

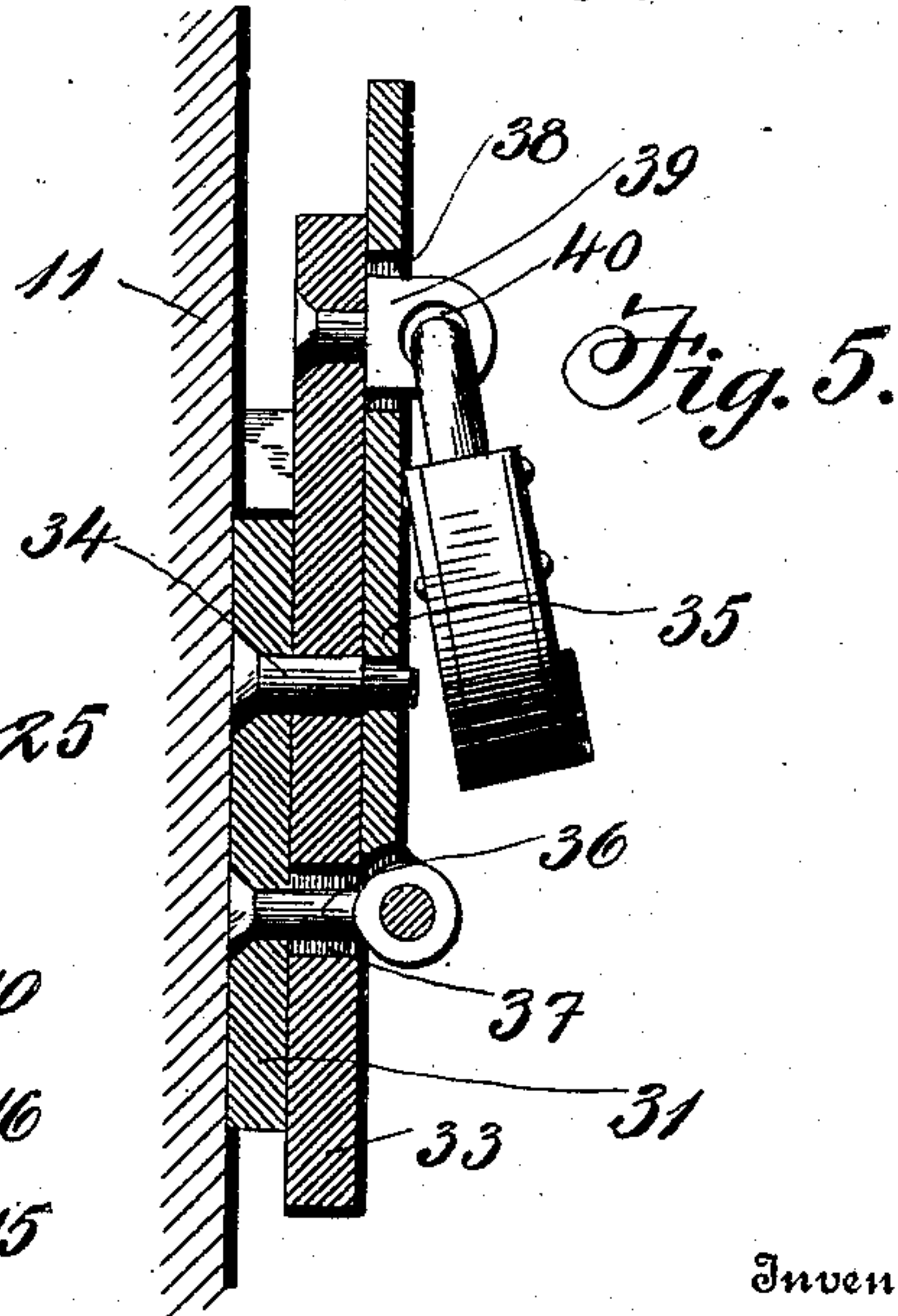
