

J. & P. LUX.
HAY-ELEVATOR.

No. 189,241.

Patented April 3, 1877.

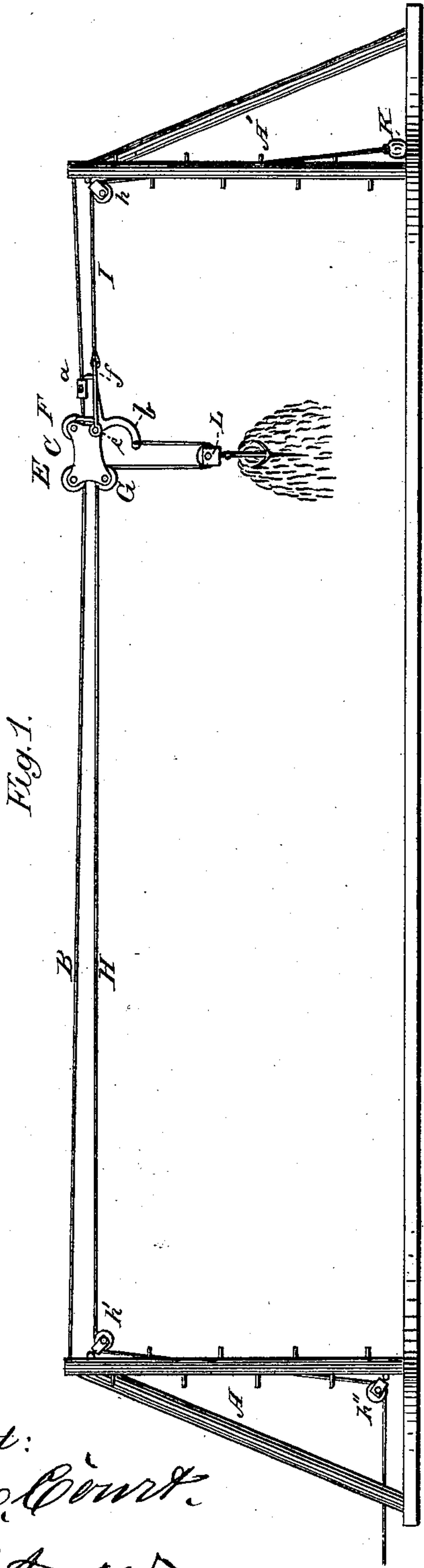


Fig. 1.

