

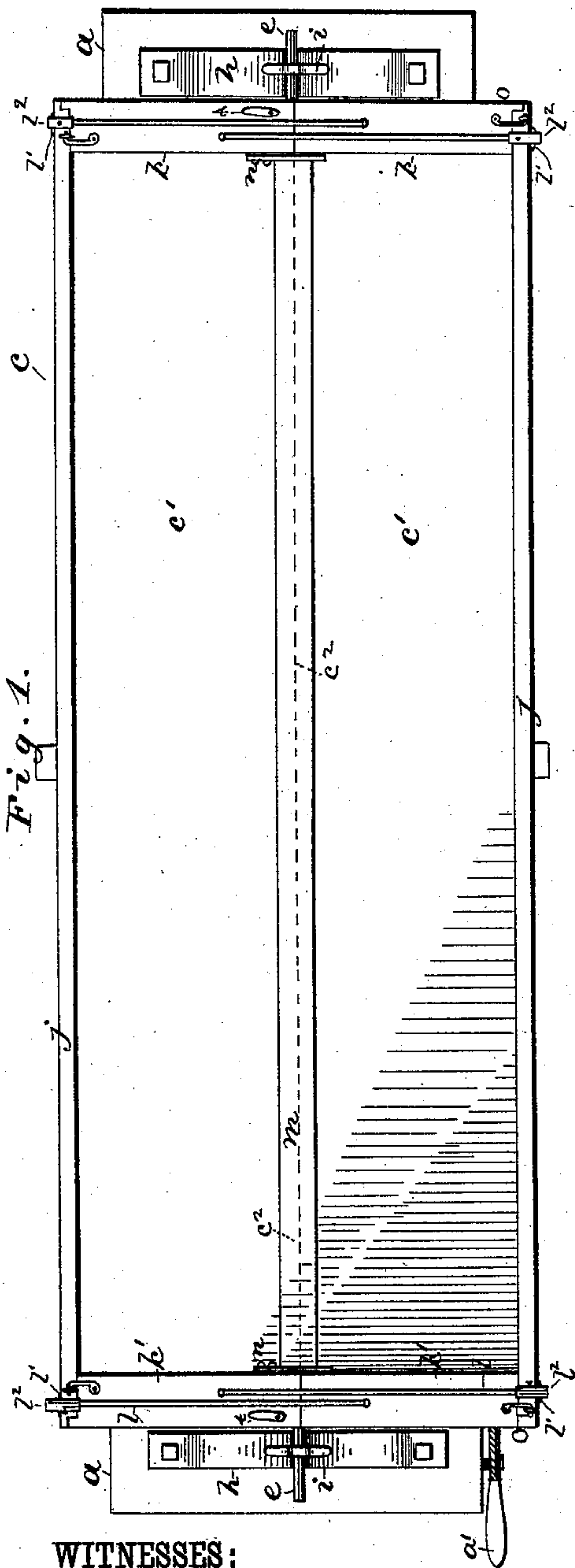
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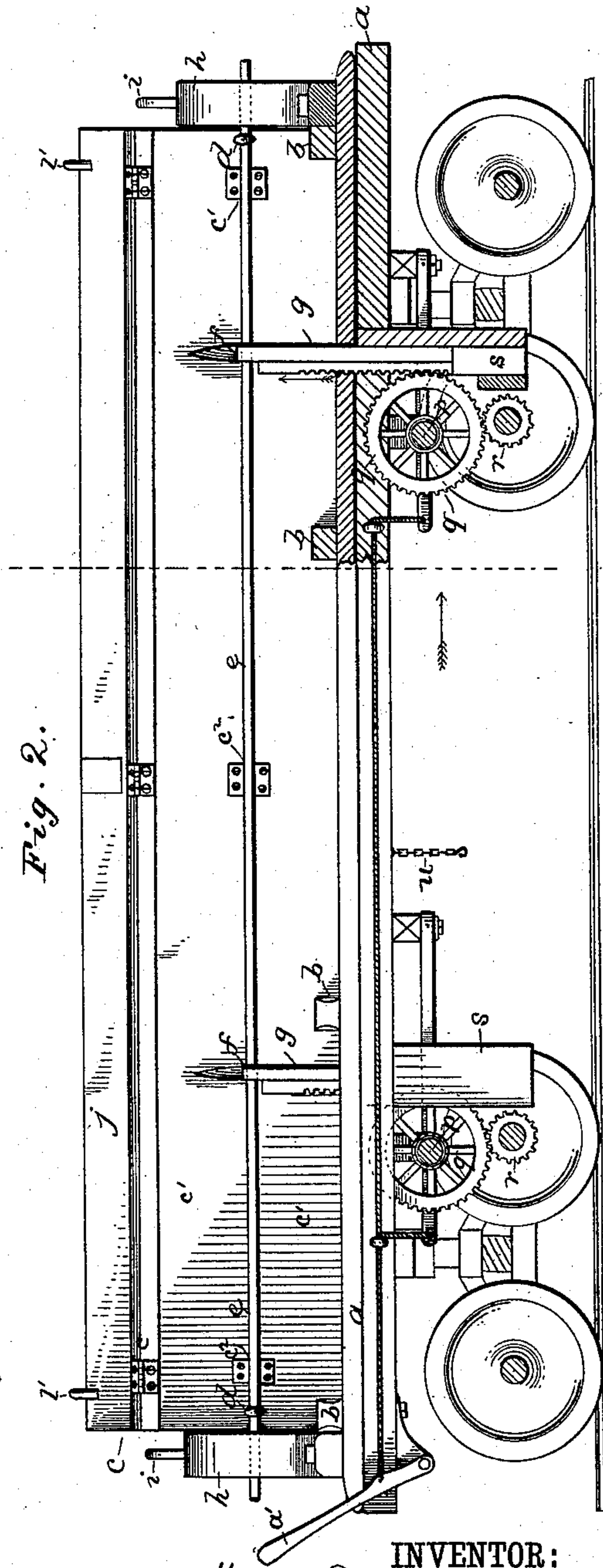
W. FALLON.
DUMPING CAR.

