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J. P. TISDALE.
CHURN DASHER.
APPLICATION FILED FEB. 11, 1911.

Patented June 13, 1911.

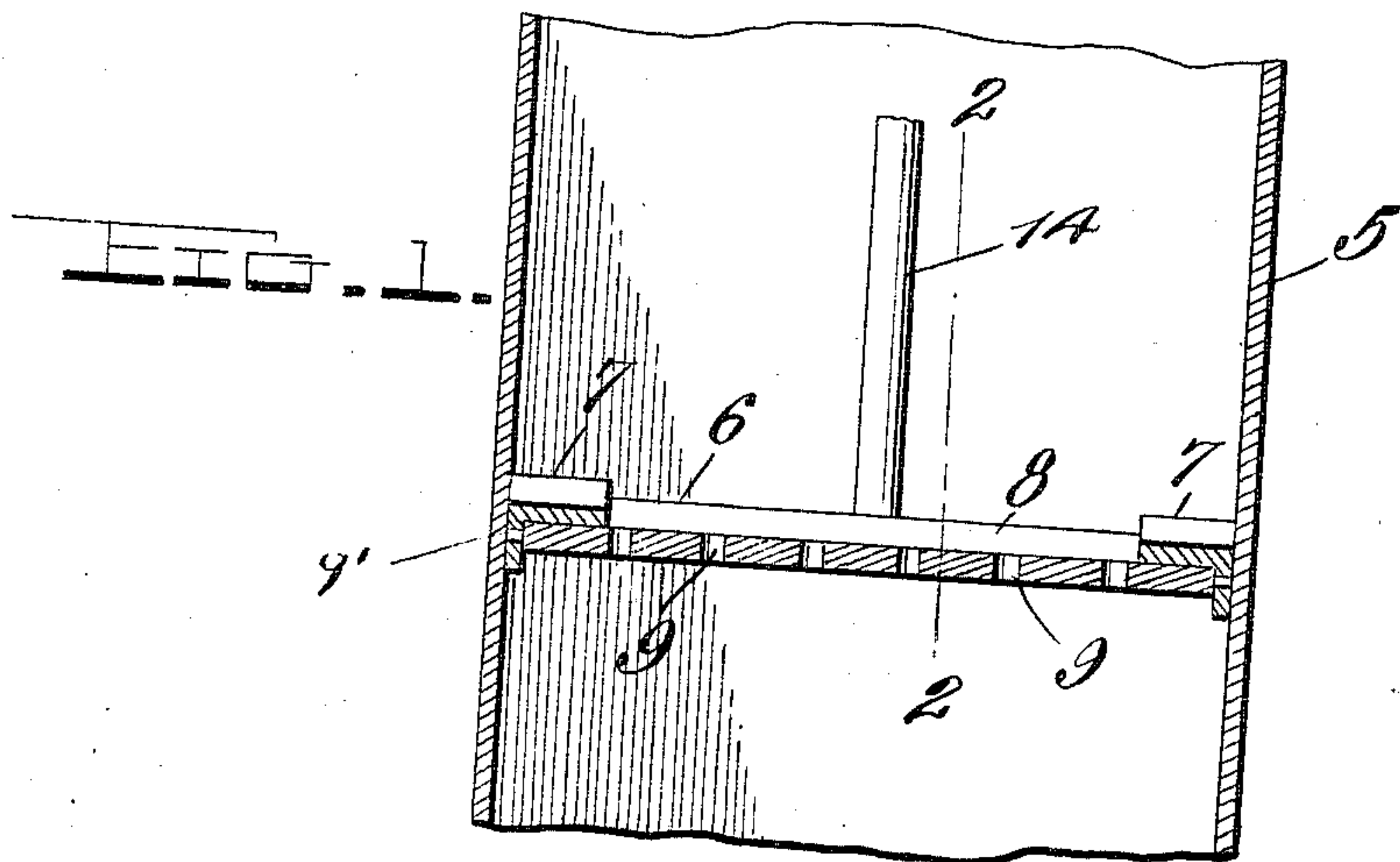


FIG. 1.

