

No. 755,626.

PATENTED MAR. 29, 1904.

B. DANNER.

BARREL SOAKING APPARATUS.

APPLICATION FILED APR. 18, 1901. RENEWED SEPT. 14, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

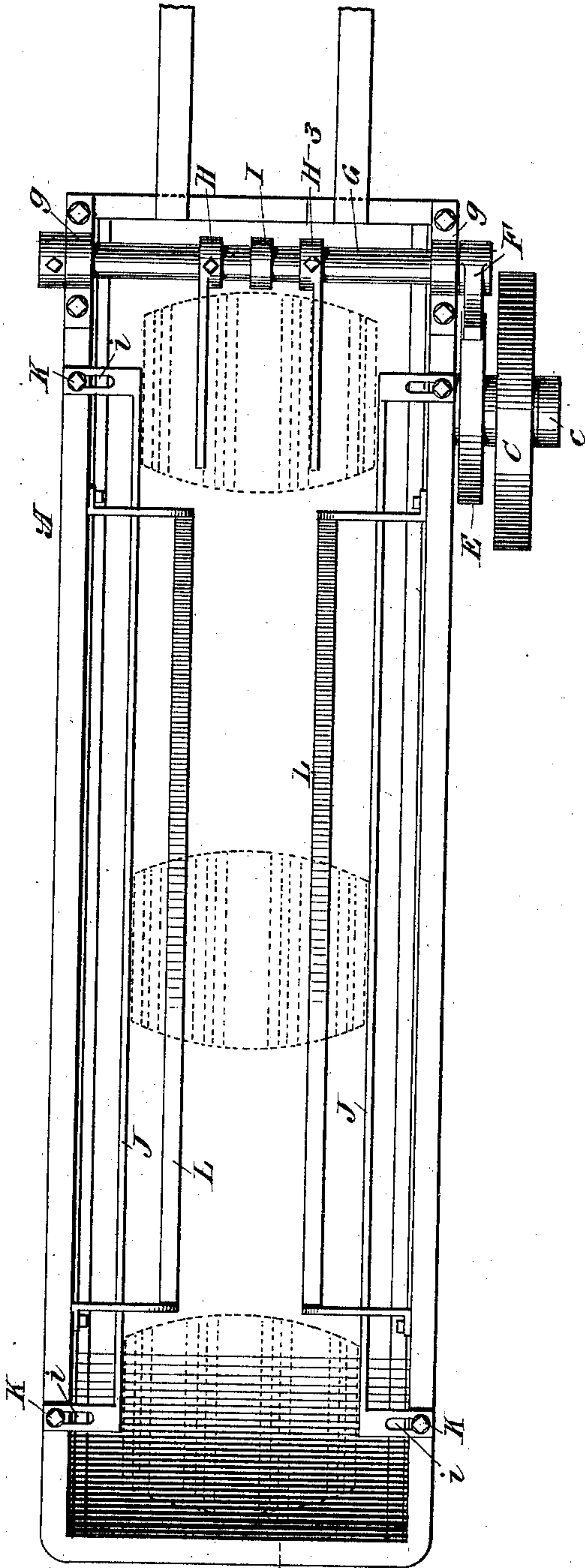
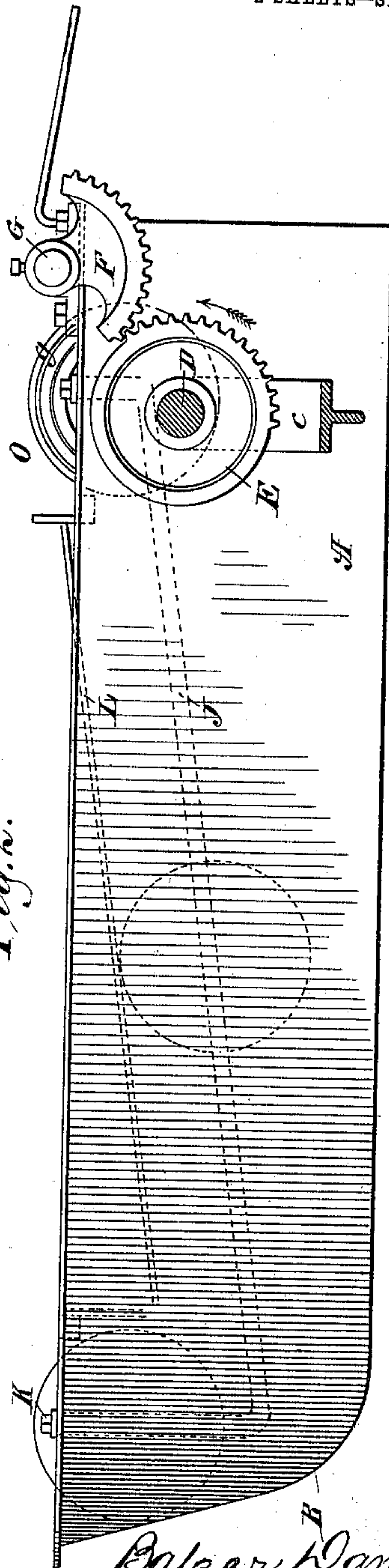


