

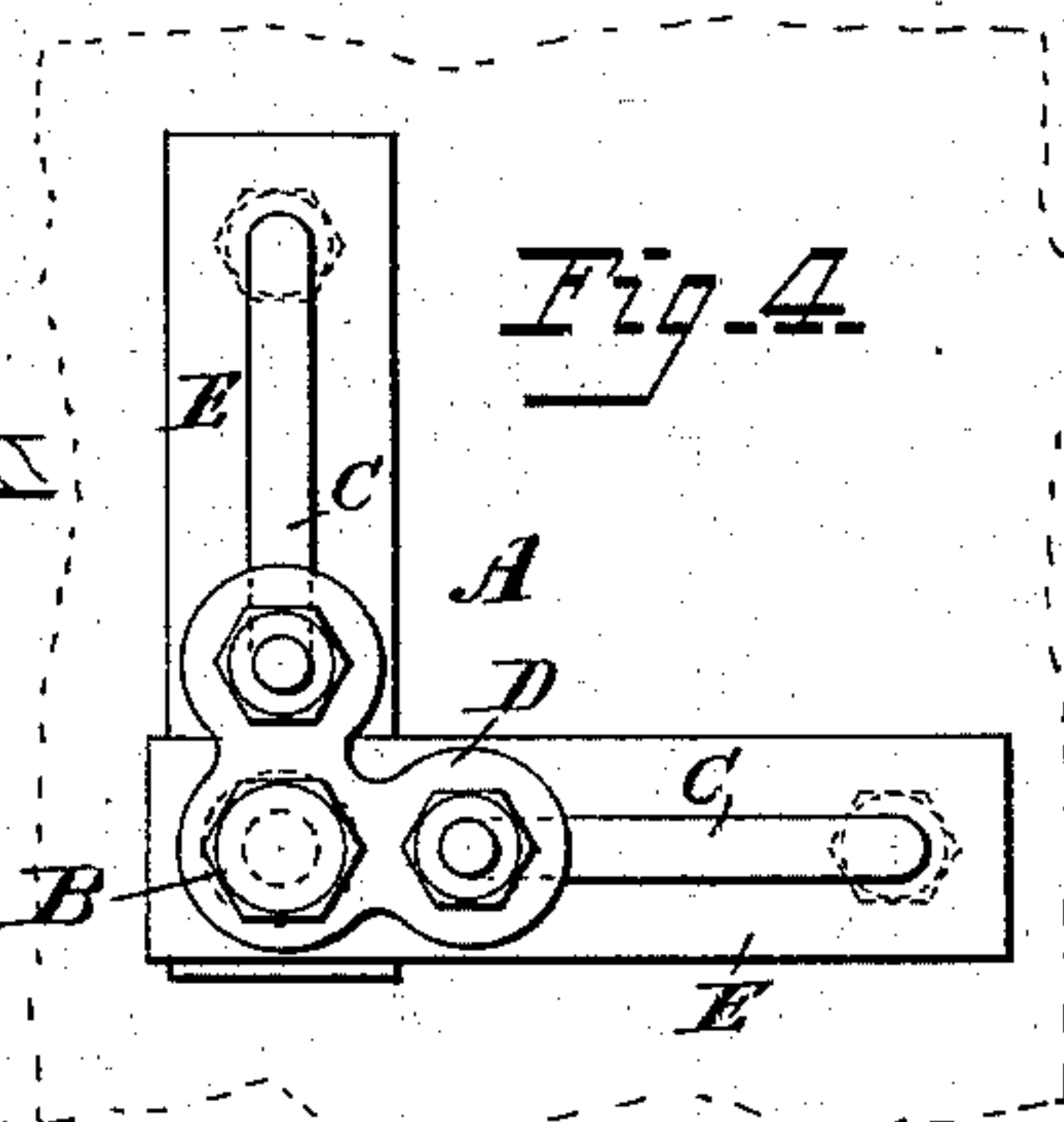
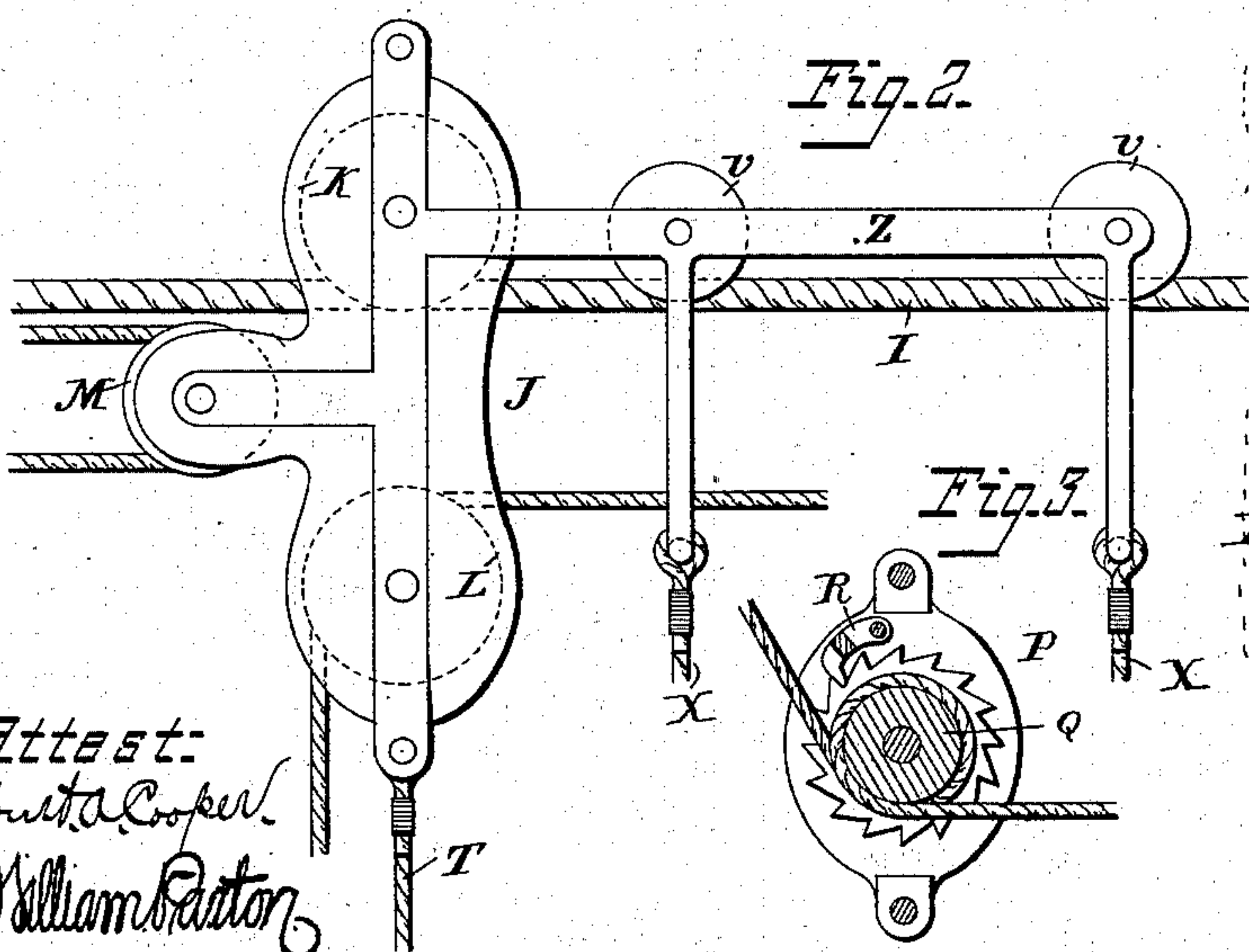