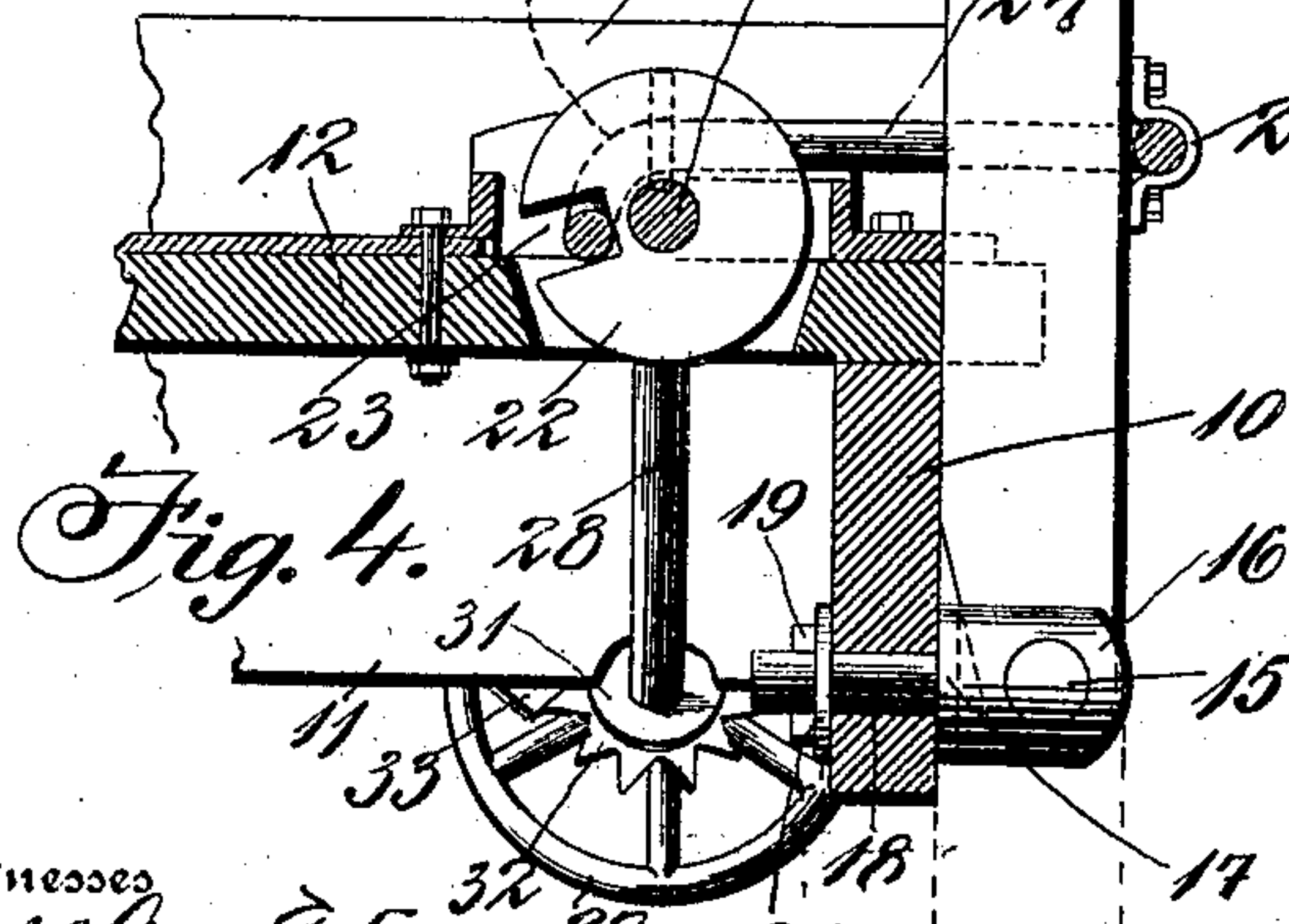
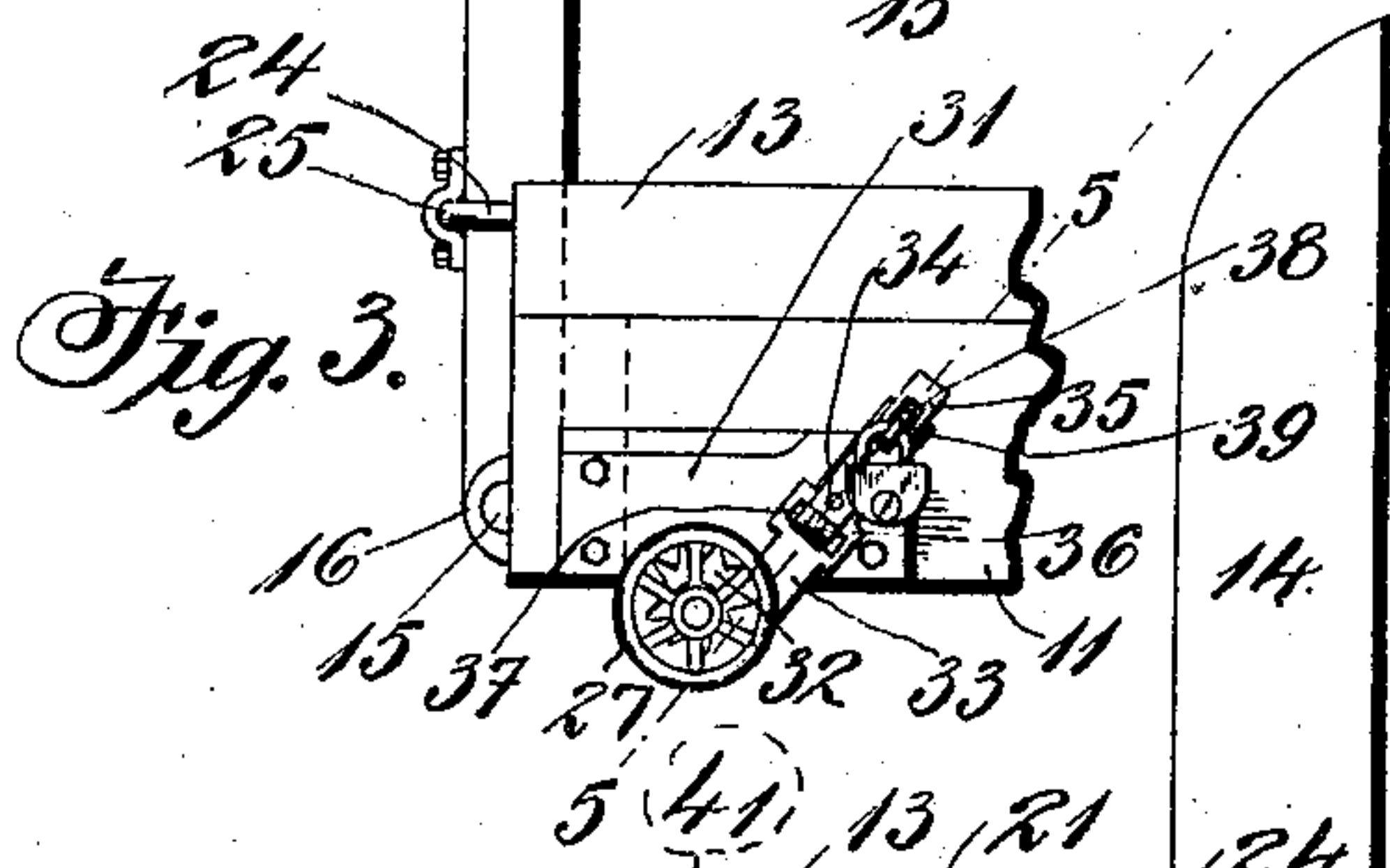