Fig. 2.



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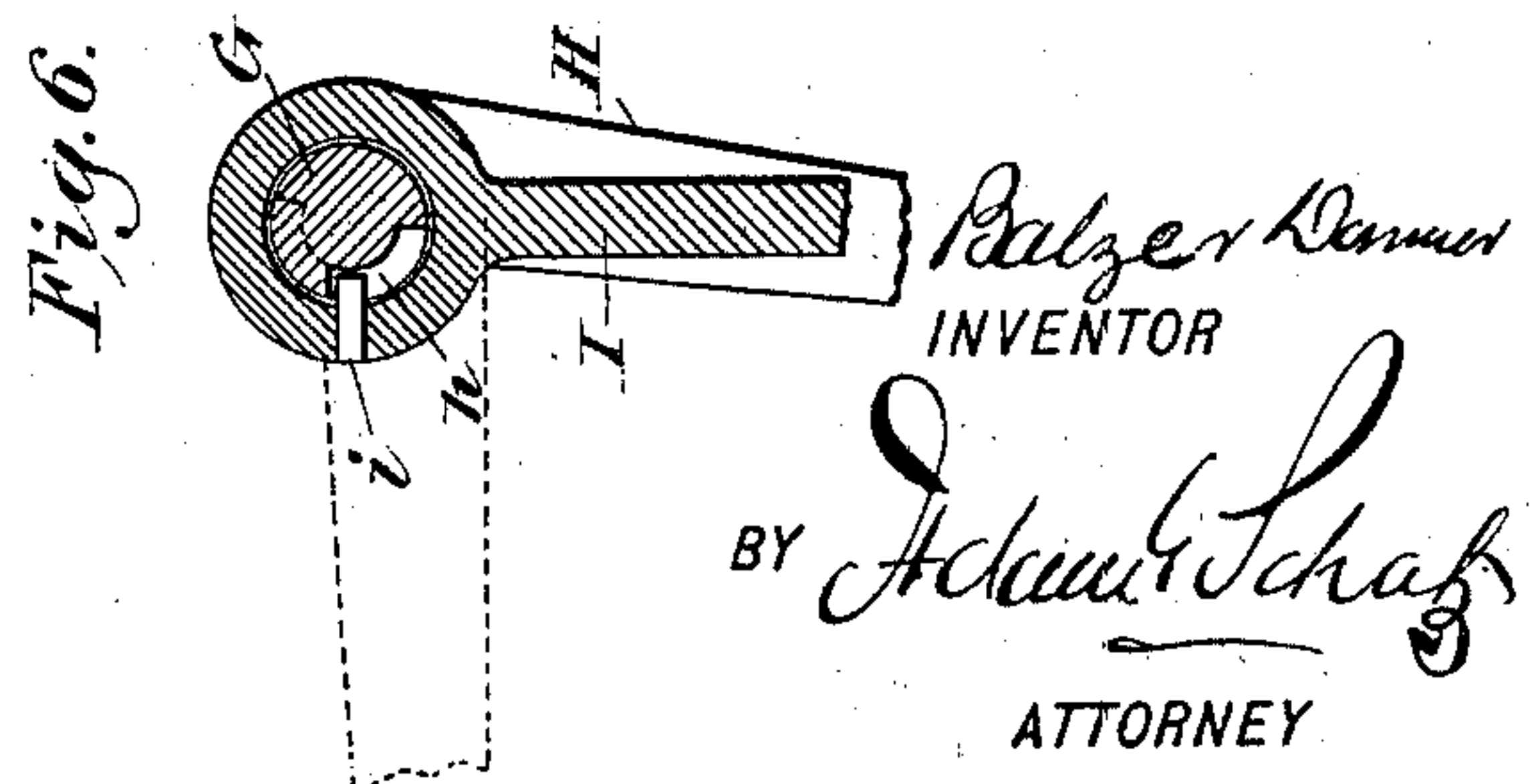
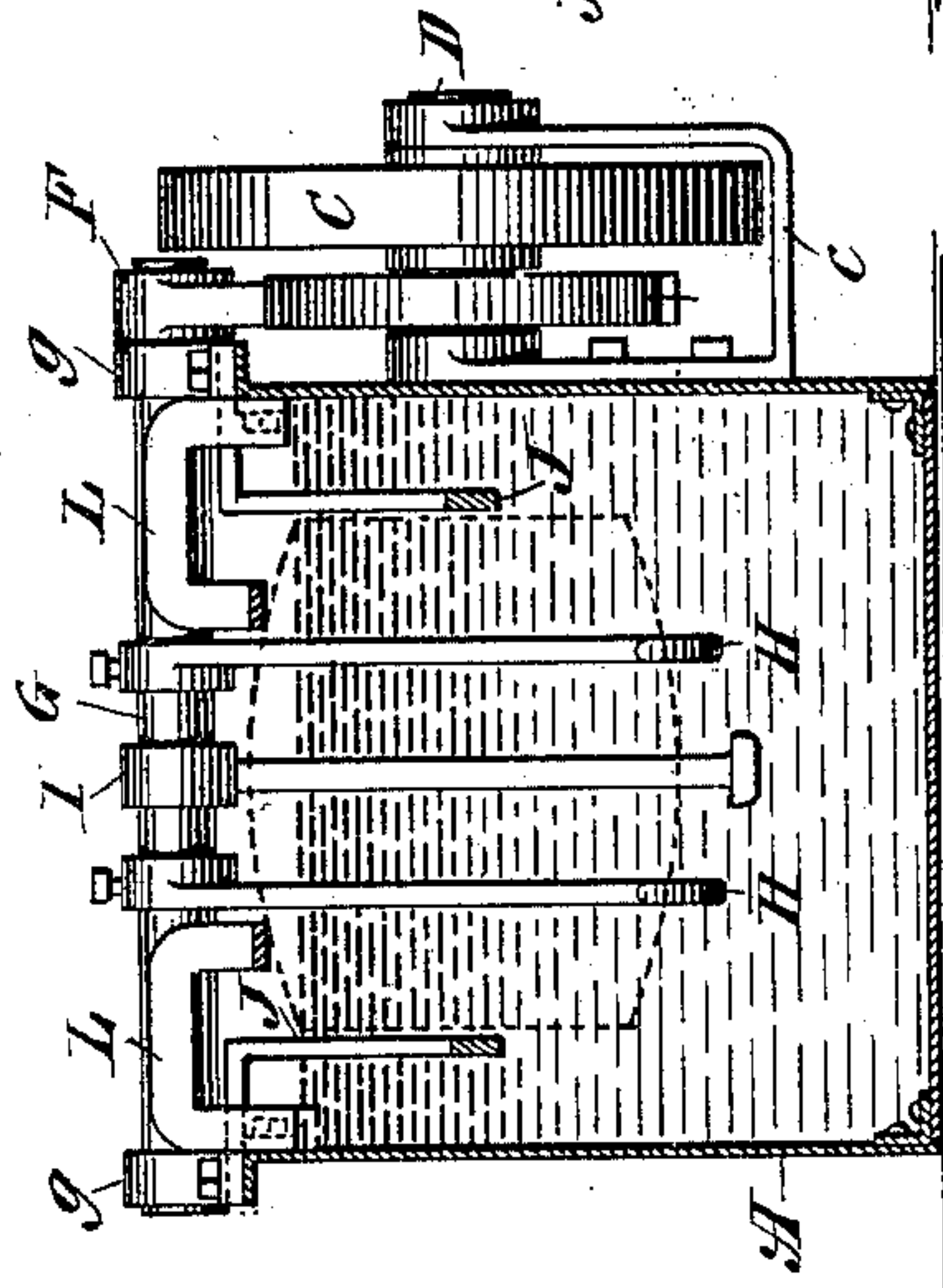