No. 287,650.

Patented Oct. 30, 1883.



WITNESSES:
Thos Houghton.
W. Read.



INVENTOR:
Wm Fallon
BY Munn & Co
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(No Model.)

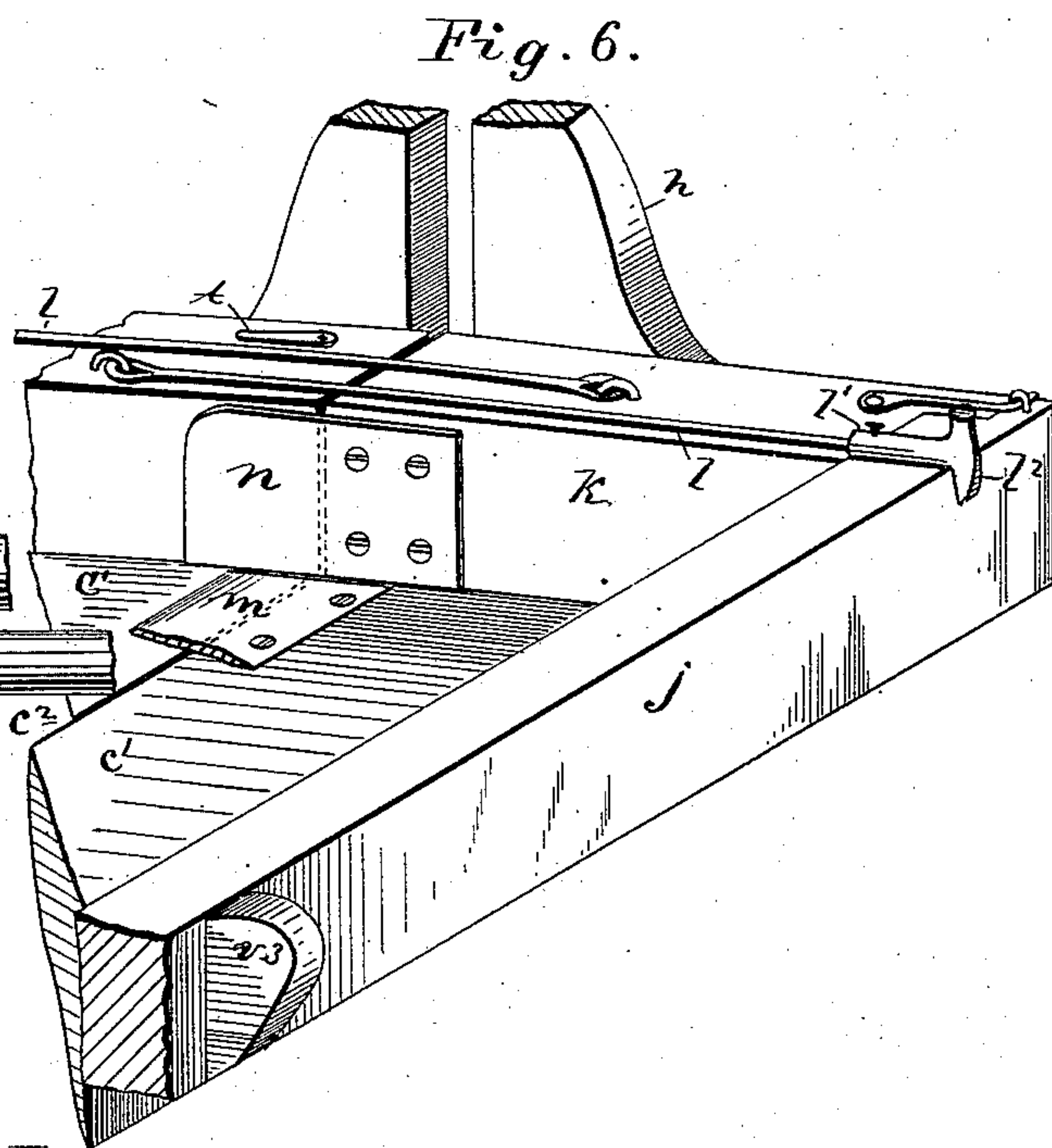
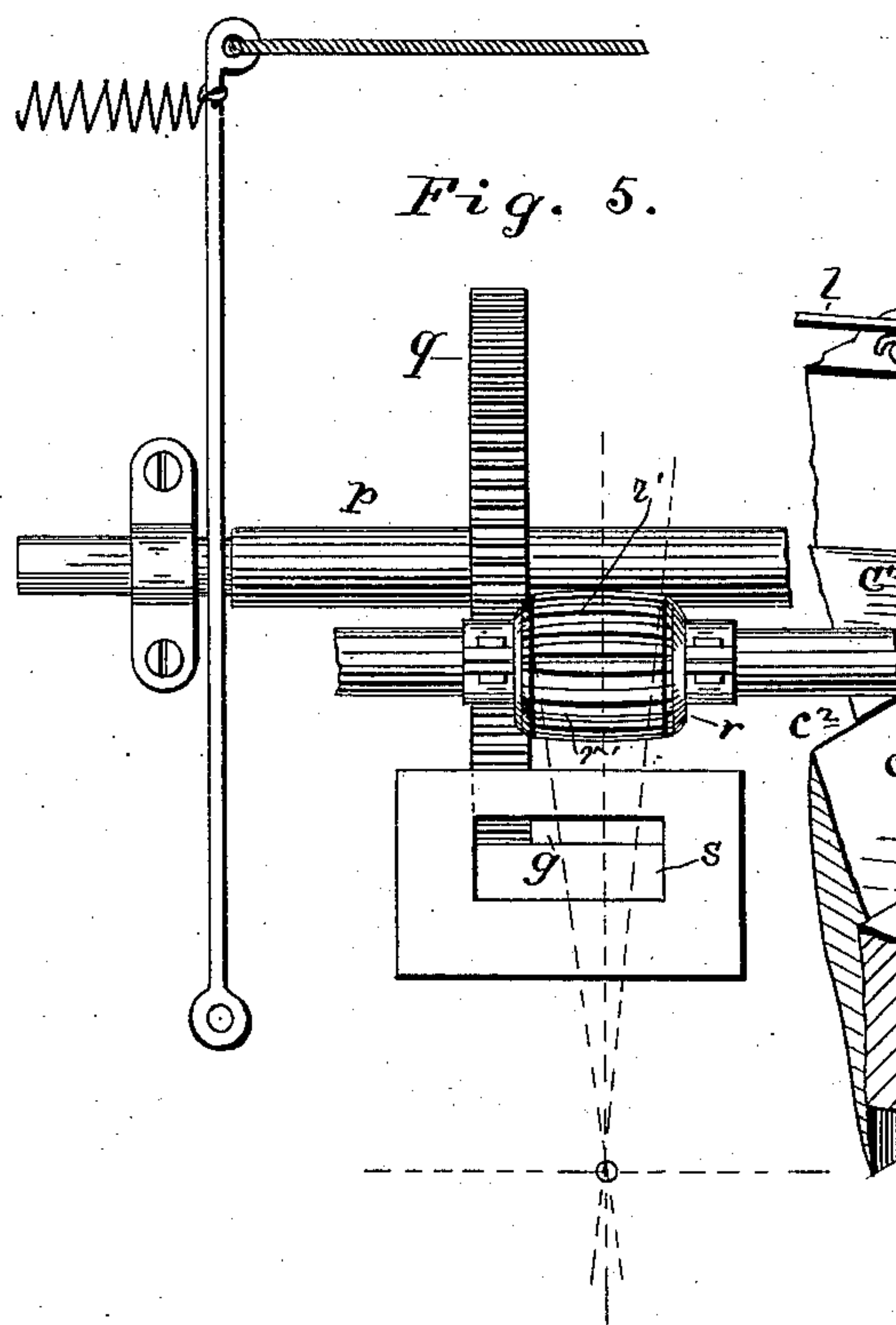
