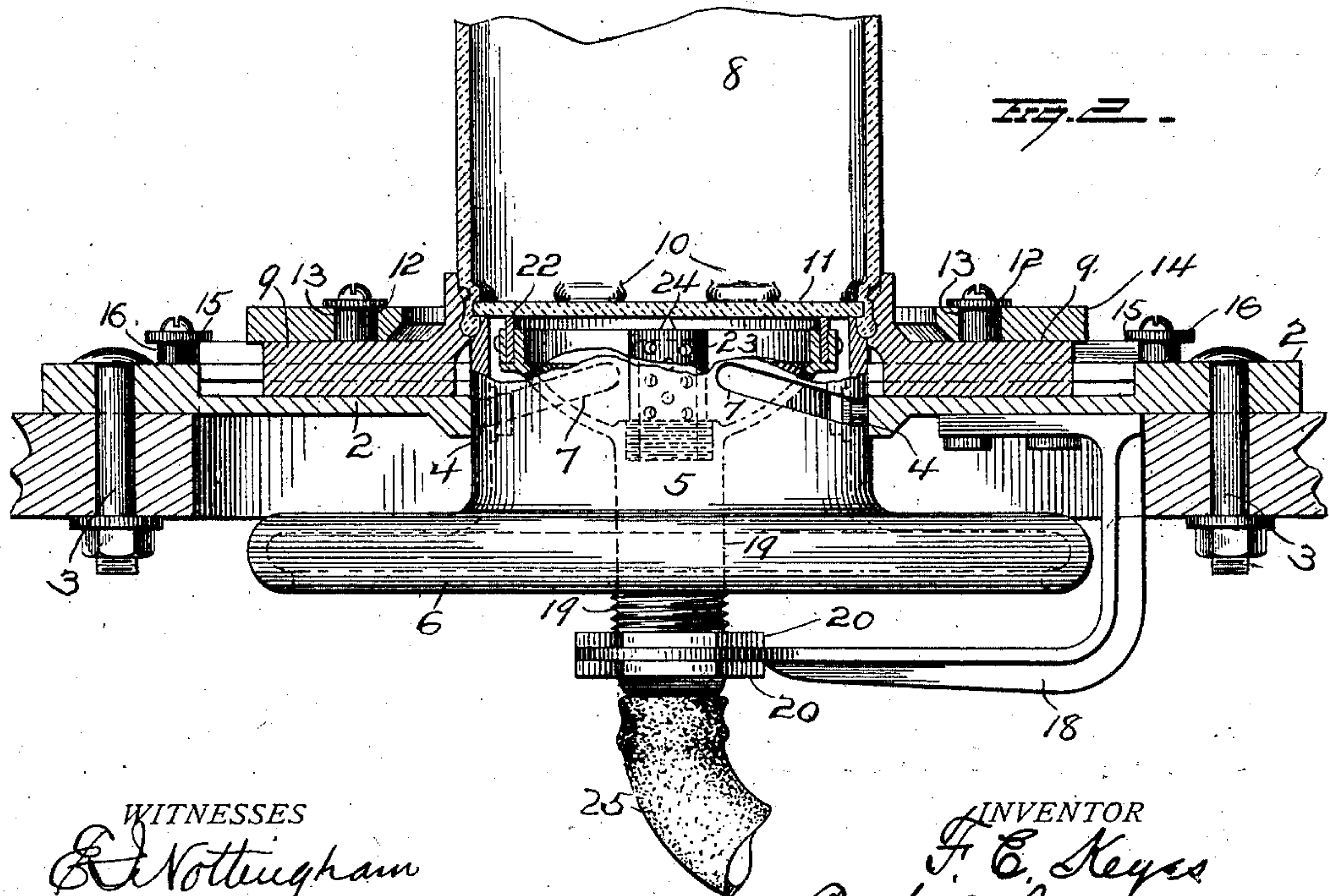
