

No. 869,804.

PATENTED OCT. 29, 1907.

W. L. PHILLIPS.
DUMPING CAR.
APPLICATION FILED JAN. 8, 1907.

Fig. 1.

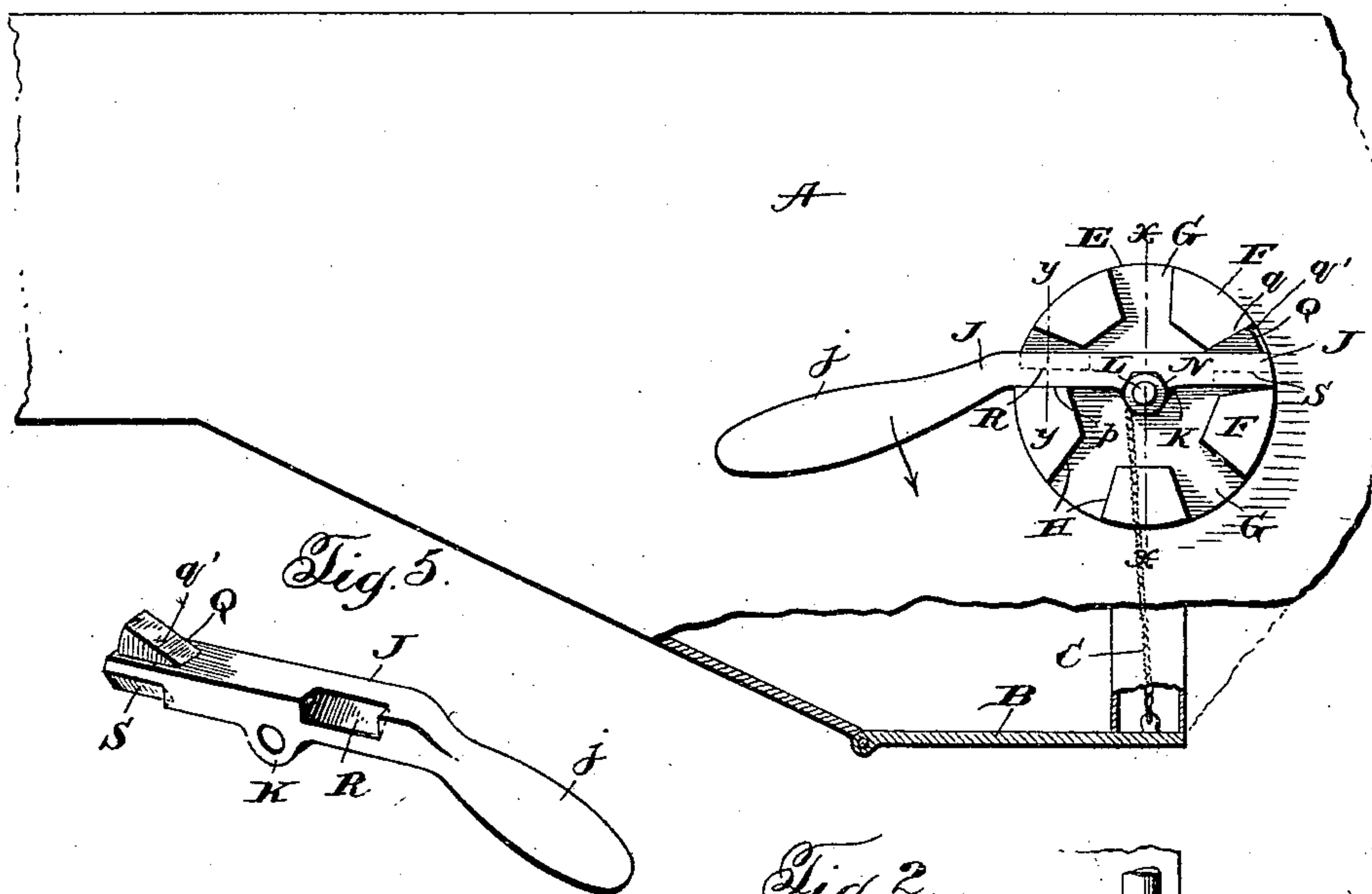


Fig. 2.