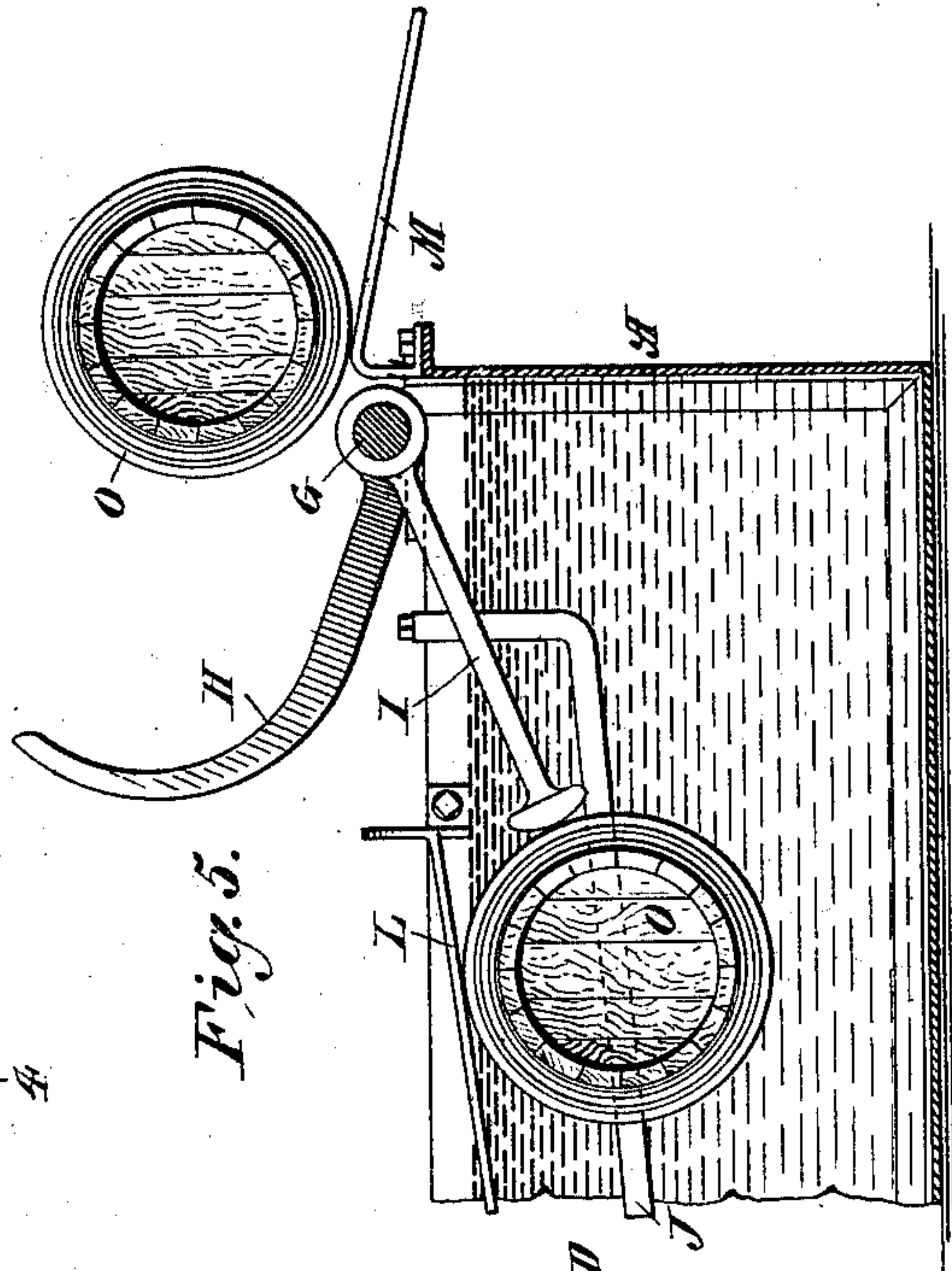
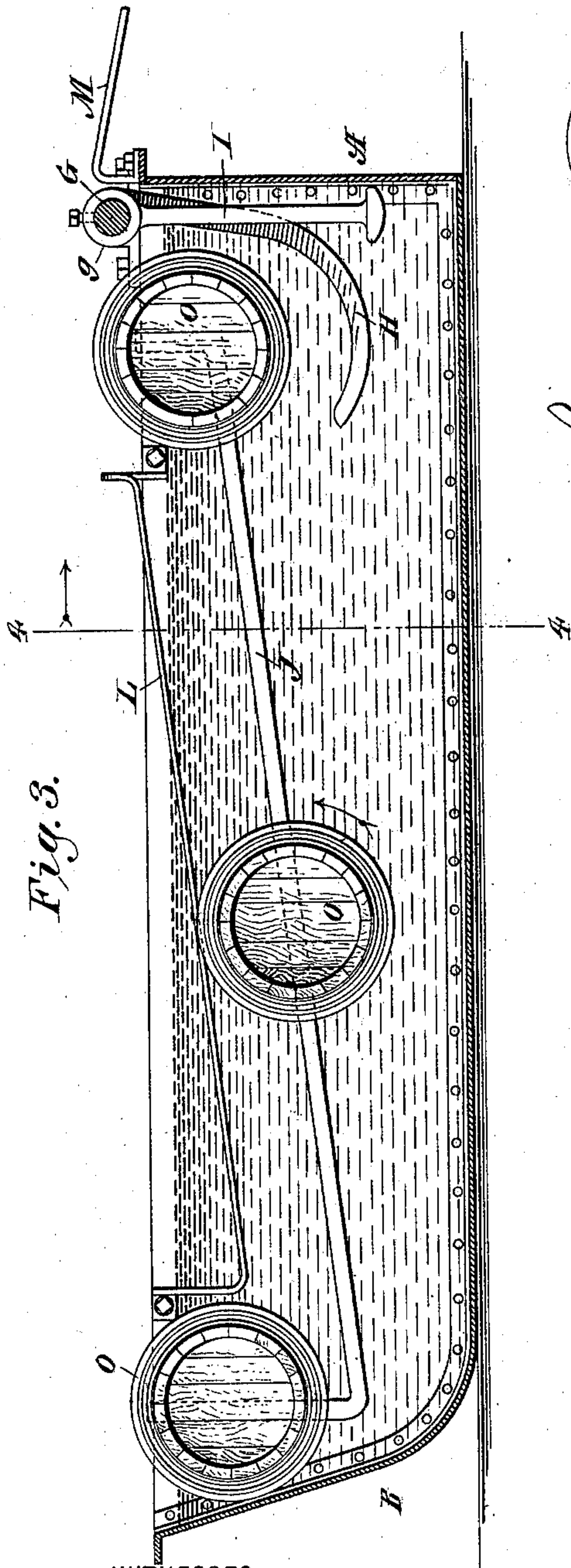
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UNITED STATES PATENT OFFICE.