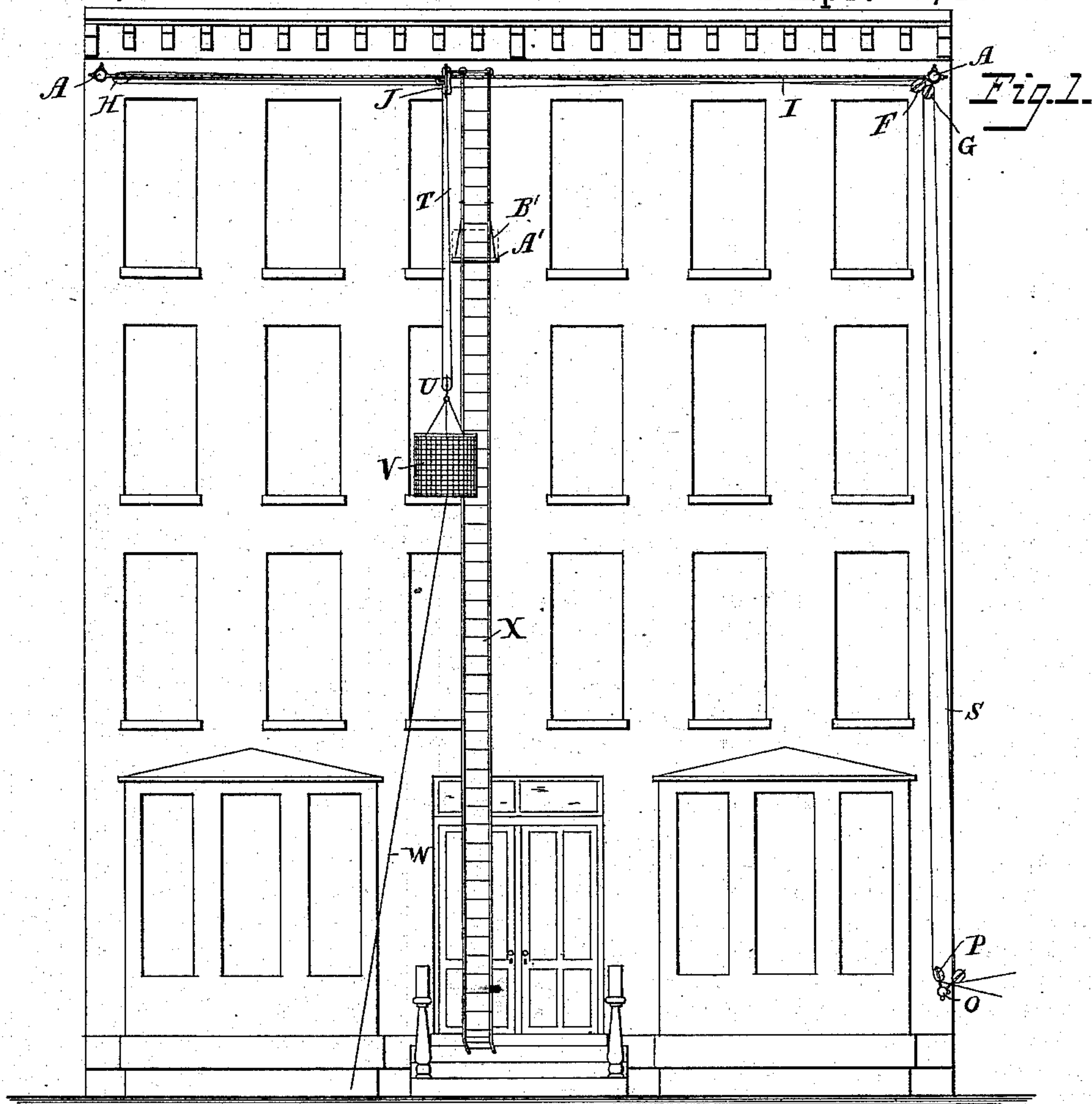
(No Model.)