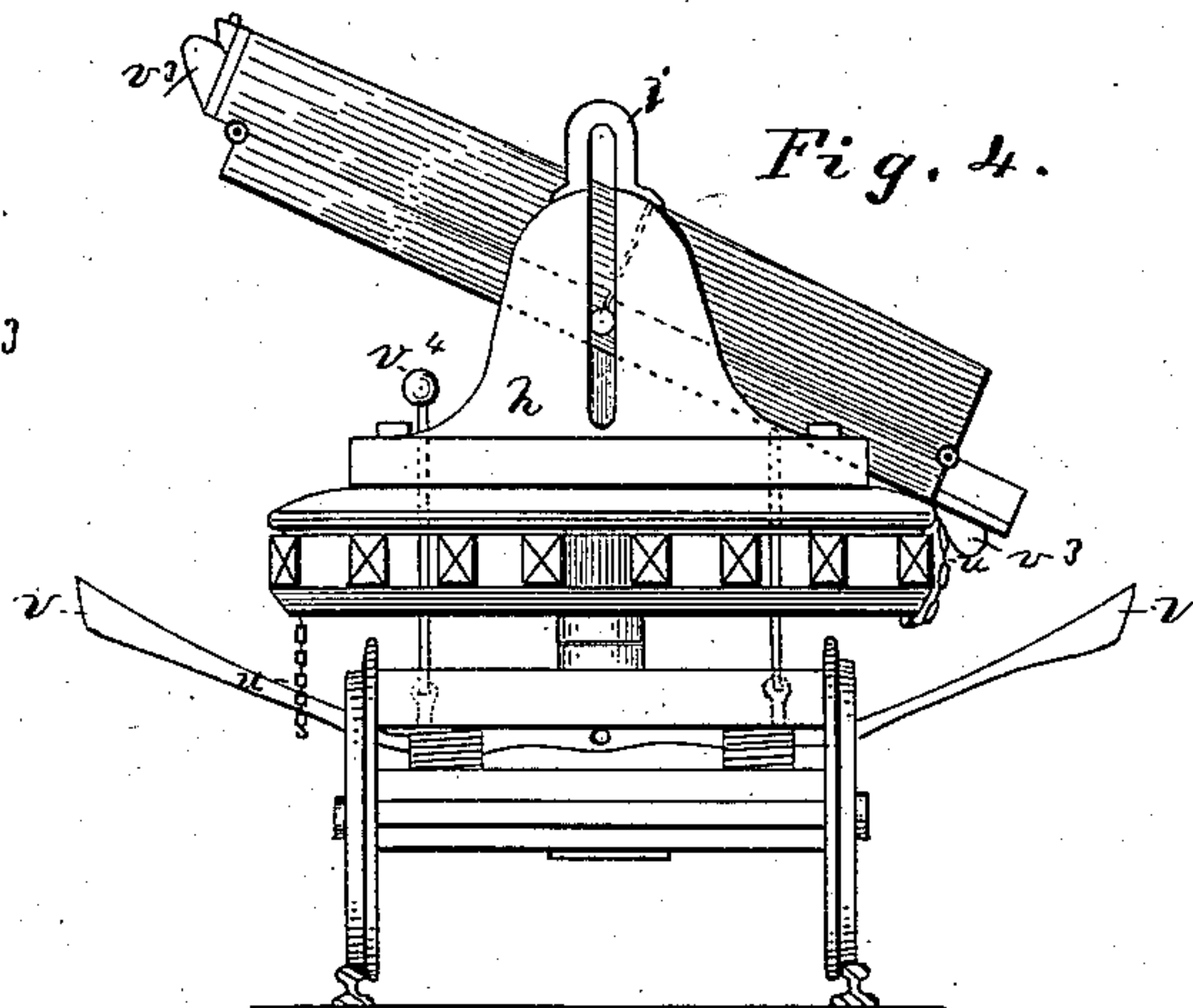
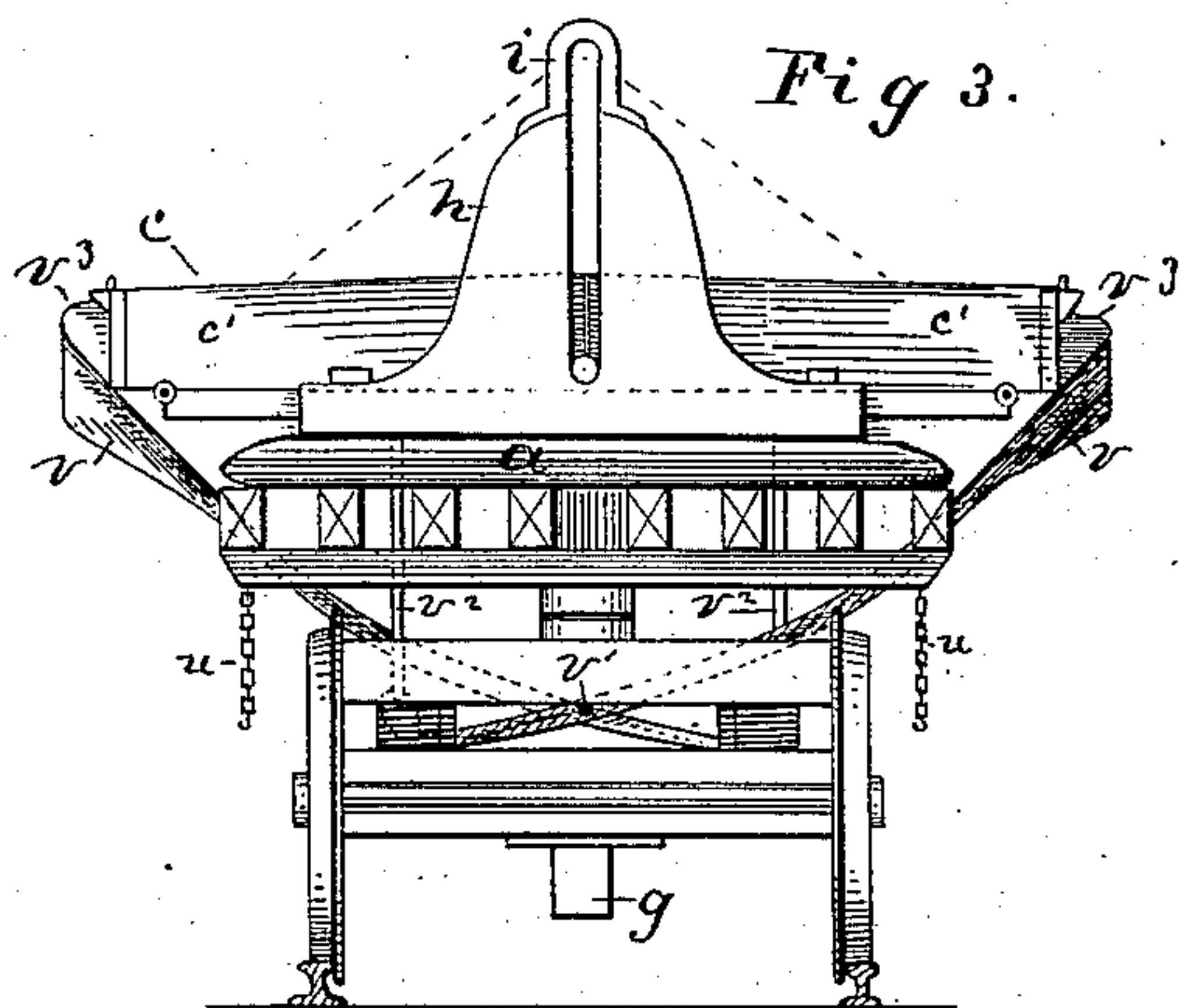
2 Sheets—Sheet 2.