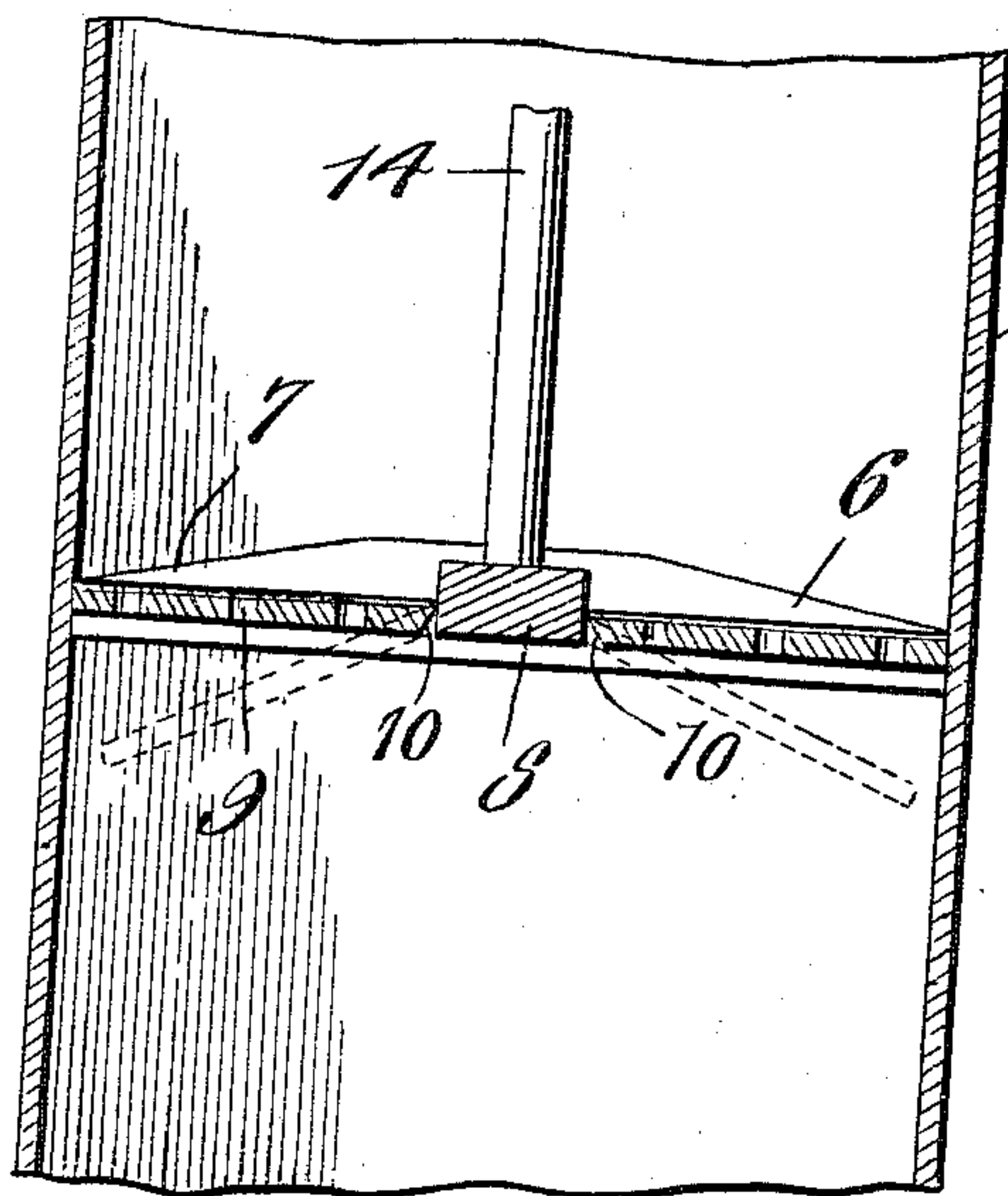
