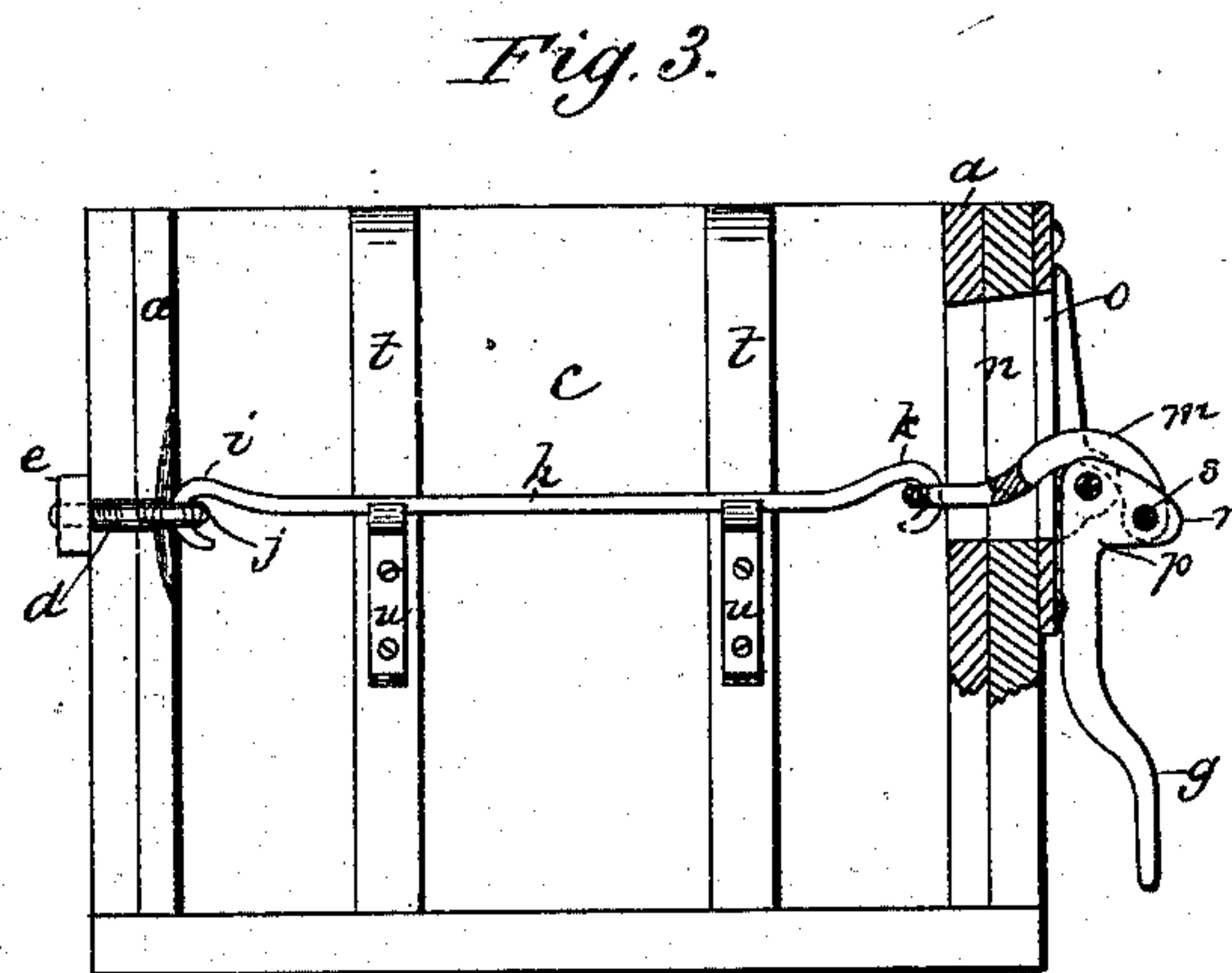