BALZER DANNER, OF WHITEPLAINS, NEW YORK.

BARREL-SOAKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 755,626, dated March 29, 1904.

Application filed April 18, 1901. Renewed September 14, 1903. Serial No. 173,174. (No model.)

To all whom it may concern:

Be it known that I, BALZER DANNER, a citizen of the United States, residing at Silver Lake Park, town of Harrison, Whiteplains, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Barrel-Soaking Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an improved apparatus for soaking barrels preparatory to washing them.

The invention comprises novel means for rotating the barrel in the water from the end to the head of the machine and there lifting the same out to throw the barrel to the scrubbing-machine, the entire mechanism being so arranged as to facilitate the thorough soaking and handling of the barrel while in the soaking-machine and by means of which the impure bodies in the interior of the barrel and the accumulations of dirt on the outside of the barrel are soaked, and thus the scrubbing of the outside of the barrel and the cleansing of the inside of the barrel are more thoroughly accomplished.

In all soaking-tanks for barrels heretofore constructed the tank has been provided with a declining rail upon which the barrels have rolled from one end of the tank to the other. I have found in practice that the buoyancy of the barrel prevents the same from being rotated to a great degree and for that reason preventing the thorough soaking both in and outside of the barrel. In a tank built according to this specification the barrel is shoved in at the end of the tank and forced under the lowest end of a depression-rail, which is provided on both sides of the tank. By this means the barrel is held entirely immersed, and consequently receives a large amount of water on the inside thereof. The buoyancy of the barrel forces the same against the rail and rotates it in the direction of least resistance, which is toward the lifting-arm, which

is brought about by the fact that the depression-rail at its end near the head is about level with the sides of the tank, while the ends near the lowest part of the tank are lowered enough to give the same a very perceptible incline. As the barrel is forced under the lowest end of the depression-rail in seeking the higher level of the water it is brought in contact with the declining rail, and thus forced to rotate in the direction as above stated. When the barrel is released from the operation of the depression-rail, it immediately finds its way into the open space near the head of the tank, where two simple arms are affixed on a shaft, which in turn has affixed to it a section of a cog-wheel. At the outer side of the upper end of the tank is affixed a pulley, which is provided with a section of cogs and is so arranged that it gears with the sectional cog-wheel which is affixed to the arm-lifting shaft. When the pulley is rotated, its clogged section, gearing with the sectional cog of the arm-lifter, rotates the same in a direction to lift the arm, which in turn grasps the barrel and carries it up far enough so that the barrel will roll off. As the arm-lifter is raised to receive the barrel the stop-rod comes into operation and holds back the following barrel, so as to prevent it from being brought under the arm. This is a very economical and safe apparatus, since its simplicity does not require the large amount of space required in other machines where means are provided for the same purpose. As the barrel falls off the arms it can be allowed to fall upon a skid or rail to carry it to a scrubbing or other machine.

Figure 1 is a plan view showing the mechanism in operation and showing barrels in dotted lines. Fig. 2 is a side view showing the mechanism in operation by means of which the barrel is lifted out of the machine. Fig. 3 is a longitudinal section taken on the line 3 3 of Fig. 1, showing the barrels immersed in water and also showing the arm by means of which the barrel is lifted out and also the stop-rod which prevents the following barrel from getting under the arm. Fig. 4 is a cross-section taken on the line 4 4 looking in the direction drawn by the arrows,

showing the arms and the stop-rod and gearing. Fig. 5 is a longitudinal cross-section of the upper end of the tank and shows the arm in the act of throwing out a barrel while the stop-rod holds another barrel back to prevent it from getting under the lifting-arm. Fig. 6 is a detail section showing the construction of the stop-rod.