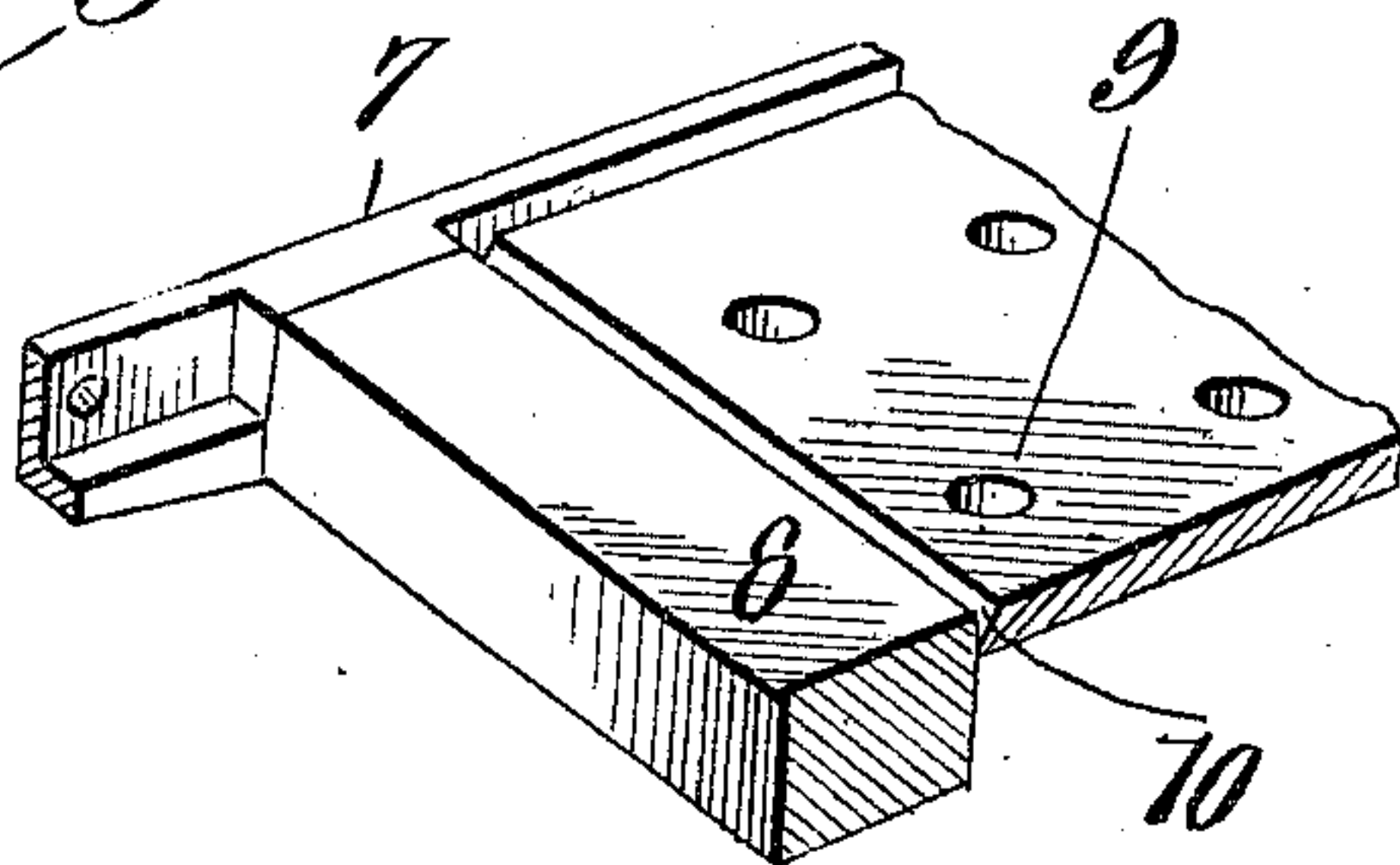