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INVENTOR:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM FALLON, OF NEWBURG, NEW YORK.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 287,650, dated October 30, 1883.

Application filed June 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM FALLON, a citizen of the United States, residing at Newburg, in the county of Orange and State of New York, have invented a new and useful Improvement in Dumping-Cars, of which the following is a specification.

Figure 1 is a top view of my improved dumping-car. Fig. 2 is a side elevation of the same, partly in section. Figs. 3 and 4 are end elevations, the latter figure showing the position of the platform when the load is dumped on one side; and Figs. 5 and 6 are detail views.

My invention relates to improvements in dumping-cars; and it consists in the peculiar construction and arrangement of the parts, as hereinafter more fully set forth, and pointed out in the claims.

In the accompanying drawings, *a* represents an ordinary car-floor frame, to which the cap-sills *b* are secured.

c represents a platform composed of two wings, *c' c'*, of equal dimensions, hinged together at their junction in the ordinary way, and resting on the cap-sills *b*. Two or more eyebolts, *d*, are secured to the underface of the platform, at the junction of its hinged wings, through which the elevator-bar *e* passes. The elevator-bar *e* also passes through eyebolts *f*, secured to the upper ends of rack-bars *g*, passing through corresponding openings in the floor of the car-floor frame *a*.

h represents vertical guides secured transversely to the ends of the floor of the car-floor frame *a*, and provided each with a central slot, for the reception and guidance of the elevator-bar *e* in its vertical reciprocations.

i represents loops on the upper ends of the guides *h*, over their central slots, for the purpose of securing the elevator-bar *e* in position in the slots.

j j represent sides hinged to the outer edges of the wings *c'* of the platform *c*, and *k k* represent transverse end pieces of the platform *c*.

l l represent latch-locks, the one locking the right-hand side, *j*, of the platform *c*, being hinged to the left-hand transverse end piece, *k*, and vice versa, so that the latch-locks *l* rest on the upper surface of the transverse end pieces, *k*, when locked, the inner ends of transverse end pieces, *k k*, raising the latch-locks

l and unlocking the sides *j j*, when the dumping process begins, by elevating the platform *c* in its center. The outer ends of the latch-locks *l l*, or, more properly speaking, their catches *l'*, are made capable of turning on their shanks, in order to unlock the catches on either side and dump the whole load on one side, or one half the load on one wing may be dumped on one side and the other half on the other side of the car, by means which I shall now proceed to describe. The catches *l'* are pivoted to the shanks of the latch-locks *l* by a sleeve-joint, *l''*, properly secured on the shank by a collar, or otherwise, whereby the catch *l'* can be turned on its shank to lock or unlock the sides when desired. The hinged joint *c''*, between the wings *c'* of the platform *c*, is covered by a strip of iron, *m*, or other material, rounded on its upper face, and secured longitudinally to one wing *c'*, and projecting over the joint *c''* between the wings, so as to completely cover it in the raised or lowered position of the platform, to prevent any of the material the load is composed of passing through the joint, and at the same time to divide the load as near its center as possible.

