

G. M. HEAD.
DUMPING WAGON.
APPLICATION FILED SEPT. 26, 1908.

928,753.

Patented July 20, 1909.

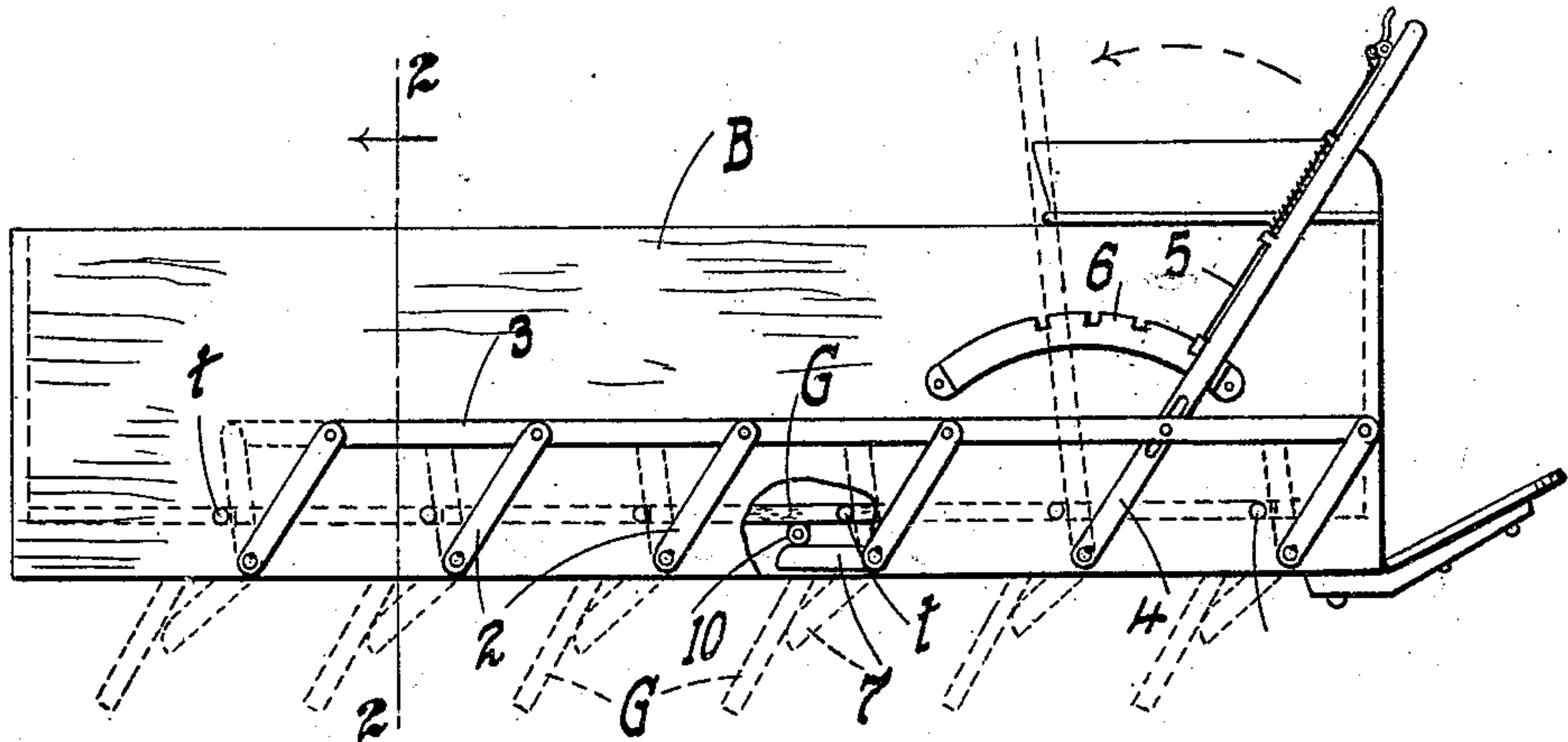


FIG. 1.

