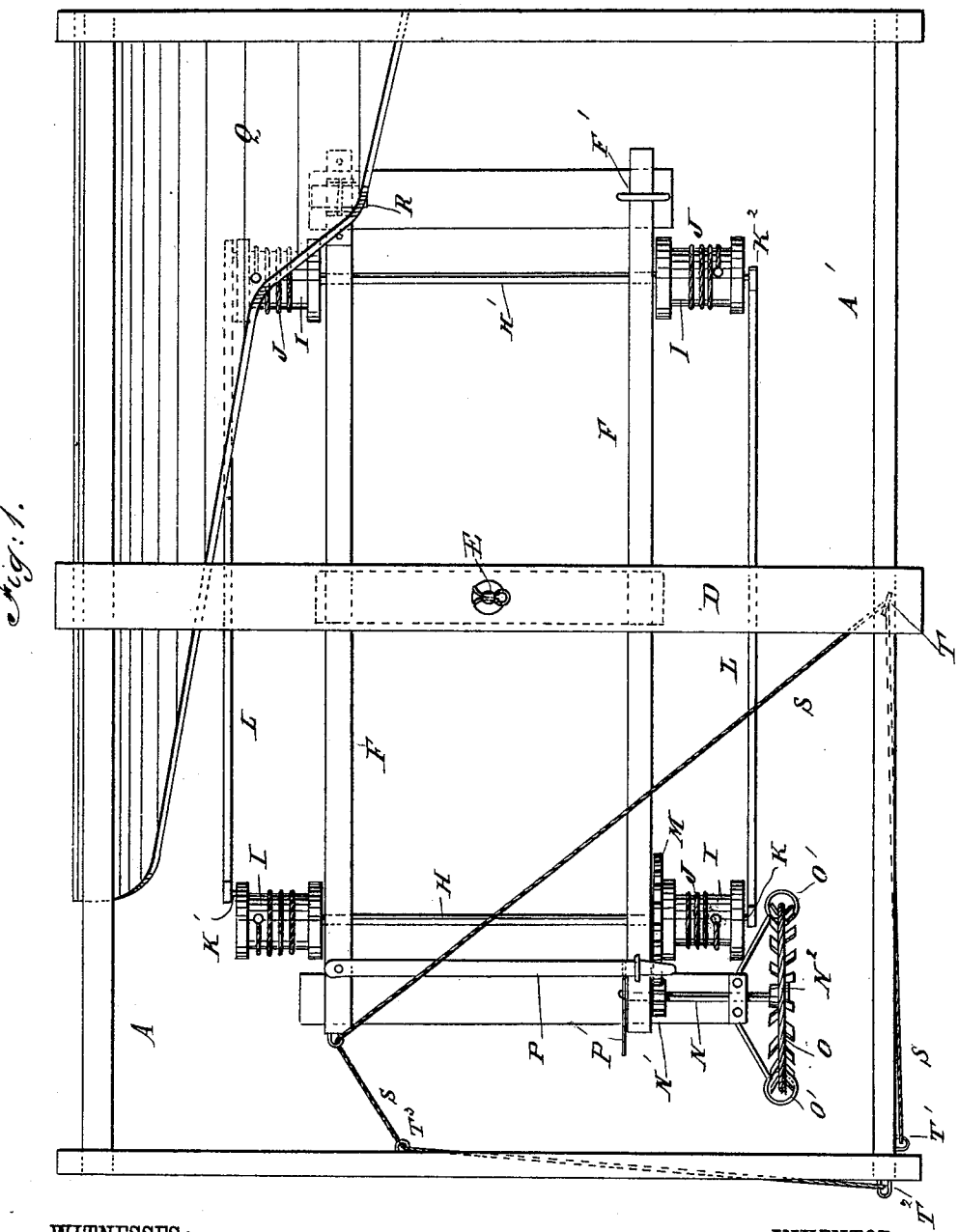
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J. P. & J. R. SEVIER.

GRAIN DUMPING DEVICE.

No. 386,934. Patented July 31, 1888.

Fig. 1.