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JULIUS P. TISDALE, OF ZEARING, IOWA.

CHURN-DASHER.

994,891.

Specification of Letters Patent. Patented June 13, 1911.

Application filed February 11, 1911. Serial No. 608,014.

To all whom it may concern:

Be it known that I, JULIUS P. TISDALE, a citizen of the United States, residing at Zearing, in the county of Story and State of Iowa, have invented certain new and useful Improvements in Churn-Dashers, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in churn dashers and has for its object to provide a very simple, efficient and inexpensive device of this character whereby milk and cream may be expeditiously churned into 15 butter.

Another object of my invention resides in the provision of a churn dasher having a plurality of plates pivotally mounted for movement in one direction of the reciprocation of the dasher and means for limiting 20 such movement whereby the contents of the churn vat may be more thoroughly agitated.

With the above and other objects in view, the invention consists of the novel features 25 of construction, combination, and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

30 Figure 1 is a vertical section through a churn vat showing a dasher therein constructed in accordance with the present invention; Fig. 2 is a section taken on the line 2—2 of Fig. 1; and Fig. 3 is a detail fragmentary inverted perspective view illustrating the 35 manner of mounting the movable dasher plates.

Referring in detail to the drawing 5 designates a churn vat which may be of any desired form or proportion and in which my 40 improved dasher 6 of substantially similar form is mounted for reciprocatory movement. The manner in which the dasher is actuated forms no part of the present invention and will not therefore be described in 45 detail.

The essential feature of my invention resides in the construction of the dasher itself whereby a very thorough agitation of the contents of the vat is obtained.

50 The construction of the dasher embodies a frame consisting of the parallel angle bars 7 which are connected intermediate of their ends by means of the cross bar 8. This cross bar may be formed integral with the 55 parallel bars or comprise a separate element

as preferred. Between the parallel longitudinal frame bars 7 and upon each side of the cross bar 8, a perforated dasher plate 9 is mounted, said plates having a pivot stud 9' formed on each end thereof adjacent to 60 one of their longitudinal edges. These pivot studs are mounted in the vertical flanges of the angle bars 7. Upon referring to Fig. 2 of the drawing, it will be observed that the longitudinal edges of the perforated dasher 65 plates 9 adjacent to the cross bar 8 are beveled as indicated at 10. These beveled edges of the movable plates engage with the side faces of the connecting bar 8. Thus the pivotal movement of the plates 9 is limited 70 by these beveled edges and in one direction of the reciprocatory movement of the dasher the dasher plates are disposed at an angle to the frame in which they are mounted as shown in dotted lines in Fig. 2. This move- 75 ment of the plates occurs upon the upward movement of the dasher rod and upon the downward movement of the dasher, the perforated plates move upwardly until they engage the outer edges of the connecting bar 80 8, the edge portions of said bar preventing the rise of the plates above the plane of the side bars 7 of the frame. In this downward movement of the dasher the under surfaces 85 of the movable dasher plates and of the connecting bar 8 are disposed in the same plane. The dasher rod 14 is centrally connected to the bar 8 in any desired manner, said rod being connected to the operating mechanism 90 whereby the dasher is reciprocated.

From the above description taken in connection with the accompanying drawings, it is believed that the construction and operation of my improved churn dasher will be 95 readily understood. The device is extremely simple in its construction and by movably mounting the dasher plates a very thorough agitation of the fluid is obtained so that the churning operation may be very quickly 100 completed at a minimum expenditure of manual labor. It will be obvious that the frame as well as the movable plates which are mounted therein may be made in any desired form as well as the churn vat in which 105 they are adapted to operate.

The invention is also susceptible of many other minor modifications in the form, proportion and arrangement of the parts without departing from the essential feature or 110 sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:—

A churn dasher comprising a frame consisting of spaced parallel angle bars and an intermediate connecting bar, a dasher plate arranged upon each side of the connecting bar, said dasher plates each having pivot studs adjacent to one of their edges rotatably mounted in said angle bars, said plates extending upon one of the flanges of the angle bars and adapted to contact therewith in the movement of the dasher in one direction to limit the pivotal movement of said plates, the edges of said dasher plates which are

disposed adjacent the intermediate connecting bar being beveled for engagement with the opposite faces of said bar to limit the pivotal movement of said plates in the opposite direction of movement of the dasher to maintain said plates at an angle with relation to the frame. 15 20

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

JULIUS P. TISDALE.

Witnesses:

W. H. GOGERTY,
T. P. POLLOCK.

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