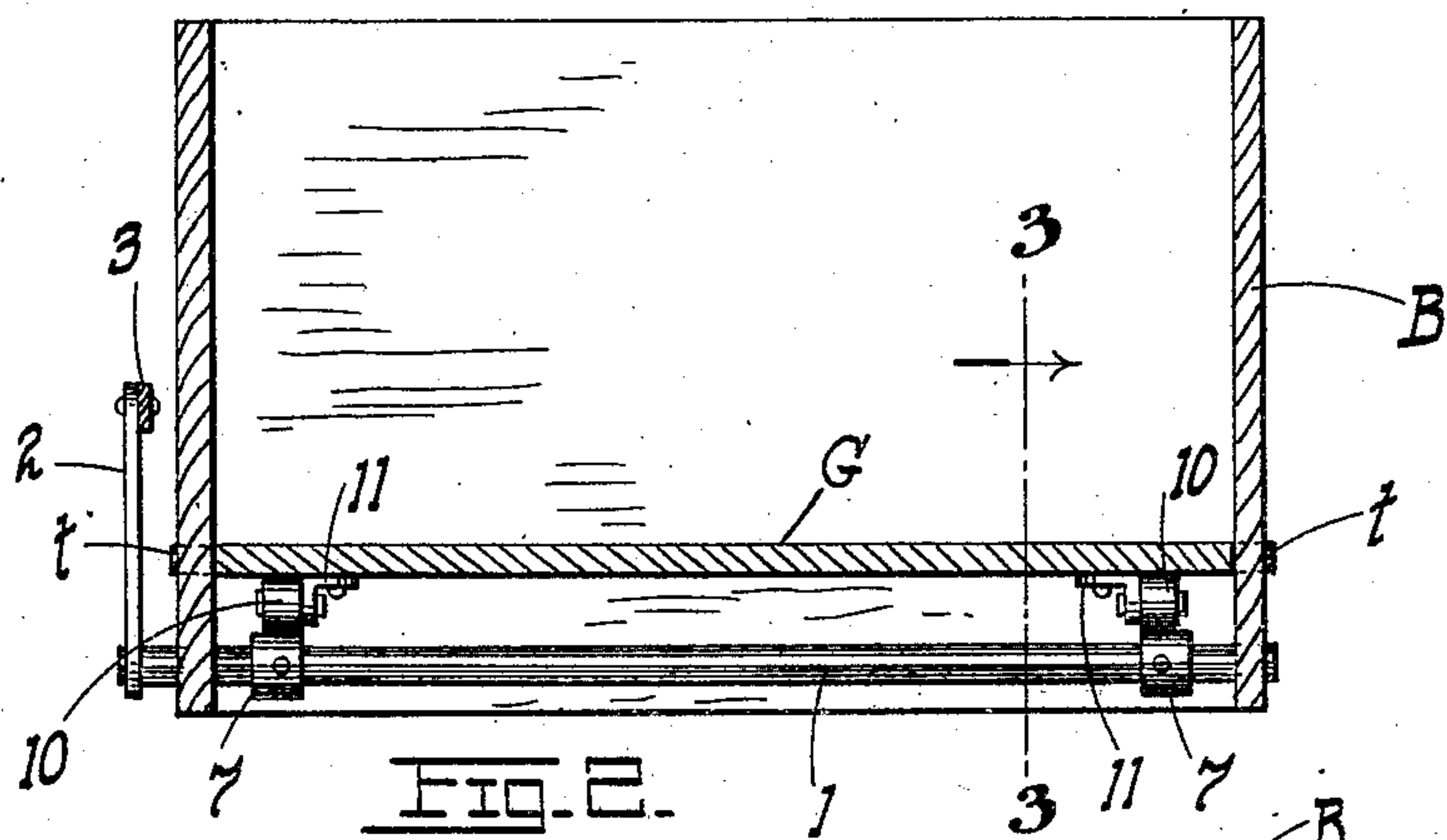


FIG. 2.