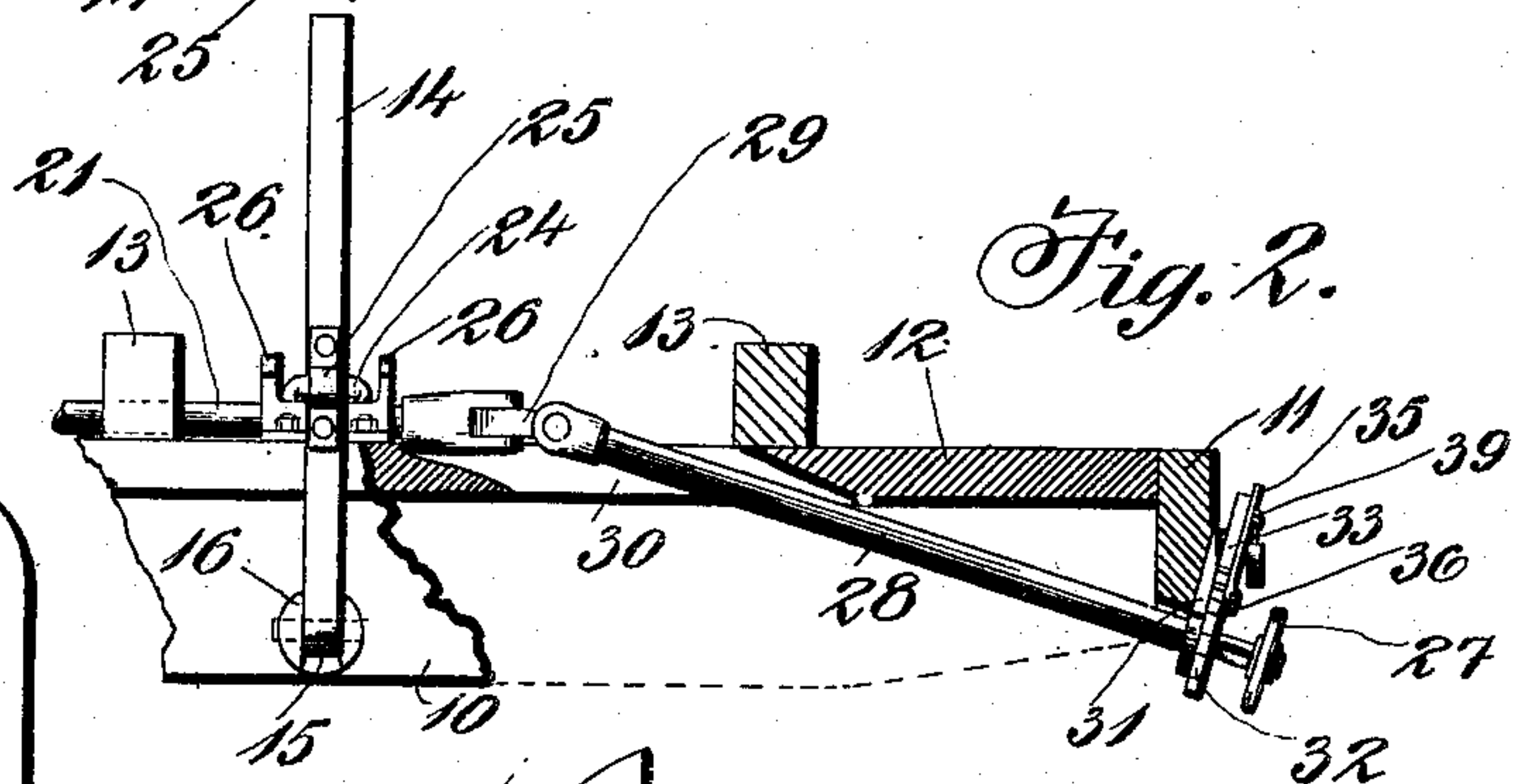
