

M. BRADFELD.
CONVEYER.

(Application filed May 22, 1902.)

(No Model.)

3 Sheets—Sheet 1.

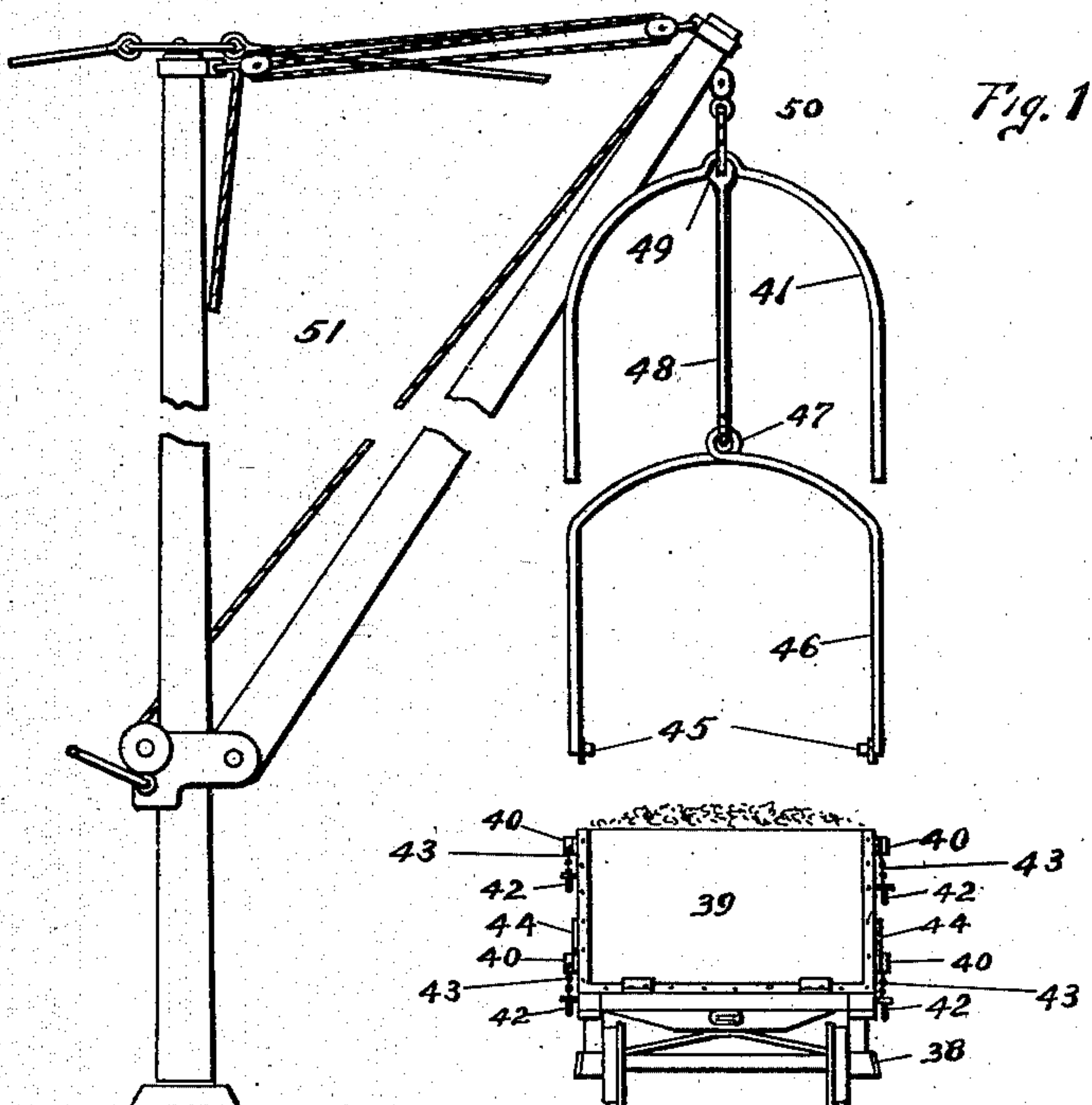


Fig. 1

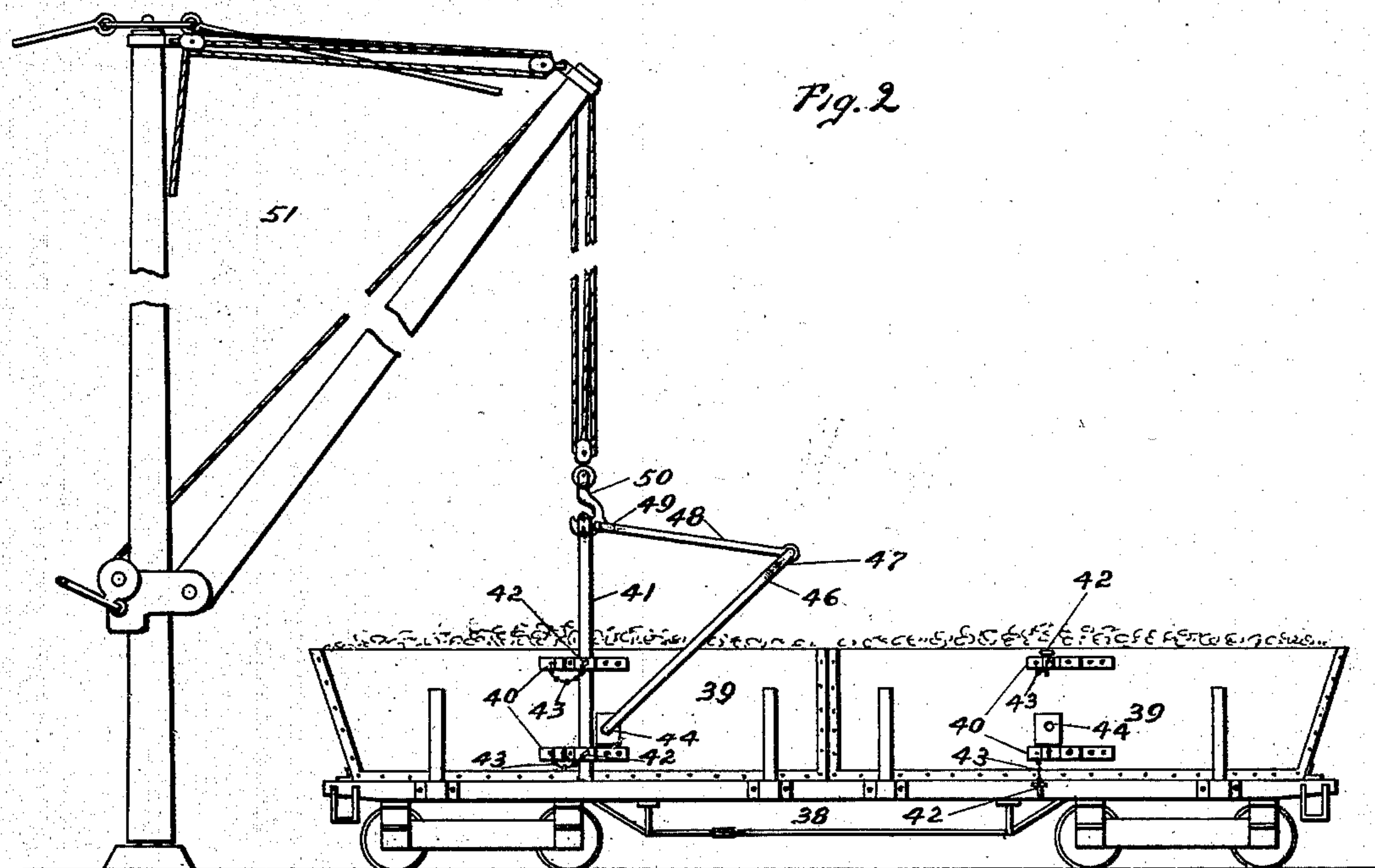