In the drawings, A represents an ordinary tank, but which is preferably provided with an outwardly-flanged end B and is also provided with the fixed barrel-depressing rail L, fixed partly along on each of its inner sides and having its highest elevation near the head of the tank and its lowest near the end of the tank. The tank is also provided with adjustable guide-bars J, which guide-bars have their ends turned upwardly and outwardly and have the slots *i* and are fixed to the side of the tank by the adjusting-nuts K, which run nearly entirely along the inner sides of the tank and are provided for the purpose of guiding the barrels directly under the depression-rail L. These rails are adjustable, so that they may guide different-sized barrels and keep them in the line of the path desired. I do not, however, consider these guide-bars indispensable, since the convexity of the barrels tends to keep the same directly in the line of the depression-bars.

At the upper end of the tank A are provided journals *g g*, which are provided to receive the arm-shaft G. To this shaft G are fixed the arms H H, while between the arms H H is swung the stop-rod I. The shaft G has a recess *h* cut into it at about its center, while the sleeve of the stop-rod is provided with a set-screw *i* and which is screwed into the recess in the shaft G, so that when the shaft is turned in the direction to raise the arms H H the stop-rod is not operated on until the set-screw is brought in contact with the end of the slot in the shaft G, and then the stop-rod is raised just high enough to prevent the following barrel from being forced from under the depressing-rail into the open space before the arms H H have returned to their normal position ready to raise the following barrel. At the outer end of the shaft G is affixed a section of a gear-wheel F. At the outer upper end of the tank is provided a journal-bracket *c*. This bracket is provided to support the pulley C, which rotates on the shaft D.

E is a gear-wheel having portion of the cogging cut away to form a free section and is affixed to the shaft D between the pulley C and the wall of the tank and in line with the

cogging F and is so arranged that when the same is rotated in the direction of the arrow as shown in Fig. 2 it will engage with section F, which in turn raises the arms H H and the stop-rod I to the positions shown in Fig. 5, where the barrel is thrown off the arm and onto the rail M. When the section F is released, the arms H H and rod F all back in their natural position of their own weight.

O O are barrels.

It is obvious that I am not limited to the exact construction shown, since other means may be employed to lift the barrels out of the tank, the essential feature of my invention being the method of soaking barrels, which consists in forcing them into a filled tank of water, having a depression-rail by means of which the barrels are kept under water and rotated in their passage from the lower to the upper end of the tank.

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

1. In a barrel-soaking apparatus, the combination of the tank A having the inclined depression-rails L and the adjustable guide-bars J, substantially as shown and described.

2. In a barrel-soaking apparatus, the combination of the tank A having the fixed rails L, the adjustable guide-bars J and means at one end to lift the barrel out of the tank, substantially as described.

3. In a barrel-soaking apparatus, the combination of a tank, having the arms H H and the stop-rod I affixed to the shaft G, said shaft being provided with means to lift said stop-rod partially out of the tank, substantially as described.

4. The combination of the tank A, the rails L, the guide-bars J, the arms H H and the rod I affixed to the pivotal shaft G, said shaft being operated by a sectional cog, substantially as described.

5. In a barrel-soaking apparatus, the combination of the tank A having the fixed depression-rails L, the guide-bars J the shaft G provided at one end of the said tank and having the fixed arms H H and the stop-rod I operated by the sectional cog F in combination with the pulley C having the sectional cog-wheel E and journal in bracket *c*, substantially as shown and described.

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

BALZER DANNER.

Witnesses:

CHAS. BECKMAN,
ADAM E. SCHATZ.