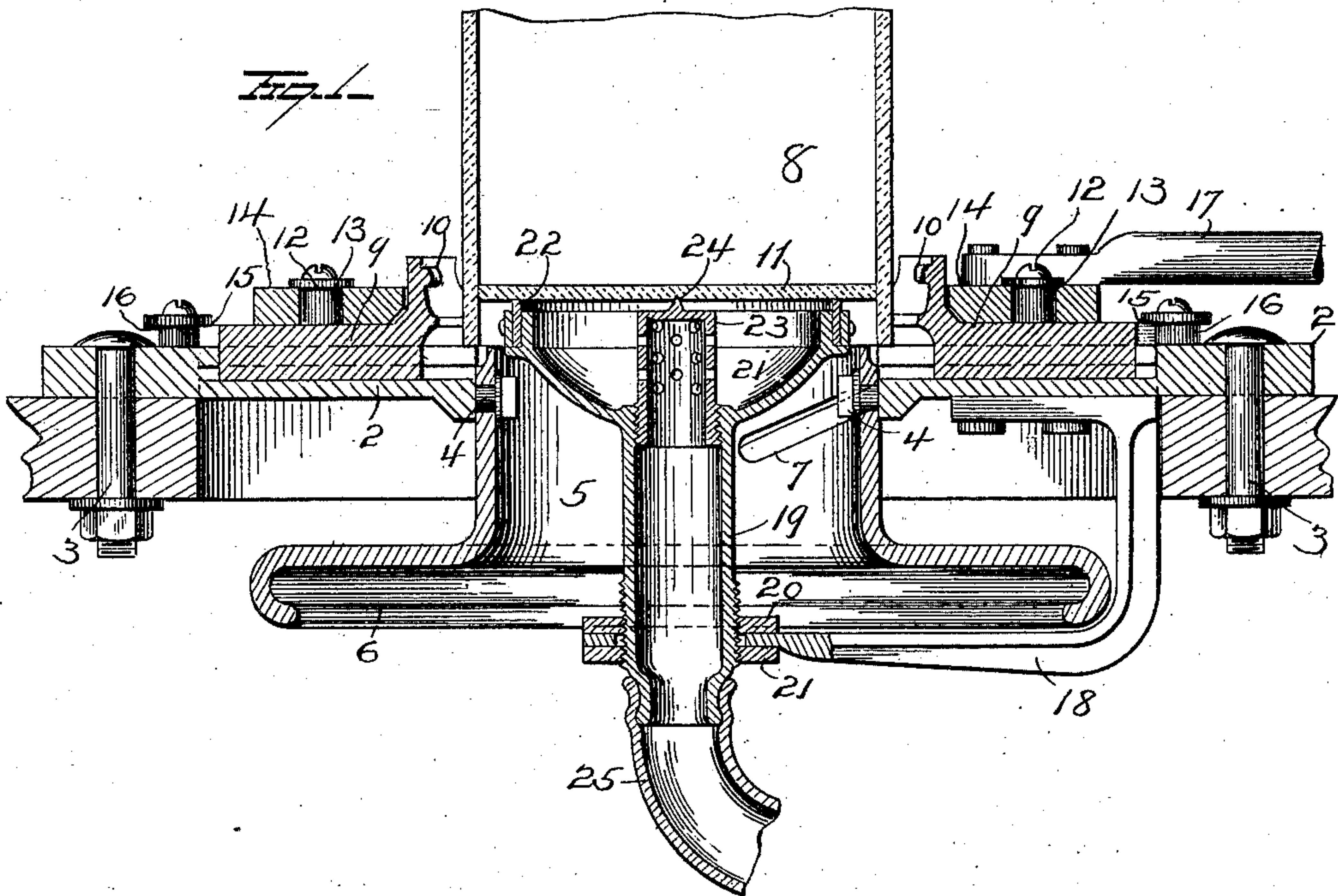