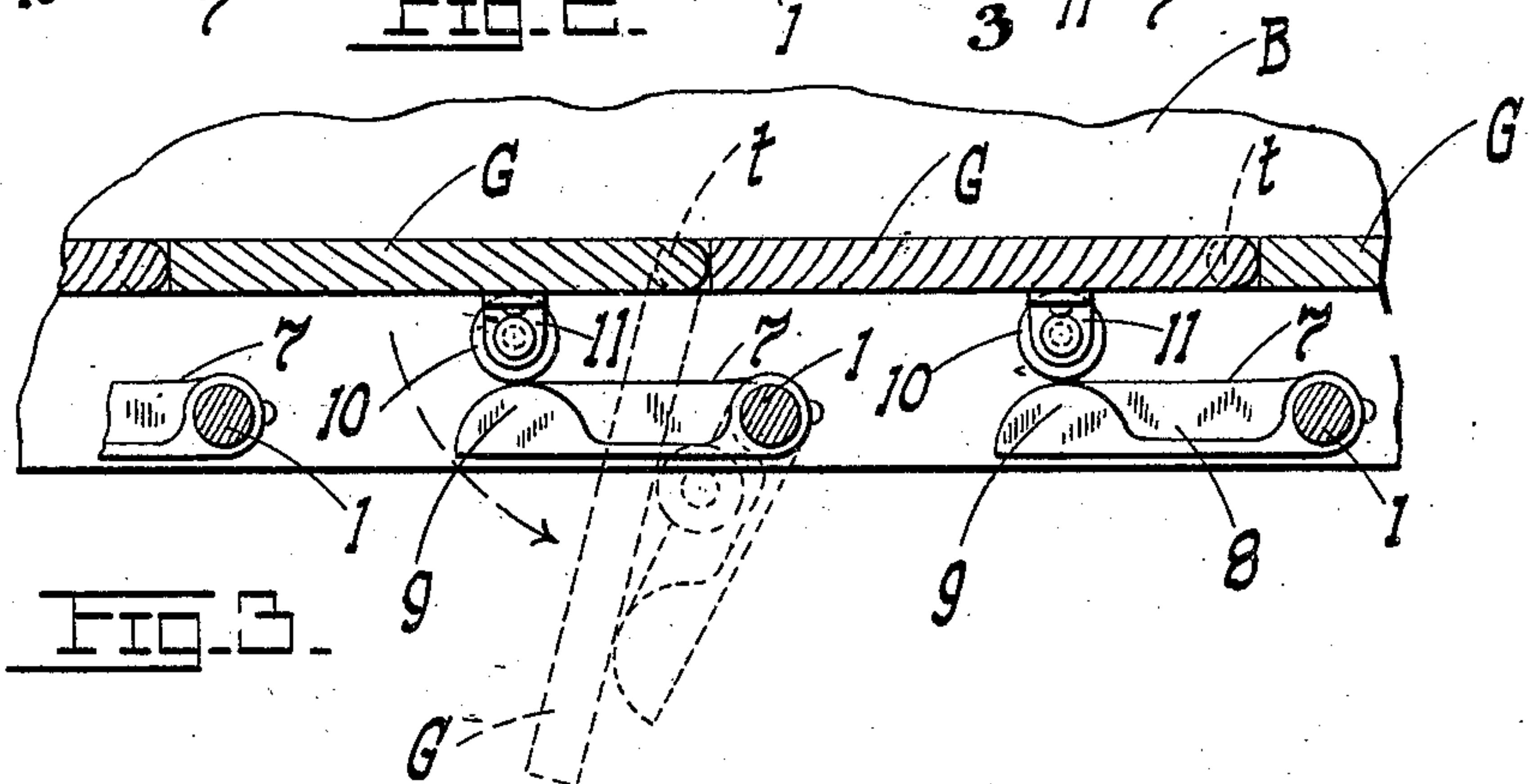


FIG. 3.