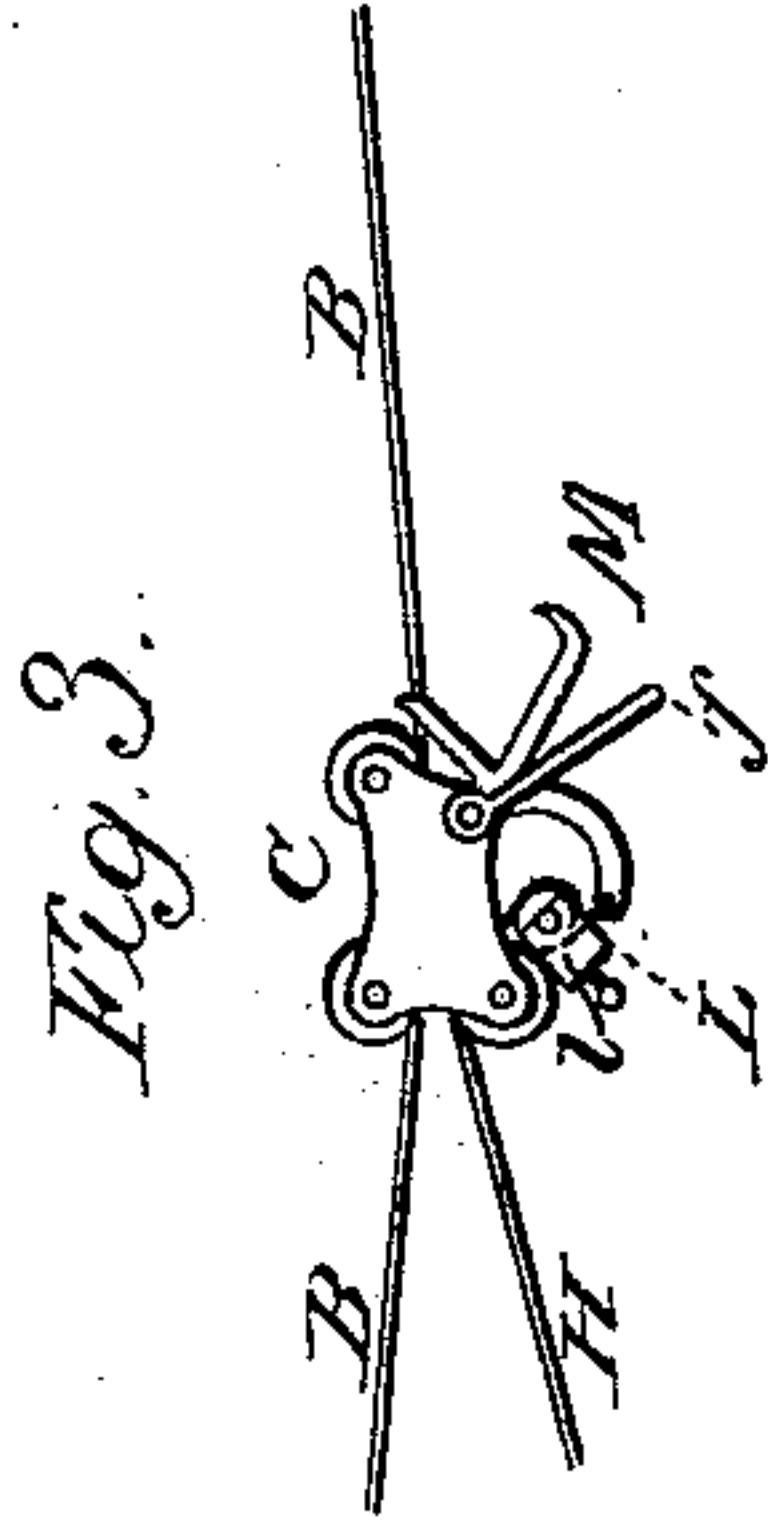


Fig. 3.

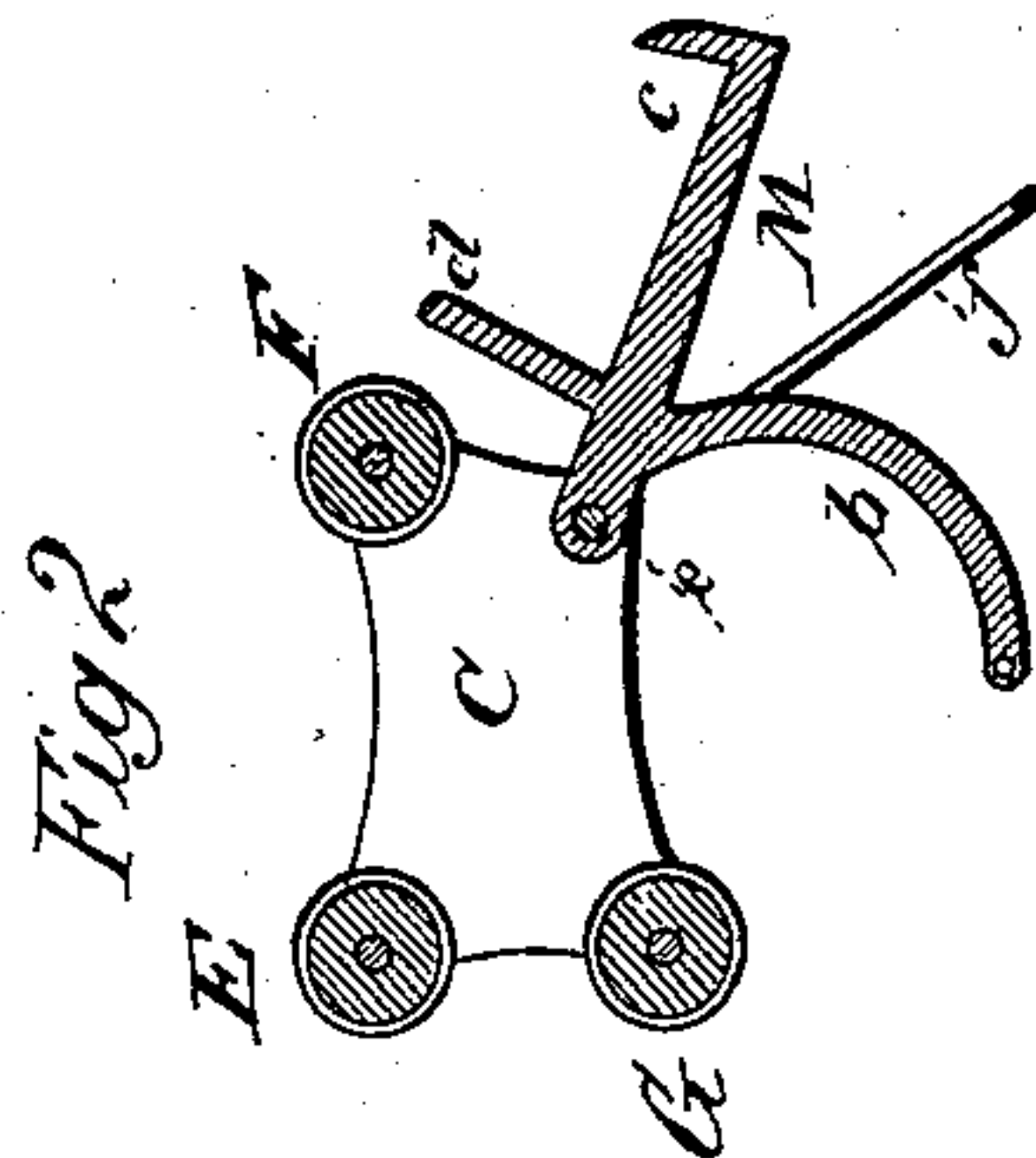


Fig 2

Attest:
E. E. Court.
C. A. Snow.