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2 SHEETS—SHEET 1.



WITNESSES

*E. Nottingham*  
*G. J. Downing*

INVENTOR

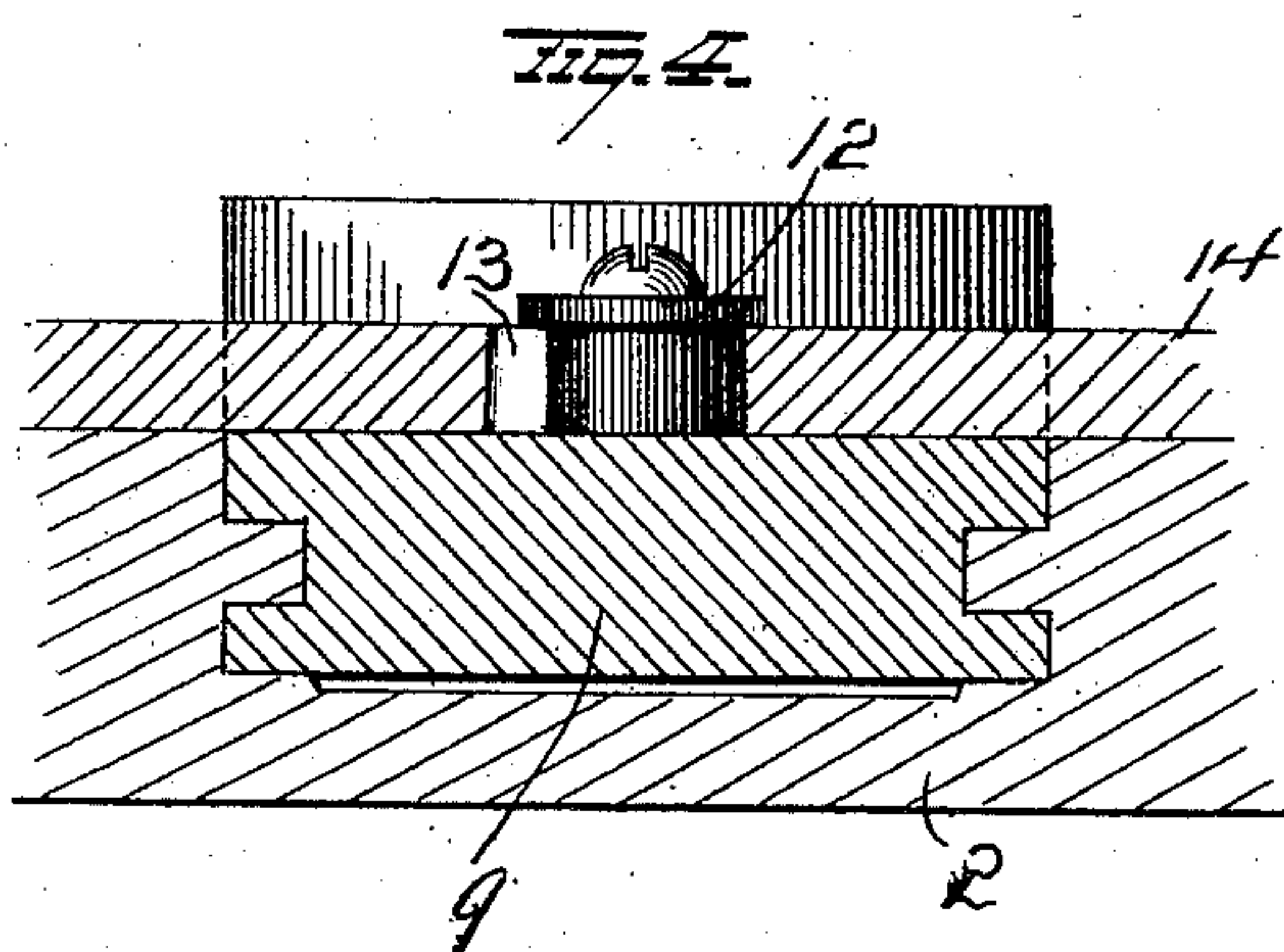
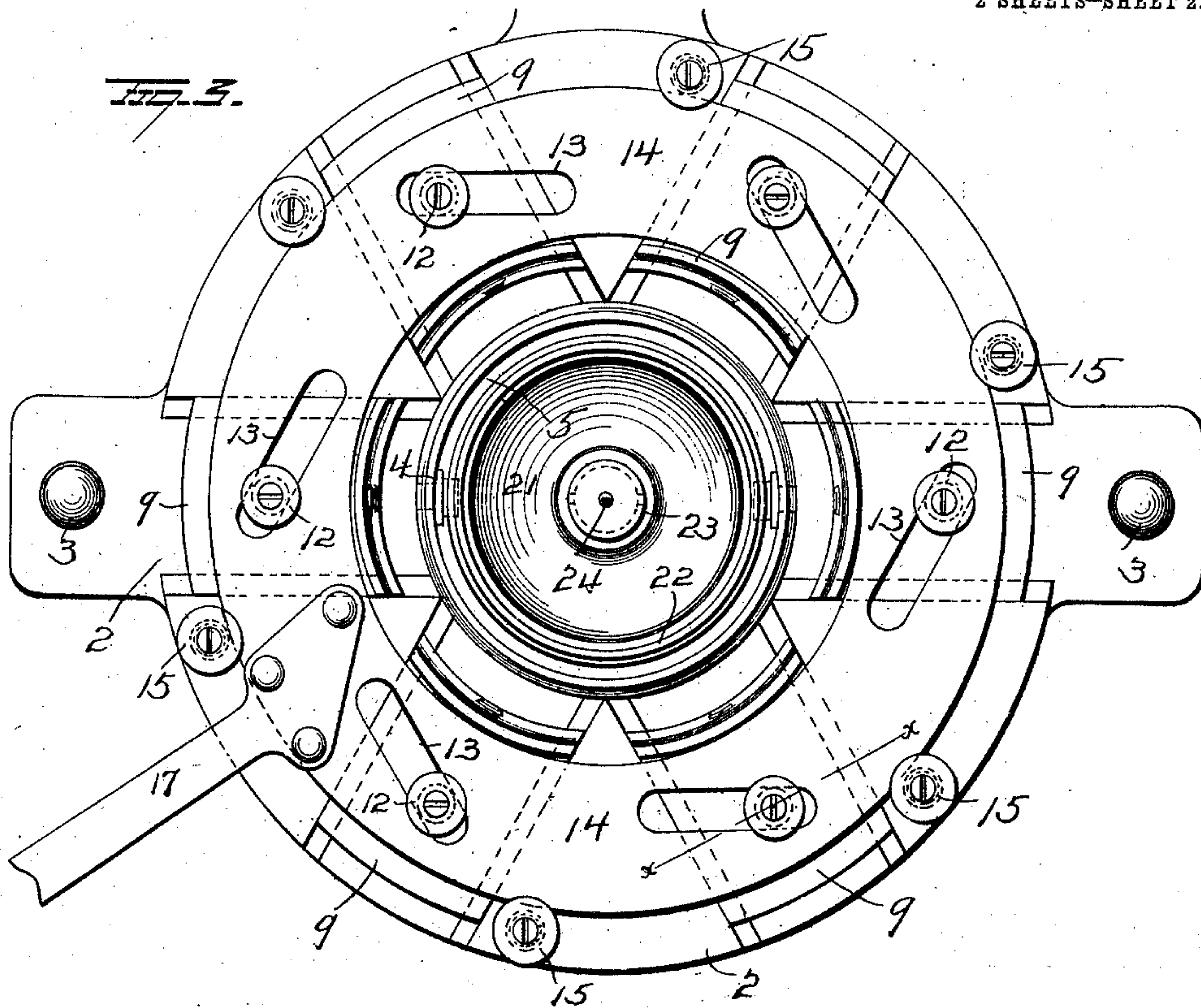
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# UNITED STATES PATENT OFFICE.