WITNESSES:

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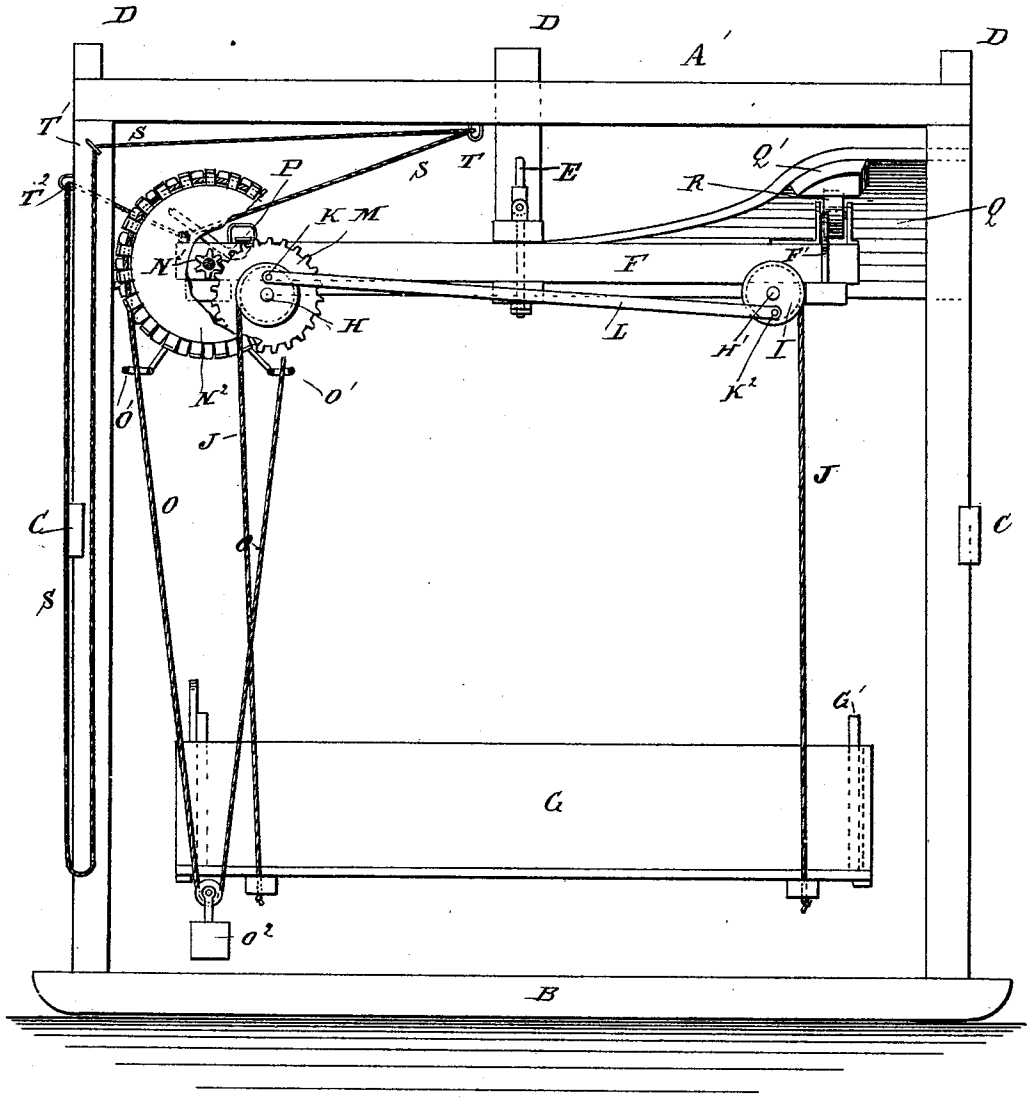
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Fig: 2.