Fig. 2

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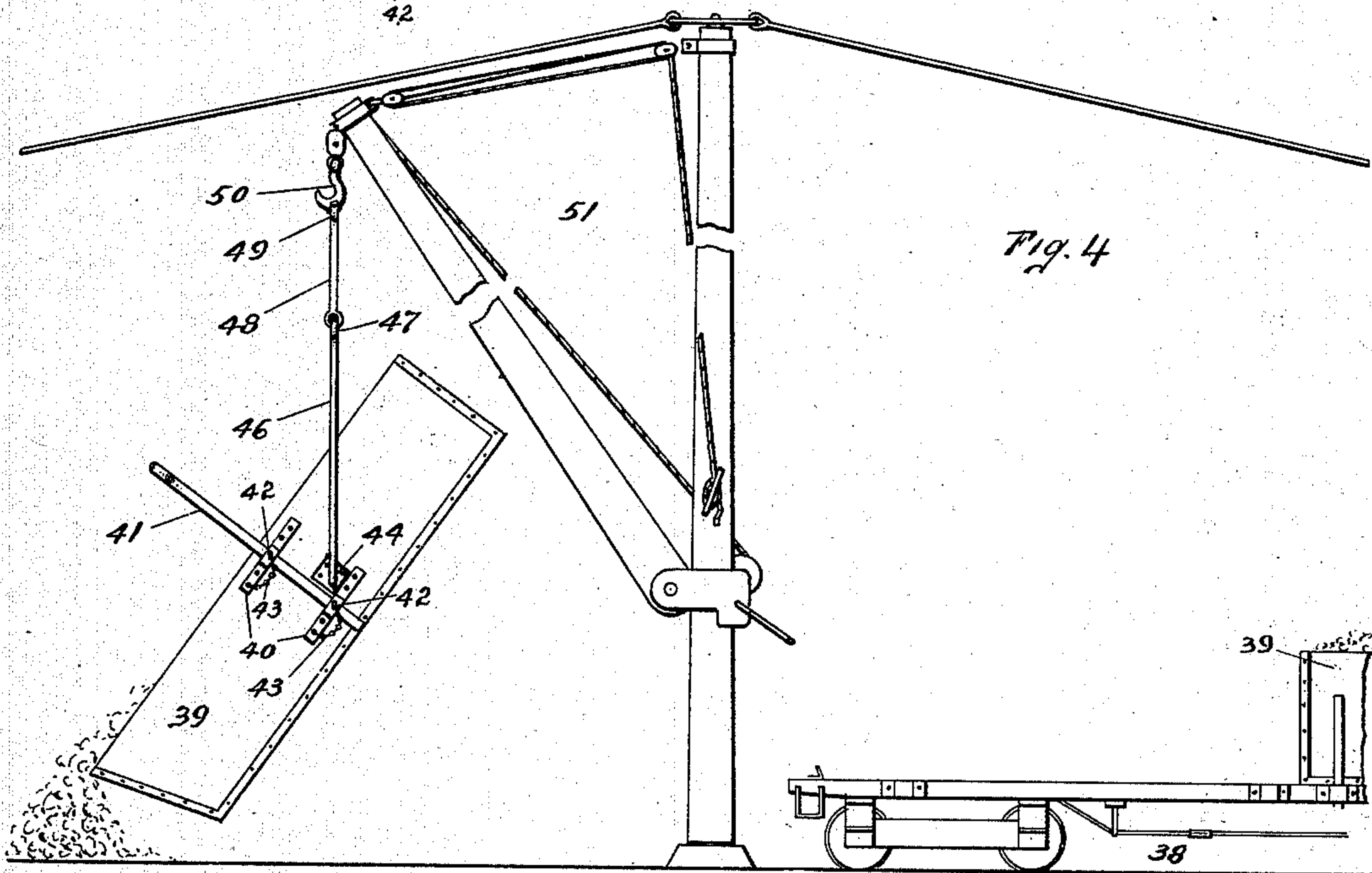
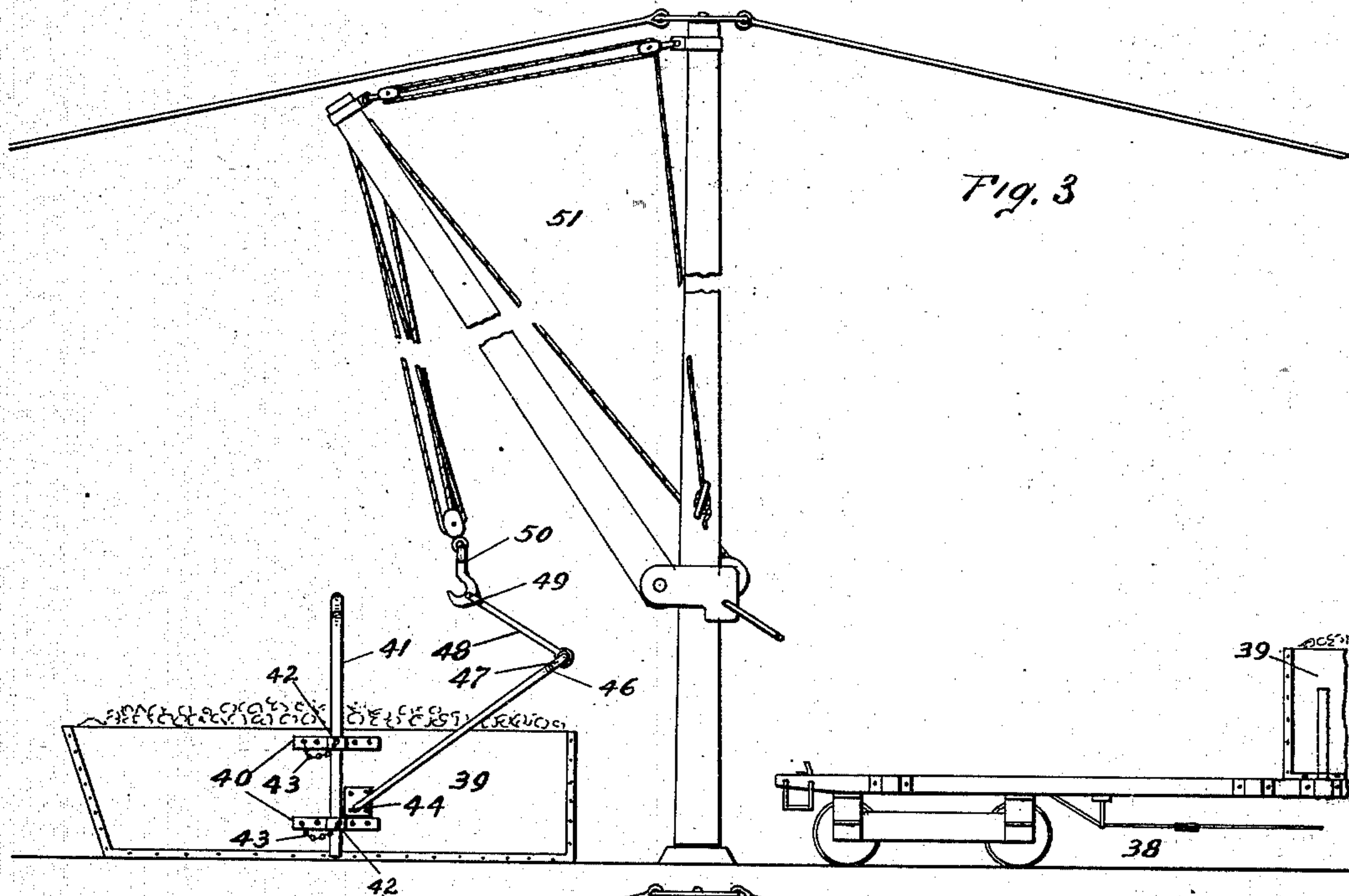
Patented Nov. 25, 1902.