D. CROWLEY.

FIRE ESCAPE.

No. 276,363.

Patented Apr. 24, 1883.



Attest:
Curtis Cooper
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Inventor:
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UNITED STATES PATENT OFFICE.

DAVID CROWLEY, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF
THREE-FOURTHS TO EDWARD W. CREECY AND RALPH WALSH, BOTH
OF SAME PLACE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 276,363, dated April 24, 1883.

Application filed March 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVID CROWLEY, of Washington, in the District of Columbia, have invented certain Improvements in Fire-Escapes, of which the following is a specification.

My invention relates to fire-escapes; and it consists in the construction and the combination of parts hereinafter particularly described, and then sought to be specifically defined by the claims.

In the accompanying drawings, Figure 1 represents a side elevation of the escape, and Figs. 2, 3, and 4, detached views of parts of the device.

Two or more supporting-brackets, A, are built or set into the wall of the building, and are composed of three parts—the bolt B and stay-rods C, all of which are connected together at the front end by a plate, D, and at the rear end by plates E, which are at angles to each other, so that if one part of the wall gives way the bracket will be held to its place by the other plate.

The construction just described is what I prefer to use; but I do not care to be restricted thereto.

From one of the brackets there are suspended two pulley-blocks, F and G, and from the other bracket a single pulley-block, H, and a metal rod or rope, I, to form a track, is extended from one bracket to the other, on which rod or rope slides a triple pulley-block, J. This triple block has within its sides the pulleys K and L and the pulley M, the latter extending out beyond the other two, and, if desired, a guide pulley or sheave may be connected to the side of the triple block nearest the building.

In the wall of the building, somewhere near the foot-pavement, and preferably in a vertical line with the bracket supporting the two pulleys, there is a bracket, O, constructed and held in place like the brackets A. This bracket O supports a pulley-block, P, the pulley Q of which has serrated edges, or else ratchet-plates secured to the sides, and a double pawl, R, pivoted to the block, engages with the teeth of the pulleys.