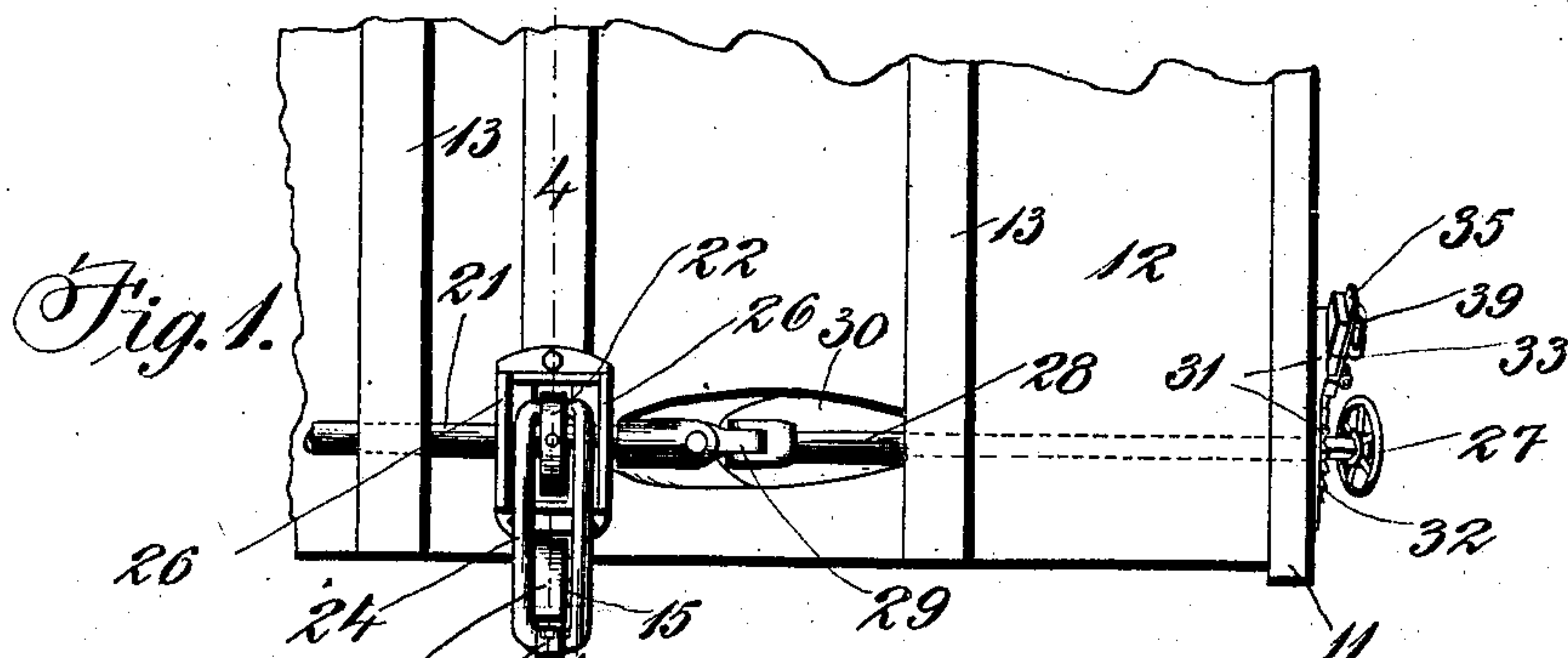
No. 891,461.