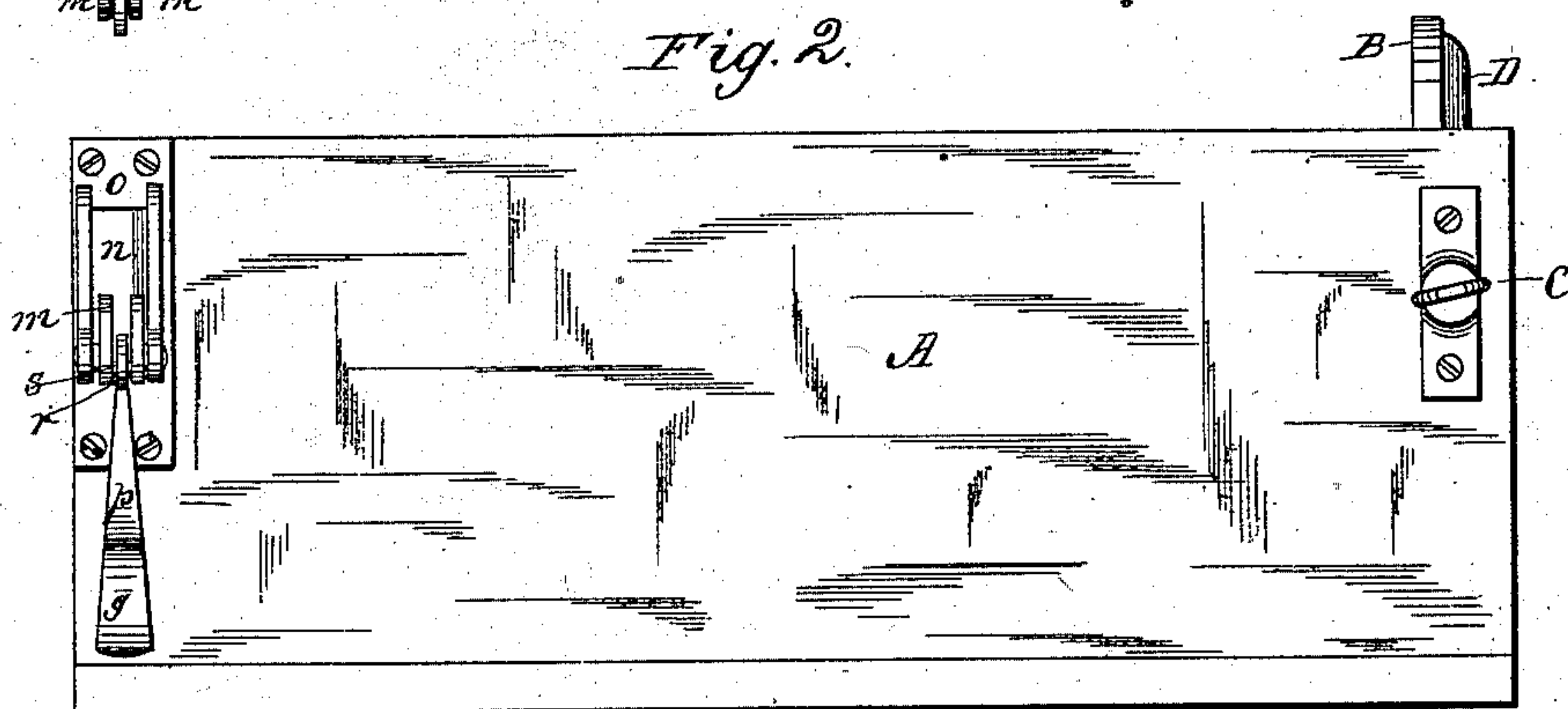