M. BRADFIELD.
CONVEYER.

(Application filed May 22, 1902.)

(No Model.)

3 Sheets—Sheet 2.



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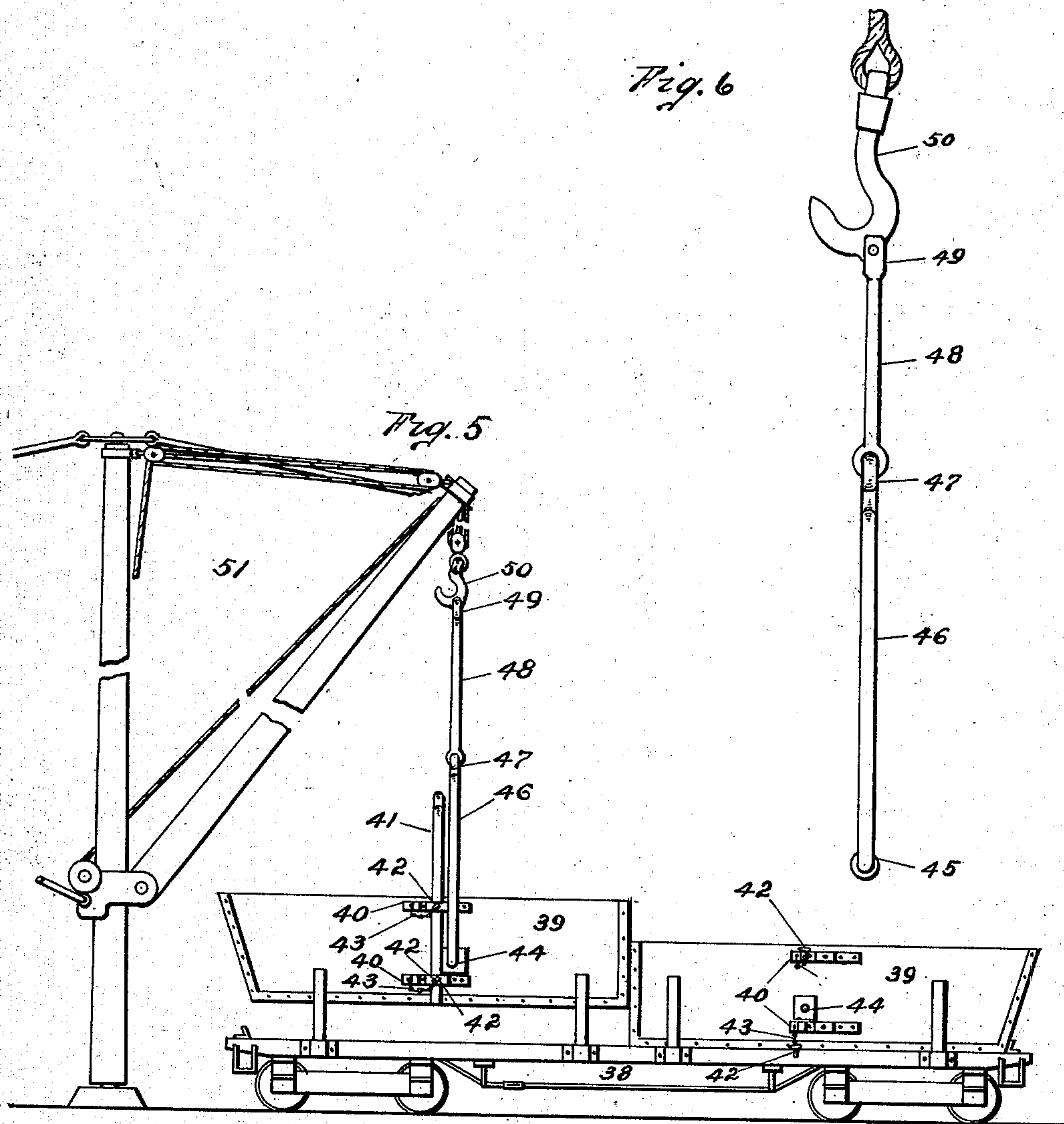
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M. BRADFIELD.
CONVEYER.

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(No Model.)

3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

MASON BRADFIELD, OF LOS ANGELES, CALIFORNIA.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 714,279, dated November 25, 1902.

Application filed May 22, 1902. Serial No. 108,560. (No model.)

To all whom it may concern:

Be it known that I, MASON BRADFIELD, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Conveyer, of which the following is a specification.

This invention relates to conveyers, and particularly to devices adapted to convey ascertained quantities of material; and some of the objects of the invention are to provide a device of this character which will be simple, durable, and cheap in construction and at the same time effective for the purpose designed.

Another object of the invention is to provide an auxiliary bail constructed to be detachably connected with a conveyer of any formation by a slight change in the dimensions of the bail and to be connected therewith so as to effect the discharge of the contents of the conveyer when the latter is supported only by the auxiliary bail and the supporting means to which said bail is attached.

It is also an object of this invention to provide a conveyer so constructed that when the supporting means is again elevated or tightened after having been lowered or relaxed until the conveyer rests upon its bottom the conveyer will be capsized or overturned and the contents thereof discharged therefrom.

A further object of the invention is to provide a conveyer having the auxiliary bail so connected therewith as to cause the conveyer to return to an upright position after having been discharged of its contents.