PATENTED JUNE 23, 1908.

O. S. CARROLL & J. C. ZANDER.

LOGGING CAR STAKE.

APPLICATION FILED JAN. 2, 1908.



Witnesses

J. J. Schmidt
M. Schmidt

O. S. Carroll
J. C. Zander
M. J. Turner Attorney S.

UNITED STATES PATENT OFFICE.

OREN S. CARROLL AND JOHN C. ZANDER, OF ELMA, WASHINGTON.

LOGGING-CAR STAKE.

No. 891,461.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed January 2, 1908. Serial No. 408,990.

To all whom it may concern:

Be it known that we, OREN S. CARROLL and JOHN C. ZANDER, citizens of the United States, residing at Elma, in the county of Chehalis and State of Washington, have invented certain new and useful Improvements in Logging-Car Stakes, of which the following is a specification.

This invention relates to logging-car stakes, and has for its object to provide a pivotal support for the stake, together with improved means for locking the stake in operative position.

In the accompanying drawing, Figure 1 is a plan view of the invention, only so much of the car-body being shown as will suffice to show the connection of the invention therewith. Fig. 2 is a side elevation partly broken away. Fig. 3 is an end view. Fig. 4 is a cross-section on the line 4—4 of Fig. 1. Fig. 5 is a cross-section on the line 5—5 of Fig. 3.

Referring specifically to the drawing, 10 denotes one of the side-sills, 11 one of the end-sills, and 12 the floor of a logging or flat-car. On the floor are the usual bunks 13 on which the logs are supported.

The stake is indicated at 14. It is pivoted at 15 between ears 16 on a stud 17 having a reduced end 18 which passes through a transverse hole in the sill 10, in which it is free to turn, whereby a swiveled support for the stake is had. The stud is held in place by a transverse pin 19 and a washer 20 between said pin and the inner surface of the sill. The outer surface of the sill is engaged by the shoulder formed by the reduced portion 18 of the stud.