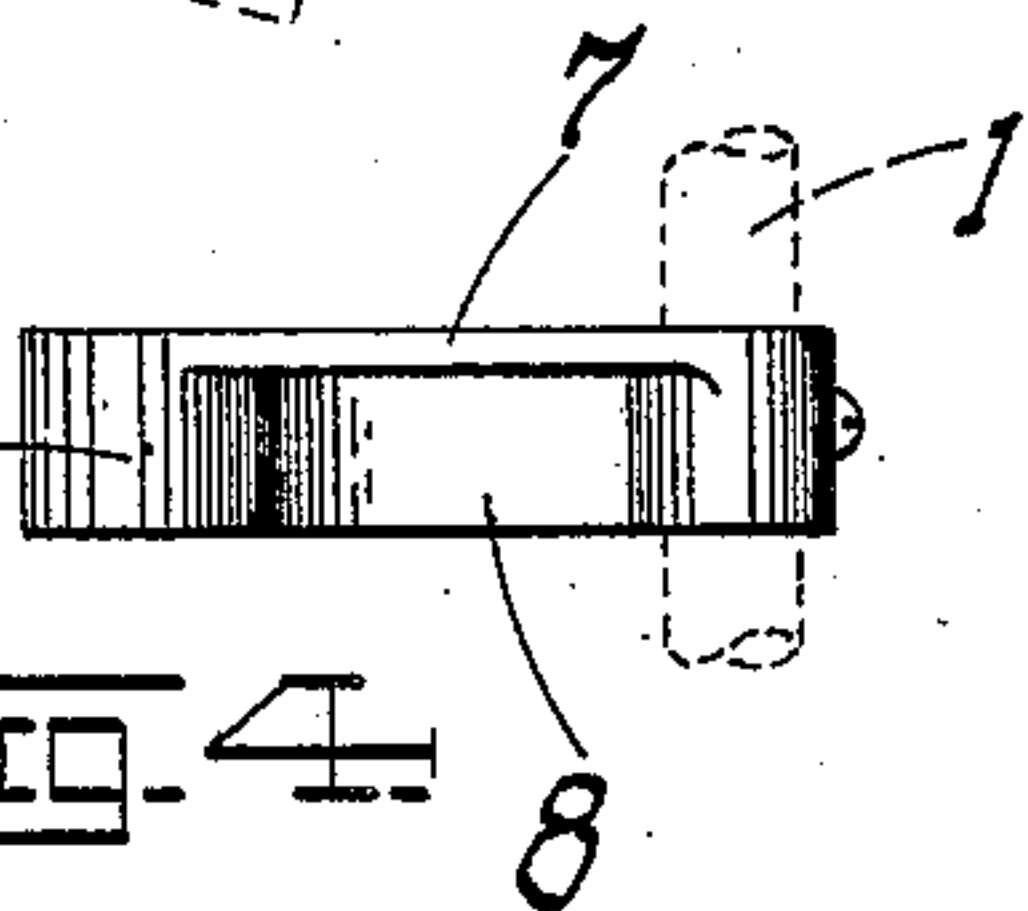


FIG. 4.

WITNESSES:

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GEORGE M. HEAD, OF ST. LOUIS, MISSOURI.

DUMPING-WAGON.

No. 928,753.

Specification of Letters Patent.

Patented July 20, 1909.

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To all whom it may concern:

Be it known that I, GEORGE M. HEAD, citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Dumping-Wagons, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in dumping-wagons; and it consists in the novel details of construction more fully set forth in the specification and pointed out in the claim.

In the drawings, Figure 1 is a side elevation of a wagon showing my invention applied thereto, the bottom being closed; Fig. 2 is a vertical transverse section on line 2—2 of Fig. 1; Fig. 3 is an enlarged sectional detail on line 3—3 of Fig. 2; and Fig. 4 is a detached plan view of one of the gate-supporting arms.