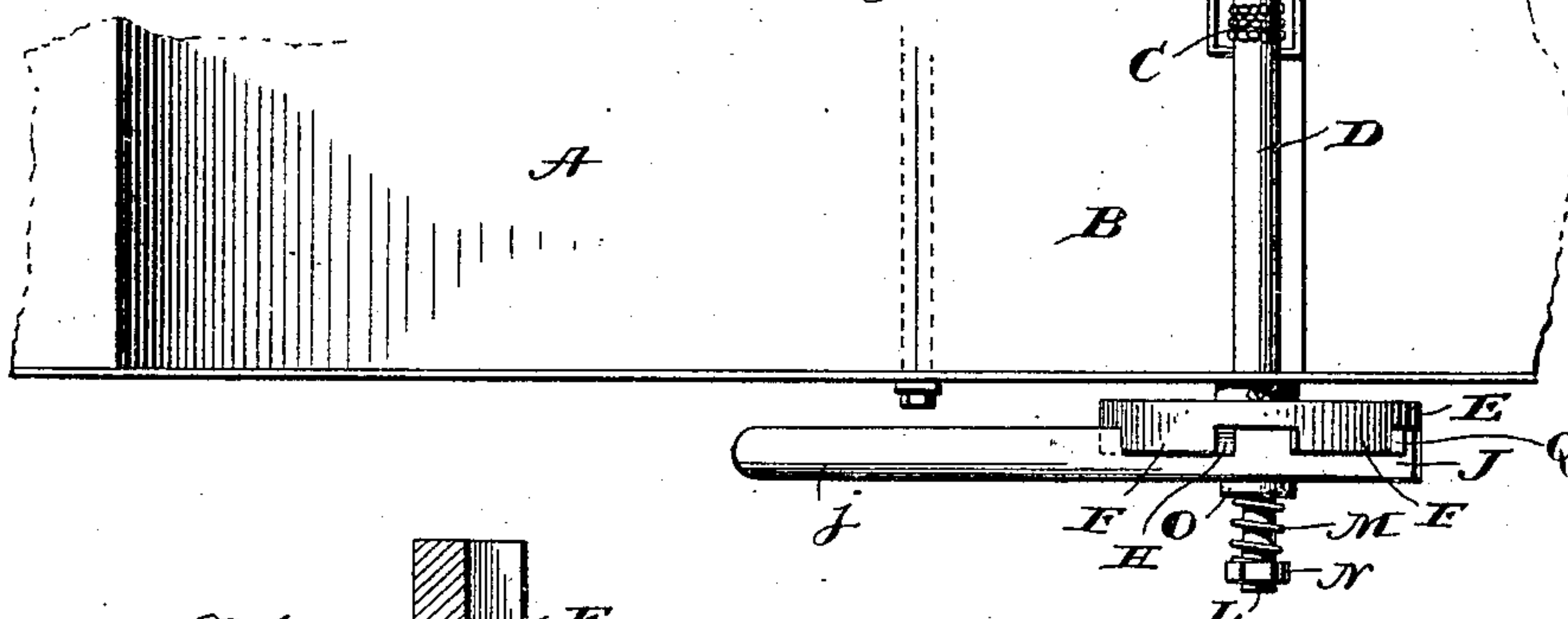


Fig. 3.