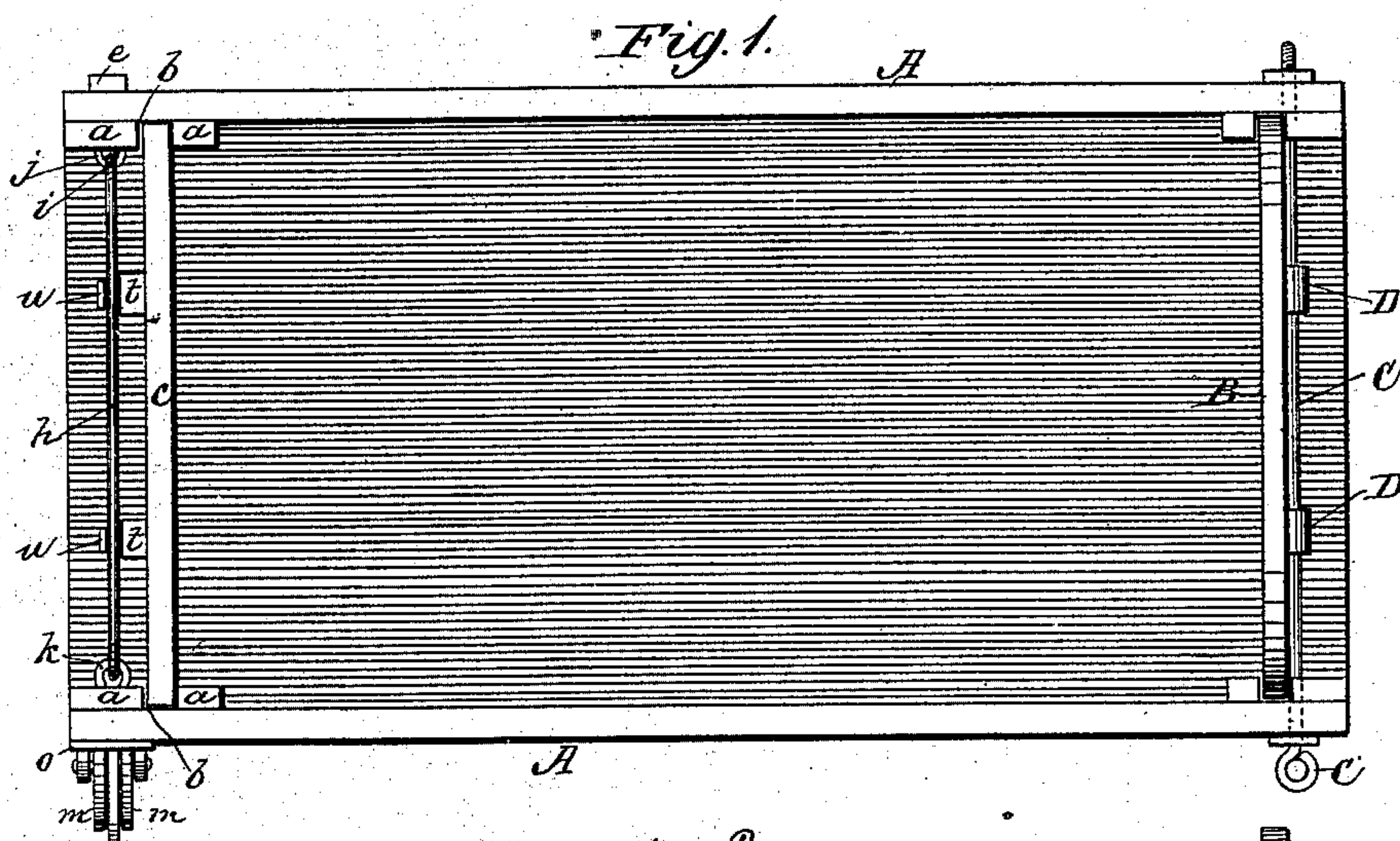