n n represent plates secured to the inner faces of the inner ends of two of the opposite transverse end pieces, *k k* and *k' k'*. The plates *n* project beyond the joint between the transverse pieces, and their function is to prevent any part of the load from escaping at the joints in the end pieces, *k k* and *k' k'*, when the platform is being elevated. Latch-locks are employed on the end pieces, *k' k'*, as well as on the pieces *k k*. Supplementary hooks *o o* are secured to the outer ends of the transverse pieces *k k' k'*, and are adapted to engage with the sides *j j*, for a purpose hereinafter fully described.

p p represent shafts journaled in bearings secured to the under face of the floor of the car *a*, and each carrying a pinion, *q*, adapted to gear with the pinion *r*, convex in transverse section, as hereinafter more fully explained. The shafts *p p* slide on their bearings, and are provided each with a spring-clutch, by means of which the pinions *q r* can be placed in gear, when desired, by means of a single lever, *a'*, connected with the sliding shafts *p*, the springs separating the pinions *q r* when the lever is released.

One of the objects of this invention is to convert temporarily an ordinary railroad-truck into a dumping-car, and as the wheels of such car-trucks are ordinarily shrunk upon their axles, a difficulty arises in securing the pinions *r* to the car-axles. To obviate this difficulty and secure the pinions *r* to their axles, and at the same time to allow for the turning of curves, I construct the pinions *r* as follows: Each pinion *r* is composed of two sections, *r' r'*, divided longitudinally in the line of the axle, and composed each of a central globular or egg-shaped part, provided with teeth of proper shape in the center and tapering toward its extremities, the tapering ends of the sections *r' r'* being bolted to the axle and each other, as shown in the drawings. By this construction the pinion *q* will always gear with the pinion *r* in following curves, or when the car is running on a straight track.

Below the openings in the floor of the car *a* for the rack-bars *g* are secured channels *s*, to guide the elevator rack-bar *g* in its vertical reciprocations. These guide-channels *s* are partly open on one side to allow the entrance of the pinions *q*, which gear with the rack-bars *g g*, the pinions *q* being geared with the pinions *r* on the car-axles, and thus an upward reciprocation is imparted to the elevator-bar *e*, raising the platform *c* at its middle, automatically disengaging the latch-lock *l*, when the sides *j j* will fall by their weight, and the load will be separated along its central line, dumping the load on both sides of the car. If it be desired to dump the entire load on one side of the car, the shanks of the latch-locks *l l* are clamped to the transverse end pieces, *k k*, by means of the buttons *t* or other suitable mechanism. The catches *l' l'* on the side to be dumped are turned out of engagement with its side *j*, which falls, the platform *c* is fastened down on the side to be dumped by the hook or chain *u*, secured to the car-body and platform, the platform is raised by the mechanism described, and the load dumped on one side of the car. If it be desired to dump one half a load on one side of the car and reserve the other half of the load to be dumped at another place and from the opposite side of the car, the supplementary hooks *o o* are engaged with the hinged sides on the wing carrying the half-load reserved, the load on the other wing is dumped, as described before, and the reserved half-load dumped when desired by disengaging the hooks *o o* from the side *j* and repeating the elevating process.

In order automatically to raise the sides *j j* of the wings after dumping, I have invented the following devices: *v v* represent levers weighted at their outer ends and projecting transversely from opposite sides of a car. These levers *v* are journaled on a shaft, *v'*, having their bearings suspended from the bottom of the car-floor. To the inner ends of the levers *v* are secured the vertical rods *v²*, which pass through holes in the car-floor, and are provided with buttons or heads *v⁴* on their up-

per ends, that will be pressed downward by the depression of the platform *c*, which falls by its own weight after dumping, thereby raising the outer weighted end of the levers *v*, which are thus brought to bear against blocks *v³*, secured to the outer faces of the sides *j*, opposite the levers *v*, and thus automatically close the sides *j*, which pass under the catches *l'* of the latch-locks *l* and securely fasten the sides *j* in place. The function of weighting the outer ends of the levers *v* is to allow them to fall, by gravity, out of the way when not in use raising the sides *j*.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the platform *c*, composed of the two wings *c' c'*, hinged together at their junction, of the sides *j j*, hinged to the wings, the transverse end pieces, *k k' k'*, each secured to a wing *c'*, and the latch-locks *l l*, pivoted to the transverse end pieces, and each latch-lock engaging with the opposite hinged side, substantially as described, whereby, when the platform is centrally raised, the latch-locks are automatically disengaged from the sides and the load dumped, as set forth.