Adjacent the side edge of the floor is mounted a horizontally disposed shaft 21 on which is fixed a hook-shaped member comprising a disk 22 having in its periphery a notch 23. The stake carries a link 24 which is engageable with the notch for locking the stake in upright or operative position. The stake is on the inside of the link, and the latter is pivotally secured to the outer edge of the stake in any suitable manner, as indicated at 25. The shaft 21 is mounted in bearings 26 secured to the floor 12 between the bunks 13, and the shaft, its bearing, and the disk 22 are below the top of the bunks so as not to interfere with the logs thereon. The shaft 21 is operated by a hand-wheel 27 fixed on one end of an inclined shaft section 28 which is connected at its other end by a

universal joint 29 to the shaft 21. The shaft section 28 passes through a hole 30 in the floor of the car and extends to the end-sill 11, on the outside of which is a plate 31 having a bearing for the shaft section.

The following means are provided for locking the hand-wheel: On the shaft section 28 is fixed a ratchet wheel 32 which is engageable by a pawl 33 pivoted on a pin 34 projecting from the plate 31. Means are also provided for locking the pawl in operative position, said means comprising a hasp 35 hinged to a stud 36 projecting from the plate 31 through a slot 37 in the pawl. The hasp has a hole 38 to receive a stud 39 projecting from the pawl, and in said stud above the hasp when the latter is in locking position, is a transverse opening 40 to receive a suitable locking device such as a padlock. The hasp also has an aperture to receive the projecting head of the pin 34.

In use, to lock the stake in upright or operative position, the free end of the link 24 is placed in the notch 23, and the hand-wheel 27 is turned to rotate the two shaft sections and the disk 22 until the stake is pulled to an upright position, in which it will be securely held upon engaging the pawl 33 with the ratchet 32, and then locking the former in the manner hereinbefore described. The free end of the link is curved downwardly, as indicated at 41 so that when the stake is locked, that part of the link which engages the notch is below the center of the shaft whereby the link is more securely held, as it cannot be swung into release position until the part 41 is above the center of the shaft. To release the stake, the shaft sections and disk are turned in opposite directions or in a direction toward the stake until the link can be disengaged from the notch after which the stake can be swung downwardly on its pivot as shown by dotted lines in Fig. 4, so that it will be out of the way of the logs when they are being unloaded.

In the drawings, we have shown only one side of the car and one stake, but in practice, the arrangement of parts herein described is duplicated at the other side of the car, and each side thereof is equipped with a number of stakes, each of which is provided with a link and notched locking-disk. A single shaft is provided for each locking-disk so that all the stakes of one side of the car may be released simultaneously.

The operation of releasing the stakes is ef-

fectured with ease and without danger to the operator, as it is done from the end of the car, and it is not necessary to get in front of the logs.

5 We claim:—

1. The combination with a pivoted car-stake, of a link carried thereby, a shaft which is in two sections, a coupling between the sections, means on one of the shaft sections
10 for rotating the same, and a hook-shaped member on the other shaft section engageable by the aforesaid link.

2. The combination with a pivoted car-stake, of a link carried thereby, a shaft which
15 is in two sections, a coupling between the shaft sections, means for rotating one of the shaft sections, a pawl and ratchet mechanism on said section, a lock for the pawl, and a hook-shaped member on the other shaft section
20 engageable by the link.

3. The combination with a pivoted car-stake, of a link carried thereby, a horizontal shaft supported on the car-body and having

a hook-shaped member engageable by the link, an inclined shaft supported at one end on the
25 end-sill of the car and fitted with means for turning it, and a coupling between the other end of the shaft and the first mentioned shaft.

4. The combination with a pivoted car-stake, of a link carried thereby, a rotatable
30 shaft having a hook-shaped member engageable by the link, means for operating the shaft, a pawl and ratchet mechanism on the shaft, a stud projecting from the pawl, a hasp
35 having an opening to receive the stud, and means engageable with the stud for locking the hasp thereto.

In testimony whereof we affix our signatures, in presence of two witnesses.

OREN S. CARROLL.
JOHN C. ZANDER.

Witnesses:

WILLIAM H. LOVELL,
FRANK GROUNDWATER.