FRANK E. KEYES, OF NEW YORK, N. Y.

MACHINE FOR MAKING KEGS OR BARRELS.

986,995.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed July 12, 1910. Serial No. 571,645.

*To all whom it may concern:*

Be it known that I, FRANK E. KEYES, of New York, in the county of New York and State of New York, have invented certain  
5 new and useful Improvements in Machines for Making Kegs or Barrels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such  
10 as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in machines for making pulp or fiber kegs or barrels, the object being to provide means  
15 for supporting the head and body of such receptacle and then molding the end of the body around the edge of the head, whereby the latter becomes permanently attached to said body and cannot be separated there-  
20 from except by the destruction of the receptacle.

With this object in view my invention consists in the parts and combinations of parts as will be more fully explained and pointed  
25 out in the claims.

In the accompanying drawings, Figure 1 is a view in vertical section through my improved machine showing the body and head of the keg or cask properly assembled there-  
30 on. Fig. 2 is a view partly in vertical section and partly in elevation showing the head secured in place. Fig. 3 is a plan view and Fig. 4 is a view in section on the line  $x-x$  of Fig. 3.

35 1 represents a table or bench having an opening therein covered by the base plate 2, the latter being firmly secured to the table by bolts 3, and provided with a central circular opening of approximately the diameter of the head of the keg or cask to be assembled thereon. Secured to said base plate  
40 2 and projecting into the central opening of same, are the plunger supporting pins or rollers 4 on which the plunger 5 is mounted. This plunger is of hollow cylindrical form of a diameter to snugly fit the hole in base plate 2, and widened out at its bottom as at  
45 6, to form a hand wheel by which it is turned or rotated. It is also provided with two or more inclined slots 7 through which the pins or rollers 4 pass, so that a rotary motion imparted to the plunger in one direction through handle 6, will elevate the plunger, and a reverse movement will lower same.  
50 The slots 7 and pins 4 are so located with relation to the upper edge of the plunger, that

when the latter is elevated, its upper end will have engaged and shaped the lower end of the body 8 of the keg or cask, as shown in Fig. 2, and when in its other position, as  
60 shown in Fig. 1, its upper end rests below and out of contact with the lower edge of said body.

Mounted in recesses in the upper face of the base plate 2, are a series of sliding dies,  
65 each of which is connected by tenon and groove joint, as shown in Fig. 4, with said plate. In the present instance six of such dies are shown, and each is enlarged at its inner end, and so shaped on its inner face as  
70 to produce the projection 10 in the body of the keg or cask above the head 11, and impart the desired shape to the lower end of the body immediately below the head. These  
75 dies may be constructed to produce a continuous ridge instead of the separated projection as shown, and in the present instance, they compress and round up the lower edge of the body 8 under the head 11 thus locking  
80 the same permanently in place. The inner edge of the several dies are curved in the arc of a circle concentric with the circular opening in the base plate, so that when the dies are in their closed positions, as shown in  
85 Fig. 2, the inner ends of the several dies come together and thus form in effect a continuous circle.

Each die is provided on its upper face with a projecting pin or stud 12, each of which passes through an oblique slot 13 in  
90 the die operating ring 14. This ring rests on and over the several dies and is retained in place thereon by the disks 15 secured to the studs 16 and overlapping the ring 14. The ring is provided with a handle 17 by  
95 which it may be given a partial rotation, and when turned, it operates, through its oblique slots, to move all the dies 9 simultaneously toward or away from the body of the keg or cask.  
100

Depending from the underside of base plate 2 is the bracket 18, through which the pipe section 19 passes, the latter being secured to the bracket by the clamping nuts  
105 20 screwed to said pipe 19 above and below the bracket. Pipe section 19 terminates at its upper end in a dished shaped suction head 21 of circular form which carries at its periphery a rubber, leather or other flexible ring 22 on which the head 11 of the  
110 cask rests during the process of assembling the parts, and secured to the upper end of



pipe section is the thimble 23 perforated at its sides and provided on its top with the centering pin 24. The lower end of pipe section 19 is connected by a hose 25 with an exhaust fan or other suction device.