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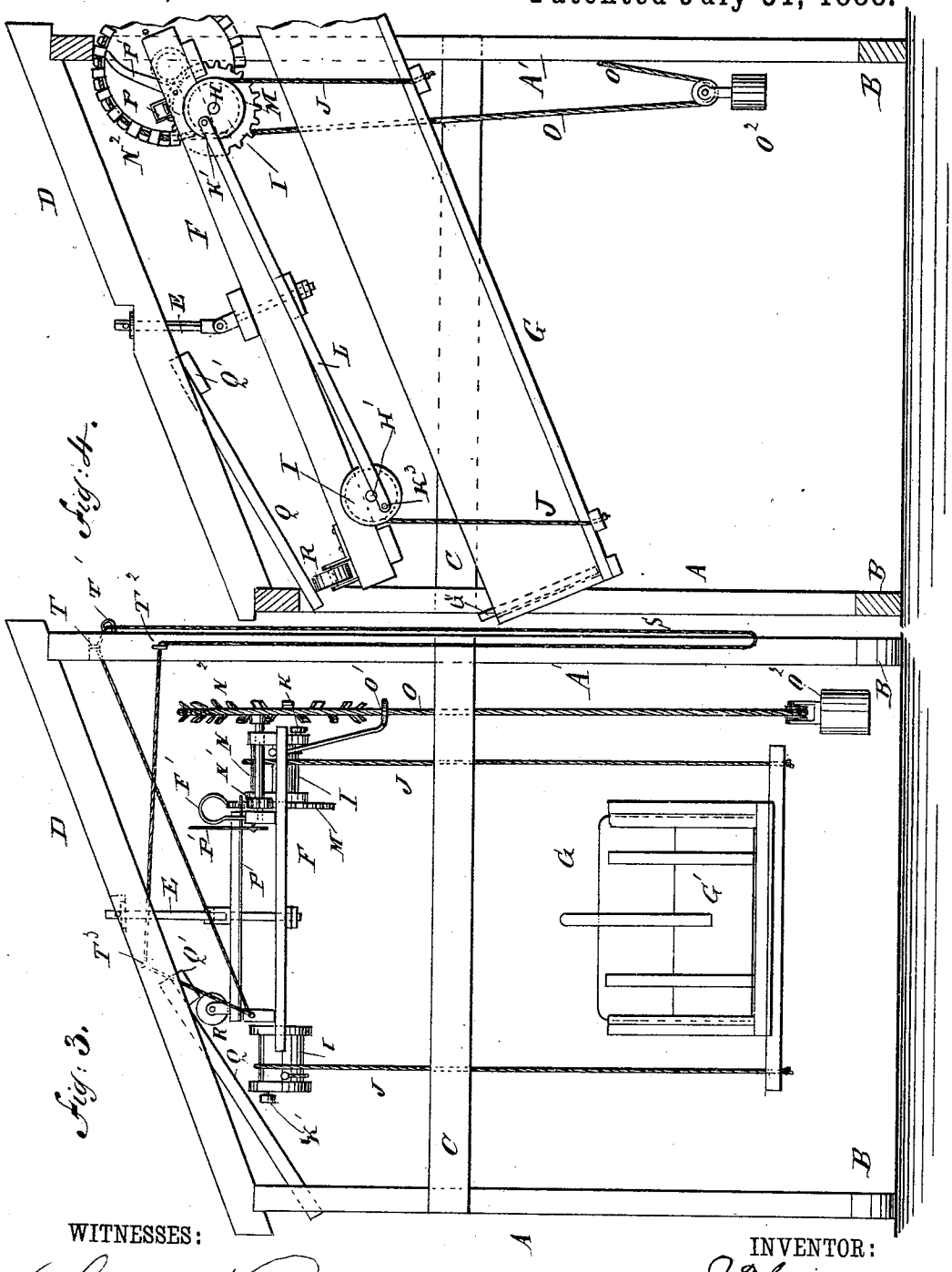


Fig. 3.

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UNITED STATES PATENT OFFICE.

JAMES POTTER SEVIER AND JOHN RUSH SEVIER, OF OPEL, MISSOURI.

GRAIN-DUMPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 386,934, dated July 31, 1888.

Application filed August 17, 1887. Serial No. 247,170. (No model.)

To all whom it may concern:

Be it known that we, JAMES POTTER SEVIER and JOHN RUSH SEVIER, both of Opel, in the county of Sullivan and State of Missouri, have invented a certain new and useful Improvement in Combined Grain Carriers and Elevators, of which the following is a specification.

The object of our improvement is to provide a combined grain carrier and elevator whereby one unaided, if he so desire, can conveniently transport a load of grain, elevate the same, and discharge it into a storage or other bin without the necessity of handling the grain, as with a scoop.

We will first describe in detail a combined grain carrier and elevator embodying our improvement, and then point out the various features of the said improvement in claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a combined grain carrier and elevator embodying our improvement. Fig. 2 is a side elevation of the said grain carrier and elevator, parts being broken out to reveal certain details of construction. Fig. 3 is an end view of the same, and Fig. 4 is a sectional end view showing the grain-box elevated, turned crosswise, and tilted in position to discharge its contents.

The portable frame-work of the apparatus is here shown composed of two vertical side frames, A A′, of which the frame A is of considerably less height than the frame A′, erected on parallel runners B, and rigidly connected at the ends by cross-braces C and at the tops by inclined cross-beams D.

To the lower end of a hanger, E, mounted to turn horizontally in the central top cross-beam, D, is pivoted to tilt lengthwise a horizontal frame, F, from which is suspended a box, G, for receiving the grain, and on which are mounted appliances for hoisting and lowering the grain-box G.

In the appliances employed by us two shafts, H H′, are journaled transversely in the ends of the frame F, and, projecting laterally from the same, carry at either end drums I, all of like size, on which ropes or chains J, connected at their lower ends to the grain-box G, are adapted to be wound. Each of the shafts H H also carries at either end cranks K K′ and K^2 K^3, respectively, the two cranks on each shaft being set ninety degrees apart, but in opposite directions, on the two shafts. A pitman, L, connects the corresponding cranks on each side of the frame F, so that the drums on the two shafts will turn in opposite directions when one of said shafts is revolved, and the ropes or chains J being oppositely wound on the reversely-rotating drums, the grain-box will be evenly raised or lowered, as the case may be.