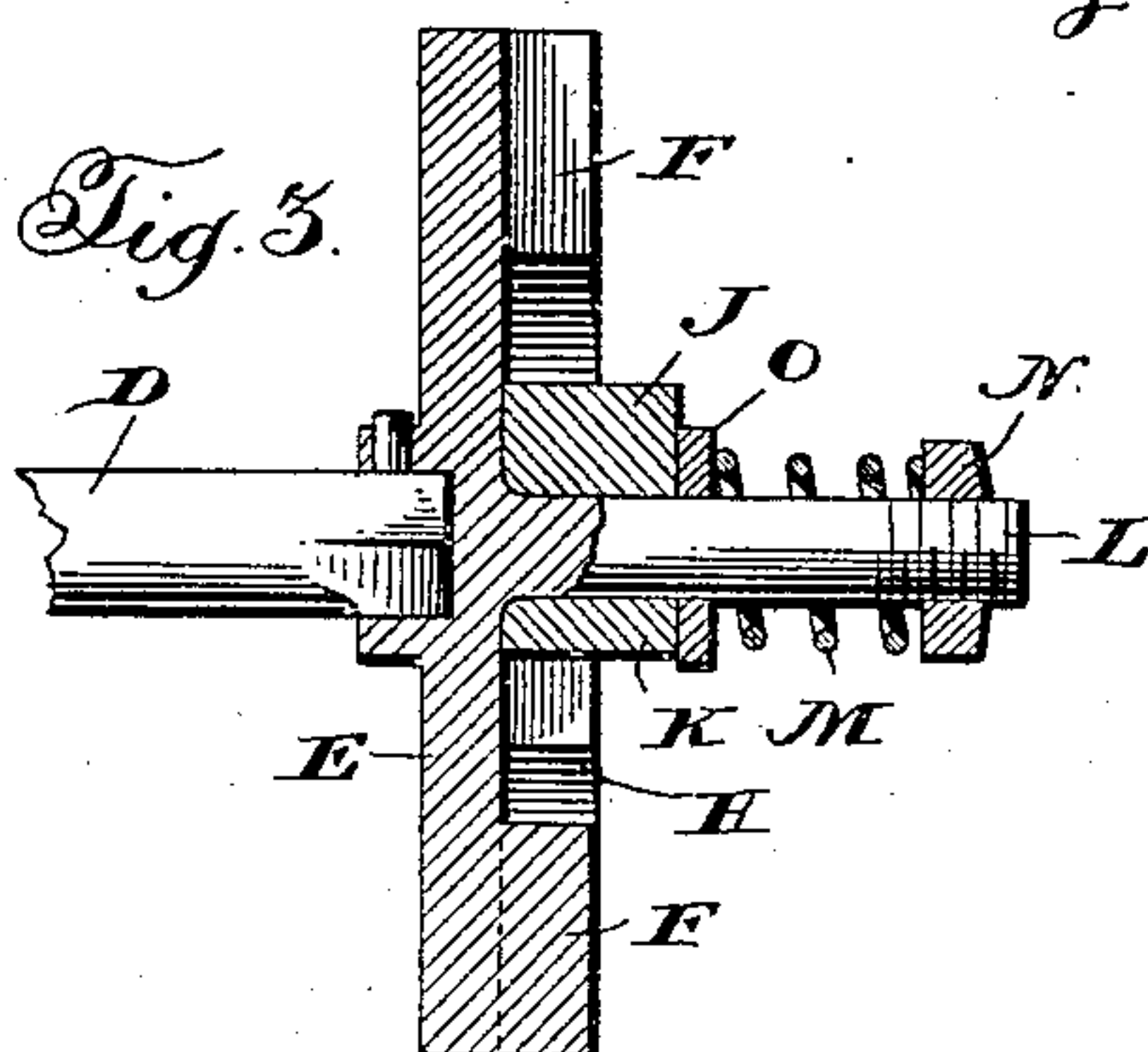
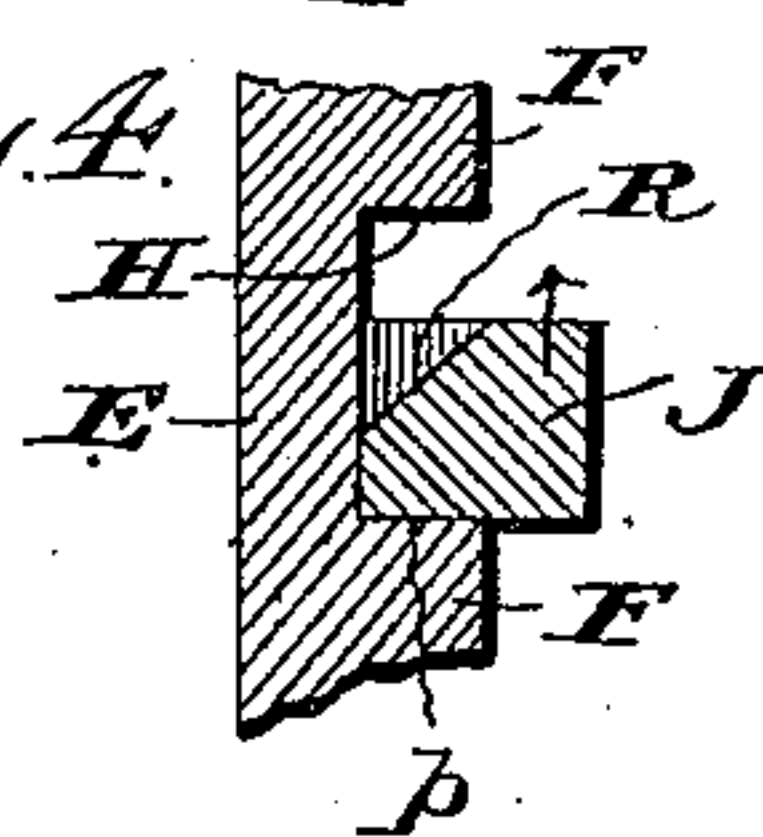


Fig. 4.