Still another object of the invention is to provide a main bail, a supporting means having a device to detachably engage said bail, and a rigid auxiliary bail movably connected with the conveyer and attached to said device, constructed to prevent the reengagement of said device with the main bail after the former has been disengaged from the latter.

With these and other objects in view the invention consists, essentially, in the construction, combination, and arrangement of parts substantially as more fully described in the following specification and as illustrated in the accompanying drawings, forming part of this application, in which—

Figure 1 illustrates the main and auxiliary bail and hook about to be connected with one of the sections or hoppers of a car and illustrating a hoisting apparatus for operating the bails and hook and the section or hopper to be connected therewith. Fig. 2 is a side elevational view of a sectional car, illustrating the invention connected with one section or hopper thereof ready for hoisting. Fig. 3 is a side elevational view of the section or hopper after having been removed from the car and deposited upon the dump or place of discharge, illustrating the disengagement of the hook from the main or rigid bail effected by the action of the auxiliary bail. Fig. 4 illustrates the section or hopper in the act of being discharged of its contents. Fig. 5 shows the empty section or hopper returned to an upright position by the connection of the auxiliary bail therewith, and Fig. 6 is a detail view of the auxiliary bail and hook and connections.

Similar characters of reference designate corresponding parts throughout the several views.

It will be understood that this invention is capable of extensive use and application, and it is not limited to the particular application herein shown and described, as the same is only typical, for it is obvious that a detachable auxiliary bail connected with a hook carried by supporting means is capable of universal application and use.

Referring to the drawings, there is illustrated an application of the invention to the sections or hoppers of cars, and Figs. 1 to 5, inclusive, illustrate the separate stages or steps necessary to discharge the contents of such sections or hoppers by one operation. Fig. 1 shows the two bails supported by a hoisting apparatus above a section or hopper about to be lowered and secured thereto. Fig. 2 illustrates the bails secured in position upon the loaded section or hopper ready for hoisting. Fig. 3 indicates the loaded section or hopper removed from the car and placed upon the dump or place of discharge, the supporting means having been lowered or relaxed to permit the automatic disengagement of the hook from the main bail through the action of the auxiliary bail. Fig. 4 shows the position of the parts during the

operation of discharging the contents of the section or hopper, and Fig. 5 shows the empty section or hopper returned automatically to an upright position by the connection of the auxiliary bail therewith after the contents of the section or hopper have been discharged therefrom, substantially as before explained and shown.

The reference character 38 designates a car of any preferred construction, preferably constructed to carry sections or hoppers 39 of suitable form, preferably provided upon each side thereof with parallel guides or sockets 40, constructed to removably receive the free ends of the main bail 41 by means of pins 42 passing through openings in the guides and in the ends of the main bail to removably retain the main bail in the position illustrated in Figs. 2, 3, 4, and 5, and the pins 42 may be provided with guard-chains 43, if desired, and openings may be provided in the guides to receive said pins when the same are not in use, as illustrated in Fig. 2 of the drawings.

The sections or hoppers 39 may be provided with lateral openings or sockets 44 to receive the extremities 45, Fig. 1, of the rigid or integral auxiliary bail 46 in a removable manner, and the rigid movable or auxiliary bail 46 is preferably provided with an intermediate eye or loop 47, with which is movably connected a link or rod 48, preferably constructed with a bifurcated end 49 to pivotally receive a hook or engaging device 50 upon the fall-rope of a suitable derrick or hoisting apparatus 51, substantially as illustrated in Figs. 1 to 5, inclusive.

The operation of the last-mentioned construction or application of this invention is substantially as follows, to wit: The hoisting apparatus or derrick is operated so that the main bail 41 and rigid or integral auxiliary bail 46 will be suspended directly above the loaded section or hopper to be discharged of its contents, whereupon the bails are lowered and the main bail 41 is passed through or beneath the guides 40 and secured therein by the pins 42, Figs. 2 to 5, whereupon the rigid auxiliary bail 46 is sprung into the openings or sockets 44 and the hook 50 is engaged with the main bail 41 and the fall-rope is tightened up or elevated until the section or hopper 39 swings clear of the car 38, when the derrick or hoisting apparatus 51 is swung around and the loaded section or hopper is deposited at the point of discharge or upon the dump, when the fall-rope is again slackened, whereupon the auxiliary bail 46 descends by gravity and disengages the hook 50 from the main bail 41, as shown in Fig. 3 of the drawings. When the fall-rope is again elevated or raised, the rigidity of the auxiliary bail 46 so acts upon the hook 50 through the link or rod 48 that the hook will be held away from the main bail 41 by the action of the rigid auxiliary bail until the hook shall have risen above the main bail, whereby accidental reengagement of the hook and main