With the pulley-blocks constructed, applied, and arranged as described, a rope, S, is secured at one end to the block H, and passes from thence over the pulley M of the triple

block, thence back and over the pulley in block H, thence over the sheave on the side of the triple block, and thence over the pulley in block F, and its end left free to extend downward.

Another rope, T, is connected at one end to the lower part of the triple block, and passed from thence around the sheave-pulley U, to the bottom of which is attached a basket or cage, V, thence over the pulley L in the triple block, thence over the pulley in block G, and thence over one or more pins around the pulley in block P, and its end left free.

To raise the basket or cage to any desired height, you pull on the rope T at its free end, the pulley in the block P turning to discharge its usual function, and yet being prevented from turning backward by the pawl R, engaging with the ratchet-teeth, for if permitted to turn backward valuable time in raising the cage would be lost.

When the cage, with its occupant, is to be lowered, the rope is slackened and allowed to slip as the cage, by reason of its weight, moves downward. The descent is slow and without danger. The pulley is held rigid by the pawls, and the friction between the pulley and slipping rope keeps the device within absolute control of the operator, no matter if intense excitement does prevail at the time. This feature of checking the revolution of the pulley so as to increase the friction between the pulley and rope is an important feature in my device, and insures safety in fire-escapes of this kind.

To steady the basket while the same is being lowered, a rope, W, may be connected with it, which will be held by persons below.

To move the basket or cage from one end to the other of the rod or rope on which the triple block or its pulley K slides, the rope S is pulled at its free end until the cage reaches the point desired, and when it is to be moved in the opposite direction the rope S is allowed to feed from the hand while the rope T is pulled by its free end.

When the cage is to be raised or lowered at a particular point the rope S is held taut while rope T is operated.

As many of these escapes as desired may be applied to the front of a building, but gener-

ally one will answer all purposes; and by extending the rod or rope I from one end building to the other end building of a row of buildings, the people can be taken from the burning building and safely delivered to the ground at a distance from the burning building, as the lateral adjustment or movement of the cage permits that to be done.

If desired, a rope or ladder, X, may be suspended from the track by sheaves Y, the sheaves running upon the track and being connected to the triple pulley-block so as to be moved along therewith. The sheaves are connected to the triple pulley-block by plates Z, which are held to the pulley-block by the bolt on which the upper pulley in the block turns, as represented by the drawings.

One or more platforms, A', may be connected to the ladder by ropes B' on the side that will be next to the wall, so that persons may step from the windows onto the platforms, and then around onto the rounds of the ladder.

If it is not desired to use the platform, it may be folded up against the ladder, and persons descending can step from the round above to the round below it.

The device is comparatively cheap of production, very efficient in operation, and easy of application.

I am aware that it is not new in fire-escapes to move a carriage along a horizontal rod by means of a rope connected to one end of the carriage, then passed over a pulley at that end of the rod, thence downward through a pulley-block suspended by the same rope, thence upward and over a pulley alongside the first pulley, thence across to and over a pulley at the opposite side of the rod, and thence backward and connected to the other end of the carriage.

Having described my invention and set forth its merits, what I claim is—

1. The combination of the transverse track, the pulley-block sliding thereon, the end pulley-blocks, the cage, the two sets of ropes for operating the sliding pulley-block and cage, and the ratchet-pulley and pawl for regulating the tension or friction of the rope controlling the raising and lowering of the cage, substantially as and for the purpose set forth.

2. The combination of the transverse track, the triple pulley-block sliding thereon, the end pulley-blocks, the rope connected with the pulleys at opposite parts of the track and with the triple pulley-block, as set forth, the cage, and the rope for raising and lowering the cage connected with two pulleys, the triple pulley-block, and with the cage, substantially as and for the purpose set forth.

3. The combination of the transverse track, the triple pulley-block sliding thereon, the end pulley-blocks, the pawl-and-ratchet pulley-block, the cage, and the two sets of ropes connected with the pulley-blocks and cage to operate them, as set forth, for the purposes specified.

4. The combination of the transverse track, and the brackets composed of the three parts connected together at the rear by the angularly-set plates, substantially as and for the purpose set forth.

5. The pulley-block J, having within its sides the two pulleys arranged in a vertical line with each other, and the third pulley in a horizontal line at right angles to the two pulleys, substantially as and for the purpose set forth.

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

DAVID CROWLEY.

Witnesses:

JOHN W. SIMS,
A. E. HANSMANN.