The object of my invention is to construct a dumping wagon, the contents of which may be instantly released by the simple manipulation of a tripping lever under the control, and within easy reach of, the driver; one which shall be positive in its action, simple in construction, and one possessing further and other advantages better apparent from a detailed description of the invention which is as follows:—

Referring to the drawings, B, represents the body of a wagon which may be of any conventional form or construction. Mounted between the lower edges of the sides of the body B are a series of parallel rock shafts 1, to the projecting ends of which on one side of the wagon body are secured the lever-arms 2, the upper ends of which are pivotally and collectively secured to a common connecting rod 3 disposed longitudinally with the body as shown. One of the levers is extended upwardly beyond the rod 3, thereby forming a tripping lever 4 controlled by a spring-pawl 5 engaging a curved toothed rack or bar 6 to which the pawl, and hence the lever may be locked, as fully understood in the art.

Rigidly secured at opposite ends of each rock-shaft, between the sides of the wagon body, and disposed at an angle to the lever arms 2, are arms 7, 7, provided each with a lateral depression or pocket 8 terminating in a head or cam formation 9, the base of the pocket or depression, and the head 9 afford-

ing a bearing for the travel of the rollers 10 mounted in brackets 11 secured to the under side of a series of gravitating gates G collectively forming the bottom of the body. These gates are suspended from hinge-arms or spindles *t* in the sides of the body as shown.

The operation of the invention is as follows:—By throwing the tripping-lever forward and locking the same in the full position shown in Fig. 1, the connecting rod 3 will be advanced forward, thereby oscillating forwardly the entire series of lever-arms 2 as shown. With this oscillation, the entire series of rock-shafts 1, 1, will be rocked in proper direction to oscillate upwardly the gate-supporting arms 7, 7, bringing the latter to a horizontal position, and thereby lifting the entire series of gates G to a correspondingly horizontal position and holding them there, thus closing the wagon-bottom. By pulling the tripping-lever rearwardly as shown by the dotted position of the parts in Fig. 1, the reverse of the several operations takes place, the arms 7 swinging away from the gates, the latter automatically gravitating or swinging to an open position, thus allowing the contents of the wagon to be discharged or dumped, (see dotted position of parts Figs. 1 and 3). With the oscillations of the arms 7, 7, the anti-friction rollers 10 travel freely over the parts 9 and 8, the presence of the pocket 8 permitting the necessary opening of the gate (a swing of about 80 degrees) without the necessity of oscillating the lever 4 through a greater arc than perhaps 45 degrees. In other words the cam 9 resulting from the pocket formation or depression 8, imparts an angular movement to the gate G considerably in excess of that participated in by the lever 4 by virtue of the travel of the roller 10 over the parts 9 and 8 with the oscillation of the arm 7. This is obvious from an inspection for example of Fig. 3. The moment the arm 7 has oscillated downwardly sufficiently to have permitted the roller 10 to pass off the cam 9, the sudden descent it then subsequently makes into the pocket or depression 8, obviously allows the gate a movement in excess of any oscillation participated in either by the tripping-lever 4, or by the arm 7.

Having described my invention, what I claim is:—

In combination with a wagon-body, a series of gates hinged in suitable relation to form a bottom therefor, a series of rock-

shafts mounted below the hinge-axes, lever-
arms secured to the ends of the rock-shafts
and extending upwardly along the side of the
wagon-body, means within reach of the
5 driver for oscillating the lever-arms and ro-
tating the rock-shafts, a series of gate-sup-
porting arms secured to the rock-shafts, said
arms having lateral depressions and termi-
nal cam formations, and rollers on the gates
10 engaging said depressions and cams during
the oscillations thereof, whereby the gate

may describe an arc in excess of that de-
scribed by the gate-supporting arm for any
oscillation of the latter, substantially as set
forth.

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

GEORGE M. HEAD.

Witnesses:

W. C. KILLEEN,

CHAS. A. BECKER.