Witnesses:

Jas. E. Hutchinson.
Barrie A. Grey

Inventor:

William L. Phillips,
By A. D. Phillips Attorney

UNITED STATES PATENT OFFICE.

WILLIAM L. PHILLIPS, OF TRENTON, NEW JERSEY.

DUMPING-CAR.

No. 869,804.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed January 8, 1907. Serial No. 351,346.

To all whom it may concern:

Be it known that I, WILLIAM L. PHILLIPS, a citizen of the United States, residing at Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Dumping-Cars, of which the following is a specification.

This invention relates to improvements in dumping cars or vehicles and has for its primary object the provision of an improved device for facilitating the opening or closing of drop bottoms, although, as will be apparent to those skilled in the art, the device is capable of use in many other respects.

A convenient embodiment of the invention comprises a rotary disk, or its equivalent, connected to an operating shaft or other device, said disk having a series of radial abutments or shoulders on one of its faces, an operating lever pivoted to said disk having a part arranged to successively engage said shoulders, and the relative formation of the disks and operating lever being such that the lever may be shifted over the disk from a position in engagement with one of the shoulders into position to engage the next adjacent shoulder.

More specifically, the invention consists in forming the operating lever and disk shoulders in a manner to permit simultaneous engagement of two of the shoulders or abutments with opposite edges of the operating lever to afford two bearings. The invention still further comprehends the provision of the shouldered disk with the cooperating lever, in combination with means for pivoting the lever and disk together whereby one of them may move laterally with respect to the other to permit the lever to ride over the shouldered portions in its retrograde movements from one shoulder to a succeeding shoulder.

The novel details in the construction and arrangement of the several parts of the device will be apparent from the detailed description hereinafter contained when read in connection with the accompanying drawings wherein one embodiment of the invention is illustrated.

In the drawings, Figure 1 is a side elevation of the device, Fig. 2 is a top plan view of Fig. 1, Figs. 3 and 4 are cross sectional views on the lines X—X and Y—Y respectively of Fig. 1, and Fig. 5 is a perspective view of the actuating lever.

Referring more specifically to the drawings, wherein like reference characters refer to corresponding parts in the several views, A represents a fragmentary portion of a dump car shown simply to illustrate one use of the present device, B represents a hinged member of a hopper bottom of said car, and C a chain running from the free edge of said member, to a rotary operating shaft D to one end of which my improved device is attached. This device comprises a disk E rigidly secured to the shaft D whereby the latter will be rotated under the actuation of the former, said disk having

on its outer face a series of enlargements or raised portions F, forming intermediate depressions or recesses G and the adjoining abutments or shoulders H. J is an actuating lever having a pivot bearing K through which a pivot bolt L passes, said bolt being rigid with the disk E. To hold the lever in surface contact with the disk I sleeve thereupon a spring M bearing between an adjusting nut N on the bolt and a washer O. At a point adjoining the handle *j* of the lever I provide a contacting edge P formed complementary to the shoulders H and at the opposite end of the lever as also the opposite edge thereof, I provide an angular projection Q having a contacting edge *q* also formed complementary to the abutments or shoulders H whereby when the handle portion of the lever is pressed in the direction of the arrow the lever will contact at two points with the disk shoulders as represented at *p* and *q'*. To facilitate a retrograde movement of the lever on its pivot whereby to engage successive shoulders, I bevel the under edges of the lever opposite the bearing edges P, *q* thereof, as clearly indicated at R and S. This beveling of the edges permits the lever to readily ride upwardly over the shoulders or enlargements which face the same, the spring M yielding sufficiently for that purpose, and said spring, as soon as the lever is in proper position therefor again depressing the lever into aligned recesses G for engagement with said succeeding shoulders or abutments.