On the shaft H is fixed a spur-wheel, M, in gear with a pinion, N′, on an auxiliary shaft, N, also journaled in the frame F, and carrying a chain or rope wheel, N^2, over which and through guides O′, fixed to the frame F, an endless hand chain or rope, O, runs.

The lower loop of the endless rope or chain O runs through a weighted block, O^2, which holds it in place on the wheel N^2, and thus by properly drawing on the rope or chain O the grain-box, with or without its contents, can be raised or lowered at the will of the operator, while kept always in a horizontal position.

A spring-pawl, P, normally engages the spur-wheel M in raising the grain-box, but may be raised out of engagement with the spur-wheel to permit the descent of the grain-box by means of an elbow cam-lever, P′, pivoted to swing vertically on the frame F, and which may be provided with a suitable handle-rod, if desired, for operating it from the ground.

A downwardly and laterally inclined and inverted camway, Q, is fixed to the top of the frame-work of the apparatus at one side thereof, on which camway is arranged to run a friction-roller, R, on the top of the frame F.

A stop, Q′, at the upper end of the camway Q limits the travel of the roller R in one direction and holds the frame F with the suspended grain-box G normally in a horizontal position lengthwise of the apparatus.

A hand-rope, S, is attached to the frame F at the end opposite to that on which the roller R is mounted, runs through a guide, T, at the middle of the top of the side frame, A′, thence through a guide, T′, at the corner of the frame-work downward to form a hanging loop, and upward through a guide, T^2, near the guide

T', and thence through a guide, T^3, at the center of the end top beam, D, back to the point of attachment of the other end to the frame F.

After elevating the grain-box to the required height, as before described, by drawing on the part of the rope S leading from the center of the side frame, A', the frame F, with the grain-box G, can be turned at right angles to its normal position.

The roller R on the frame F will be compelled to run down the inclined camway Q, so that the frame F, together with the grain-box, will be tilted lengthwise, as shown in Fig. 4. The gate G' on the end of the box G, which gate may be of any suitable description, being then opened, the grain will be automatically discharged therefrom into the bin or other receptacle at the side of the apparatus, and into which the grain is to be delivered. A post, F', erected on the top of the frame F at the side of the roller R, bears against the inverted camway when the frame is in this position, and with the roller R serves to steady the frame F and lever-box G against lateral tilting. The grain being discharged, by drawing on the other part of the rope S leading from the end top beam, D, the frame F and box G can be returned to their normal position lengthwise of the apparatus, and will automatically assume a horizontal position, as the weight of the gearing on one end of the frame F will hold the roller on the opposite end thereof firmly against the stop Q'. The empty grain-box can then be lowered, as before stated, and the whole apparatus removed to receive a fresh load.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. In a grain elevator and carrier, the combination, with the frame-work, of a horizontally-turning frame within said frame-work, a grain elevator suspended from and below said frame, and a cam in the horizontal path of the frame to cause it to assume an inclined position, substantially as set forth.

2. In a grain-elevator, the combination of an upright frame-work, a horizontal frame supported thereby, pivoted to turn laterally and to tilt, a grain-box suspended from the pivotal frame, and an inclined camway in the path of the frame when turning, and on the frame when so turned to tilt the same together with the grain-box, substantially as described.

3. In a grain-elevator, the combination of a horizontal frame, shafts journaled transversely in both ends of the same, drums and cranks on both ends of each shaft, pitmen connecting corresponding cranks on the shafts, and ropes winding on the drums and supporting a grain-box, substantially as described.

4. In a grain-elevator, the combination of a horizontal frame pivoted to turn horizontally and vertically, a shaft journaled therein carrying winding-drums, grain-box-suspending ropes winding on the drums, a gear-wheel on the shaft, a pawl for dogging the gear-wheel and adapted to be disengaged therefrom, a pinion engaging the gear-wheel, a rope-wheel for turning the pinion, and a hand-rope running over the rope-wheel, substantially as described.

5. In a grain-elevator, the combination of a frame-work, a grain-box-supporting frame pivoted to turn laterally and to tilt automatically on the frame-work, guides on the frame-work, a rope passing through the guides and attached to the frame for turning the same laterally in one direction, and another attached rope passing through other guides for turning the frame in the opposite direction, substantially as described.

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JOHN RUSH SEVIER.

Witnesses:
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JAMES C. TAYLOR.