bail is rendered impossible. Upon further elevation of the fall-rope the loaded section or hopper 39 is overturned or capsized and the contents are discharged therefrom by the action of the auxiliary bail, substantially as illustrated in Fig. 4 of the drawings.

In Fig. 6 of the drawings there is illustrated a portion of a supporting rope or cable having a hook 50 connected therewith, with one side of which hook is movably attached one end of a link or rod 48, also movably attached to an auxiliary or independent bail 46, constructed to be detachably and movably secured upon a conveyer having a bail or handle, so as to provide detachable means for transporting and overturning or capsizing the conveyer. By means of this construction buckets, car sections or hoppers, and other forms of conveyers may be transported as loaded and may be emptied of their load in one operation with the greatest ease and rapidity and at the smallest expense of time and money, and one set of said devices can be used in connection with any number of conveyers of the same construction, thereby utilizing the conveyers to retain the material during transportation and to discharge the material at the destination by one operation.

It is not desired to limit or confine this invention to the specific construction, combination, and arrangement of parts herein shown and described, because the invention covers, broadly, a rigid or integral auxiliary bail constructed to be removably connected with a conveyer of any description or construction provided with connection with a hook or engaging device attached to supporting means. Therefore the right is reserved to make all such changes in and modifications of the construction herein shown and described as come within the spirit and scope of the invention.

I claim—

1. The combination with a conveyer having a main bail and means for supporting and transporting said conveyer, of a rigid auxiliary bail removably connected with said conveyer and movably attached to said means, said rigid auxiliary bail being constructed to disengage said means from said main bail when the means is relaxed and to prevent reengagement when said means is again contracted.

2. The combination with a conveyer having a main bail and means for transporting said conveyer, of a rigid auxiliary bail movably attached to said conveyer and having movable connection with said means and mechanism to lower said means to permit said auxiliary bail to disengage said means from said conveyer and to prevent reengagement thereof.

3. The combination with a conveyer having a main bail and means for transporting said conveyer having a hook, of a rigid auxiliary bail movably attached to said conveyer, a bar movably connected with said auxiliary bail

and said hook to draw said hook out of engagement with said main bail when said means is relaxed and prevent reengagement when said means is again elevated.

5 4. The combination with a conveyer having a main rigid bail and sockets in the sides thereof and means carrying a hook for transporting said conveyer, of a rigid auxiliary bail having the extremities thereof constructed to removably engage said sockets and having movable connection with said hook and mechanism to lower said means to permit said auxiliary bail to draw said hook out of engagement with said main bail and prevent
10 the reengagement thereof when said mechanism again elevates said means.
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5. A main bail constructed to be rigidly and removably secured to a conveyer and a rigid auxiliary bail constructed to be movably
20 and detachably connected with said conveyer and to have movable connection with supporting means, said main bail being constructed when engaged by said means to effect the transportation of the conveyer and said
25 auxiliary bail being constructed to disengage said means from said main bail and prevent the reengagement thereof.

6. An auxiliary bail having a movable con-

nection with a supporting means and having the extremities thereof constructed to movably and detachably engage a conveyer, said auxiliary bail being rigid throughout to automatically disengage and prevent the reengagement between said means and said conveyer.

7. The combination with a conveyer and supporting means having a hook, of a main bail constructed to be rigidly and removably secured to the conveyer and to receive said hook to effect the transportation of the conveyer and a rigid auxiliary bail having the extremities thereof constructed to movably and removably engage said conveyer and a bar movably connected with said hook and auxiliary bail so that the latter will draw said hook out of engagement with said main bail when said means is relaxed and hold said hook away from reengagement when said means is again contracted.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MASON BRADFELD.

Witnesses:

C. W. HOLLISTER,
L. B. ALDERETE.