It will be obvious that although I have shown herein one embodiment of the invention, said invention is susceptible of other embodiments wherein the details may be somewhat changed but the underlying principle or spirit of the invention preserved.

I claim:—

1. A device of the character described comprising a rotary member having radially disposed shoulders or abutments on one of its faces formed by intervening recesses, said recesses being separated by substantially flat portions of the disk, whereby each abutment has a substantial reinforcing backing, a lever pivoted to said disk and having a portion formed complementary to said shoulders or abutments whereby to engage the same and adapted to be shifted from one shoulder or abutment to a succeeding shoulder or abutment.
2. A device of the character described comprising a rotary disk member having radially disposed shoulders or abutments on one of its faces separated by intervening recesses, both walls of said recesses being formed to constitute said abutments, and a lever operatively associated with said disk formed to be reversible, and actuated to engage either of said wall abutments of each recess.
3. A device of the character described comprising a rotary disk member having radially disposed shoulders or abutments on one of its faces formed by intervening recesses, said recesses being separated by substantially flat portions of the disk, whereby each abutment has a substantial reinforcing backing, a lever pivoted to said disk and having a portion formed complementary to said shoulders or abutments whereby to engage the same and adapted to be shifted from one shoulder or abutment to a succeeding shoulder or abutment, in combination with means for

fording the lever into engaging position with an abutment, and the parts being formed to facilitate the riding of the lever over the intermediate projecting portion from one recess to another to engage a succeeding abutment.

- 5 4. A device of the character described comprising a rotary disk member having radially disposed shoulders or abutments on one of its faces separated by intervening recesses, both walls of said recesses being formed to constitute said abutments, and a lever operatively associated with said disk, formed to be reversible, and actuated to engage either of said wall abutments of each recess, in combination with means for forcing the lever into engaging position with an abutment, and the parts being formed to facilitate the riding of the lever over the intermediate projecting portion from one recess to another to engage a succeeding abutment.

- 10 5. A device of the character described comprising a rotary disk member having radially disposed shoulders or abutments on one of its faces separated by intervening recesses, a lever pivoted to said disk having a part adapted to seat in said recesses including a beveled projection, the beveled edge of which is formed radially of the disk to be complementary to and abut the shoulder or abutment with which it engages.

- 15 6. A device of the character described comprising a rotary disk member having radially disposed shoulders or abutments on one of its faces separated by intervening recesses, a lever pivoted to said disk having a part adapted to seat in said recesses including a beveled projection, the beveled edge of which is formed radially of the disk to be complementary to and abut the shoulder or abutment with which it engages, and another portion of the lever at a point the other side of its pivot being formed complementary to the abutment constituted by the opposite wall of the recess in which it seats.

- 20 7. A device of the character described comprising a rotary disk member having radially disposed shoulders or abutments on one of its faces separated by intervening recesses, a lever pivoted to said disk having a part adapted to seat in said recesses including a beveled projection, the

beveled edge of which is formed radially of the disk to be complementary to and abut the shoulder or abutment with which it engages, in combination with means for forcing the lever into engaging position in opposite recesses, and the parts being formed to facilitate the riding of the lever over the intermediate projections to advanced recesses whereby to engage succeeding abutments.

8. A device of the character described comprising a rotary disk member having radially disposed shoulders or abutments on one of its faces separated by intervening recesses, a lever pivoted to said disk having a part adapted to seat in said recesses including a beveled projection, the beveled edge of which is formed radially of the disk to be complementary to and abut the shoulder or abutment with which it engages, and another portion of the lever at a point the other side of its pivot being formed complementary to the abutment constituted by the opposite wall of the recess in which it seats, in combination with means for forcing the lever into engaging position in opposite recesses, and the parts being formed to facilitate the riding of the lever over the intermediate projections to advanced recesses whereby to engage succeeding abutments.

9. A device of the character described comprising a rotary disk member having radially disposed shoulders or abutments on one of its faces separated by intervening spaces, the walls of which constitute said abutments, a lever pivoted to said disk having a portion formed complementary to said shoulders or abutments whereby to engage the same and adapted to be shifted from one shoulder or abutment to a succeeding shoulder or abutment, and means for detachably securing the lever in place whereby it may be reversed to engage opposite shoulders or abutments to turn the disk in a reverse direction.

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

WILLIAM L. PHILLIPS.

Witnesses:

NICHOLAS C. HARTER,
H. I. O'SHEA.