(No Model.)

A. GRAHAM.
WAGON END GATE.

No. 274,757.

Patented Mar. 27, 1883.



WITNESSES:

W. W. Hollingsworth
W. Peck

INVENTOR:

Andrew Graham
BY *[Signature]*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANDREW GRAHAM, OF CLARION, IOWA, ASSIGNOR OF ONE-HALF TO J. C. HARWOOD AND A. N. MINOR, OF SAME PLACE.

WAGON END-GATE.

SPECIFICATION forming part of Letters Patent No. 274,757, dated March 27, 1883.

Application filed March 24, 1882. Renewed December 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, ANDREW GRAHAM, of Clarion, in the county of Wright and State of Iowa, have invented a new and Improved Means for Securing the End-Gates of Wagon-Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view. Fig. 2 is a side elevation, and Fig. 3 is a rear end elevation.

The vertically-sliding end-gates of wagon-boxes are ordinarily secured in place by means of a rod threaded at one end and passing through opposite holes in the sides of the wagon-box, and also through holes in vertical cleats secured to the outer face of the end-gate. This construction is found objectionable for several reasons, among which the following may be enumerated, viz: Much time is required in removing and inserting the screw-threaded rod, and the threads of the rod very quickly wear out and have to be recut or replaced by a new rod.

To remedy these defects is the object of my invention; and to these ends it consists in employing a rod without threads, and provided with a hook at each end, one of which engages with the eye of an eyebolt secured to one side of the wagon-box, the opposite hook engaging with a hole in a curved link which passes through a vertical slot in the opposite side of the wagon-box, and is pivoted to one of the arms of a bell-crank lever journaled to the outer face of the wagon-box at the lower end of the slot, whereby an end-gate can be inserted or removed much more expeditiously than in the ordinary construction above described, and the parts are not so liable to get out of order, as hereinafter more fully set forth.

In the accompanying drawings, A represents a wagon-box of the usual construction, provided with a front gate, B, secured in place in the wagon-box by means of the ordinary threaded rod, C, passing through opposite holes in the sides of the wagon, and also through holes in vertical cleats D, secured to the outer face of the front gate, B.

a a represent vertical cleats secured to the

inner faces of the sides of the wagon-box near its rear end, leaving grooves b b between each pair of cleats a a, for the reception of the rear end sliding gate, c.

d represents an eyebolt, threaded at its outer end, and provided with a nut, e, which eyebolt d passes through one of the outer cleats, a, and thence through one of the sides of the wagon-body.

h represents a rod provided with a hook, i, at one end, which engages with the eye j of the eyebolt d, and is also provided with a similar hook, k, at its opposite end, which engages with a hole in a curved link, m, which passes through a vertical slot, n, in the side of the wagon-box.

o represents a slotted plate secured to the outer face of the side of the wagon-box, so that the slots in the plate and in the side of the wagon box register with each other.

p represents a bell-crank lever journaled in bearings in the slotted plate o at the foot of the slot, and provided with the long arm g, by means of which the bell-crank lever is operated to tighten or loosen the rod h, and provided with the short arm r, pivoted to the outer end of the curved link m, at s.

The back face of the rear end-gate, c, is provided with the vertical cleats t t, secured thereto, to each of which is secured a plate, u, bent outwardly at its upper end to prevent the hind end-gate from working up.

The above-described means for securing the end-gates of wagon-boxes is far more durable, convenient, simple, and less liable to get out of order than those ordinarily employed. With one hand the bell-crank lever is raised, loosening the rod, and with the other hand the rod is readily removed, allowing the end-board to be speedily and easily removed from the wagon-box. The rod is replaced by the same simple process, and by throwing down the bell-crank lever the end-gate is securely locked in position. It is not necessary, as with the ordinary construction described, to spend from one to three minutes in unscrewing and removing the rod.

When the end-gate wears a little short, as it is liable to do by use, the defect is remedied by simply tightening the screw-eyebolt d,

thereby in effect shortening the rod *h*, or drawing inwardly the sides of the wagon-box and remedying the defect.

5 The peculiar construction of the bell-crank lever and curved link forms a self-acting lock that can only be unlocked by raising the lever.

10 I am aware that a device for securing the end-gate of a wagon-box to its sides, consisting of movable staples passing through the side-boards just behind the end-gate and eccentrics, (one for each staple,) pivoted in the ends of the same, plates fastened to the side-boards between the arms of the staples, and two hooked rods connected by a swivel, with
15 their hooks engaging with the opposite staples, has heretofore been employed, and I therefore lay no claim to such construction, my invention being confined to the peculiar construction of parts pointed out in the claim. In
20 my invention I dispense with the two eccentrics on the staples, and employ in lieu thereof a single self-locking bell-crank lever fulcrumed to the wagon-body and a stationary eyebolt at the opposite end, and serving the three-

fold function of an eyebolt for the hook of the 25 rod, a means for tightening the end-gate, and additional means for securing a cleat to the wagon-body.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, 30 is—

The combination, with the wagon-box *A*, provided with the slot *n* and slotted plate *o*, sliding gate *c*, having the plates *u* and rods *h*, having the hooks *i k* at its ends, of the curved 35 link *m*, bell-crank lever *p*, fulcrumed in the plate *o*, and having its short arm *r* pivoted to the link *m*, and the eye-bolt *d*, threaded at its outer end, and provided with the nut *e*, said eyebolt serving the threefold purpose of an 40 eyebolt, a means for tightening the end-gate when worn, and additional means for securing a cleat to the wagon-body, substantially as described.

ANDREW GRAHAM.

Witnesses:

H. A. HARRIMAN,
D. D. INGLIS.