John Luxrd and Philip Luxrd Inventors.
by Louis Bagger & Co.
their Attys

UNITED STATES PATENT OFFICE.

JOHN LUX AND PHILIP LUX, OF HOPKINTON, IOWA.

IMPROVEMENT IN HAY-ELEVATORS.

Specification forming part of Letters Patent No. **189,241**, dated April 3, 1877; application filed December 13, 1876.

To all whom it may concern:

Be it known that we, JOHN LUX and PHILIP LUX, both of Hopkinton, in the county of Delaware and State of Iowa, have invented certain new and useful Improvements in Hay-Carriers; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation. Fig. 2 is a section of the carriage, and Fig. 3 represents the car traveling on the rope.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to that class of hay-carriers which consist of a rope suspended between poles or uprights, (preferably six in number, three at each terminus of the line,) and a car traveling on said rope, in combination with a draft-rope, carrying the load, and suitably-arranged pulleys for operating the same; and it consists in the construction of the car or traveler, and its combination with a peculiarly-constructed dog, and with an adjustable bumper-block placed upon the carriage-rope, substantially as hereinafter more fully described, and pointed out in the claim.

In the drawing, A A' are the poles or uprights, between which the carriage-rope B is suspended. *a* is a block, so constructed that it may be readily adjusted in any given position upon rope B, and C is the car. The frame of this consists of two plates united by bolts, which form axles for the pulleys E, F, and G. E F are the carriage-pulleys or car-wheels, by which car C is suspended, and travels upon rope B. G is the draft or hoisting pulley, over which passes the draft-rope H. I is the weight-rope, which is secured to a bail, *f*, projecting from car C, to the sides of which it is pivoted at *e*. This rope passes from its point of attachment to bail *f* over a pulley, *h*, at the end of the line, and has a weight, K, secured to its lower end, which should be sufficiently heavy—say, about fifteen pounds—to draw the car with its attachments back against the buffer-block

a when the draft or pull on rope H is released. In the lower corner of the car, opposite the pulley G, is pivoted the dog M. This is made of malleable iron, in one piece, and consists of three elements—viz., a curved arm or lever, *b*, a coupling-hook, *c*, and a coupling-lever, *d*. One end of the draft-rope H is secured to the end of the curved lever-arm *b*, is then passed through the fork-pulley L, and up through the car over pulley G, from where it is carried over pulley *h'*, at the end of the line opposite to *h*, and down alongside one of the poles to another pulley, *h''*, arranged at a suitable distance from the ground, so that the end of the rope may be conveniently secured to the single-tree, where the draft is applied.

By this arrangement of the draft-rope H and pulley L, it will be observed that a lever-purchase of one-half the weight of the load (including the weight of the fork and pulley) is gained. The weight of the load, pulling upon the bent-lever arm *b* of dog M, will have the effect of keeping the coupling-hook *c* in the position shown in Fig. 1, thereby retaining the car in its position upon the carriage-rope (by coupling it to the stationary block *a*) while the load is being elevated; but the moment the pulley L strikes lever-arm *b*, dog M will be turned on its pivoting-point, so as to uncouple hook *c* from block *a*, while, at the same time, the hooked end of arm *b* will catch in under the bail *l* of pulley L, thereby supporting the weight of the fork and its load while the car, impelled by the draft, is traveling along the carriage-rope.

When, after unloading, the car, impelled by the weight-rope I, returns to the bumper-block *a*, (the dog M being then in the position represented in Fig. 3,) it will couple itself automatically to the block by the lever *d* striking against it, and thus swinging the dog back into the coupled position shown in Fig. 1, at the same time releasing the hold of arm *b* from pulley L, so that this, with the empty fork will descend, ready to receive another load.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

The combination of the car U, having a pivoted dog, M, attached thereto, constructed with a coupling, *d*, curved lever *b*, coupling-hook *c*, draft-rope H, pulley L, and bumper-block *a*, all arranged and operating substantially as described.

In testimony that we claim the foregoing as

our own we have hereto affixed our signatures in presence of two witnesses.

JOHN LUX.
PHILIP LUX.

Witnesses:

JOHN J. SMITH,
JACOB SMITH.