In assembling a keg, cask or other receptacle, the head 11, which is made of pulp or fiber, should be first dried and then centered on the pin 24. After the head has been properly placed, the air should be exhausted from pipe section 19, and thus hold the head solidly on the flexible ring 22 by suction, the ring 22 operating, by its adaptability to conform to the surface of the head, to prevent the entrance of air into the dish-shaped suction head of the pipe. After the head has been placed and secured as above explained, the pulp or fiber body, in its wet and pliable condition as it comes from the forming roll, should be placed in the position shown in Fig. 1, with its lower end projecting below the head. Lever 17 should now be turned to force the dies 9 into contact with the body 8 of the keg, after which the plunger is raised so as to compress and round up the lower end of the body as clearly shown in Fig. 2. The inward movement of the dies forms the projections 10 in the body 8 above head 11; compresses the body in line with the head 11, and forces the lower end of the body under the head, while the plunger 5, compresses and shapes up the lower end of the body. After the head and body have been assembled, the suction is discontinued and the dies 9 moved outwardly to release the body and head. The other head of the cask or keg, is then placed in position, the body 8 inverted over said head and secured in the same manner. This second head may be provided with a hole for filling and discharging the contents of the keg or cask, which hole may be closed by a bung or screw threaded plug. In instances where one removable head is necessary or desirable, the open end of the body would simply be subjected to dies for forming projections 10 on which the removable head would rest, and the latter could be secured by nails in the usual manner.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention. Hence I would have it understood that I do not wish to confine myself to the exact construction and arrangement of parts shown and described, but,

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:—

1. In a machine for making pulp or fiber kegs or barrels, the combination of a suction device for holding the head in position, a series of dies movable toward and away

from the body of the keg and adapted to force the material of the body inwardly so as to overlap the outer edge of the head above and below, and an upwardly movable plunger for shaping the lower end of the body.

2. In a machine for making pulp or fiber kegs or barrels, the combination of means for supporting the body of the keg or barrel, means for supporting a head within the lower end of said body, a series of movable dies for compressing the body against the periphery of the head and for forcing the material of the body inwardly so as to overlap the edge of the head above and below the latter, and a plunger for shaping the lower end of said body.

3. In a machine for making pulp or fiber kegs or barrels, the combination with a support for the head, a support for the body, a series of dies movable toward the body for displacing the material of the latter above and below the head so as to overlap the edge of the latter, and means for forcing the lower end of said body up toward the head and for shaping said lower end.

4. In a machine for making pulp or fiber kegs or barrels, the combination, of a base plate having an opening therein, a series of dies arranged concentrically around said opening and movable toward and away from the latter, a vertically movable plunger carried by said plate and movable vertically in the opening in the latter, and means located centrally within said opening in the plate for centering and supporting the head of the keg or barrel.

5. In a machine for making pulp or fiber kegs or barrels, the combination, of a base plate having an opening therein, a series of dies arranged concentrically around said opening and movable toward and away from the latter, a vertically movable plunger carried by said plate and movable vertically in the opening in the latter, and a suction device located centrally within said opening in the plate for centering and supporting the head of the keg or barrel.

6. The combination of a base plate having a circular opening through same, a series of dies arranged around said opening and concentric therewith, means for moving said dies toward and away from the opening in said plate, and a plunger movable through the opening in said plate and cooperating with the dies to shape the lower end of the body of the keg or barrel and secure the head thereto.

7. The combination of a base plate having a central opening through same, a series of dies arranged around said opening and concentric therewith, means for moving said dies toward and away from the opening in said plate, a plunger movable through the opening in said plate and cooperating with



said dies for compressing the body of the keg or barrel around the head of the latter and a suction device for supporting said head.

5 8. The combination of a base plate having an opening through same, a series of dies mounted to move on said plate, the said dies being arranged around said opening and having ends curved concentrically with  
10 said opening, a plunger mounted to move vertically through the opening in said base plate and cooperating with said dies and means within the plunger for supporting the head of the barrel or keg.

15 9. The combination of a base plate having an opening through same, a series of dies mounted in grooves in said plate and having curved ends arranged around said opening concentric with said opening, a  
20 plunger having a curved upper end adapted to cooperate with the inner ends of the dies, the said plunger being mounted within the

opening in the base plate, means for simultaneously moving said dies toward the opening in the base plate, and means for moving the plunger upwardly. 25

10. The combination with a base plate having an opening therein, a suction pipe and a suction head the latter having a yielding ring on which the head of the barrel or  
30 keg rests, of a series of dies mounted on the top face of the plate, a plunger mounted to move vertically around the suction head and within the opening in the plate, means for moving the dies simultaneously and means  
35 for moving the plunger.

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

FRANK E. KEYES.

Witnesses:

WM. J. MAHON,  
W. F. KEYES.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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