2. The combination, with the platform *c*, composed of the two wings *c' c'*, hinged together at their junction, forming the joint *c²*, of the longitudinal strip *m*, rounded on its upper face, and secured to one wing *c'* and projecting over the joint *c²*, so as to completely cover it in any position of the platform, substantially as described, whereby the escape of any portion of the load through the joint is prevented, and at the same time, when the load is raised to be dumped, it is divided as near its center as possible, as set forth.

3. The combination, with the platform *c*, composed of the two wings *c' c'*, hinged together at their junction, forming the joint *c²*, of the longitudinal strip *m*, rounded on its upper face, and projecting over the joint *c²*, and transverse end pieces, *k k' k'*, provided with the plates *n n* at their joints, substantially as described, and for the purpose set forth.

4. The combination, with the platform *c*, composed of the wings *c' c'*, hinged together at their junction, and provided with eyebolts *d*, secured to the lower faces of each wing, near their junction, of the elevator-bar *e*, passing through the eyebolts *d*, rack-bars *g*, having eyebolts *f*, for the reception of the elevator-bar, pinions *q* and pinions *r*, secured to the car-axles, substantially as described, and for the purpose set forth.

5. The combination, with the platform *c*, composed of centrally-hinged wings *c' c'*, having eyebolts *d* on its under face, of the elevator-bar *e*, passing through the eyebolts *d*, rack-bars *g*, having eyebolts *f* for the reception of the elevator-bar, slotted end vertical guides, *h*, each provided with a loop over the upper end of its slot, sliding shafts *p*, each carrying a

spring-clutch pinion, *q*, and pinions *r*, secured to the car-axles, and operated by a lever, *a'*, substantially as described, and for the purpose set forth.

5 6. The combination, with the platform *c*, constructed with hinged wings *c' c'* and end pieces, *k k' k'*, and hinged sides *j j*, of the latch-locks *l l*, having revolving catches *l' l'*, buttons *t*, chain *u*, locking down the platform
10 on the side to be dumped, supplementary hooks *o*, and mechanism for elevating the platform, substantially as described, whereby all the load may be discharged on one side of the car, as set forth.

15 7. The combination, with the platform *c*, constructed with hinged wings *c' c'*, end pieces, *k k' k'*, and hinged sides *j*, of the latch-locks *l l*, supplementary hooks *o o*, and mechanism for elevating the platform, substantially as
20 described, whereby half the load may be dumped on one side of the car and the other half reserved to be dumped at a different point on the other side of the car, as set forth.

25 8. The latch-locks *l*, provided on the outer ends of their shanks with revolving catches *l'*, secured to the shanks, substantially as described, and for the purpose set forth.

9. The combination, with a car-axle, of a pinion, *r*, composed of two sections, *r' r'*, each

having a central or egg-shaped part armed 30 with teeth from the center toward its extremities, the sections being bolted to each other and the axle, and the pinion *q*, connected with the elevating mechanism, substantially as described, whereby the pinion can readily be se- 35 cured to the car-axle or removed therefrom, and at the same time the pinion on the car-axle, in turning curves, be always in gear with the elevating mechanism of the platform, as set forth.

40 10. The combination, with the car-floor frame *a* and platform *c*, having hinged wings *c' c'*, provided with hinged sides *j*, having blocks *v³* on their outer faces, of the levers *v*, weighted at their outer ends, and provided with the 45 vertical rods *v²*, having heads *v⁴*, substantially as described, and for the purpose set forth.

11. The combination, with the platform *c*, composed of the wings *c' c'*, hinged together at their junction, and provided with the trans- 50 verse end pieces, *k k' k'* and hinged sides *j j*, of the latch-locks *l l* and mechanism for elevating the platform, substantially as described, and for the purpose set forth.

WILLIAM FALLON.

Witnesses:

SOLON C. KEMON,
GEO. S. BROCK.