

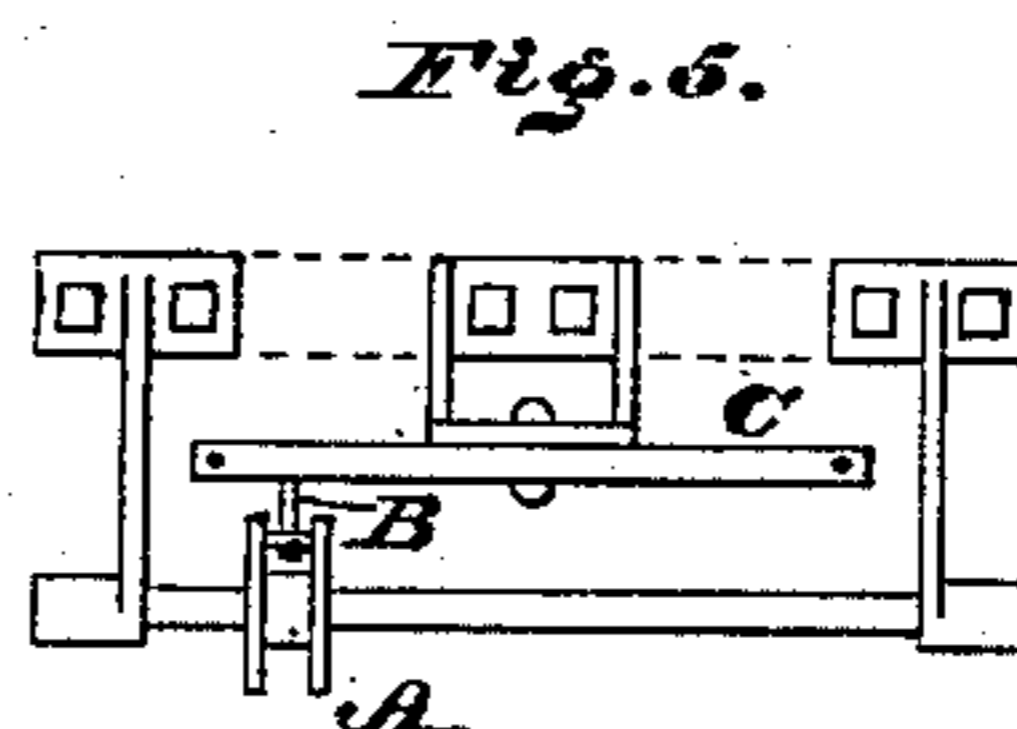
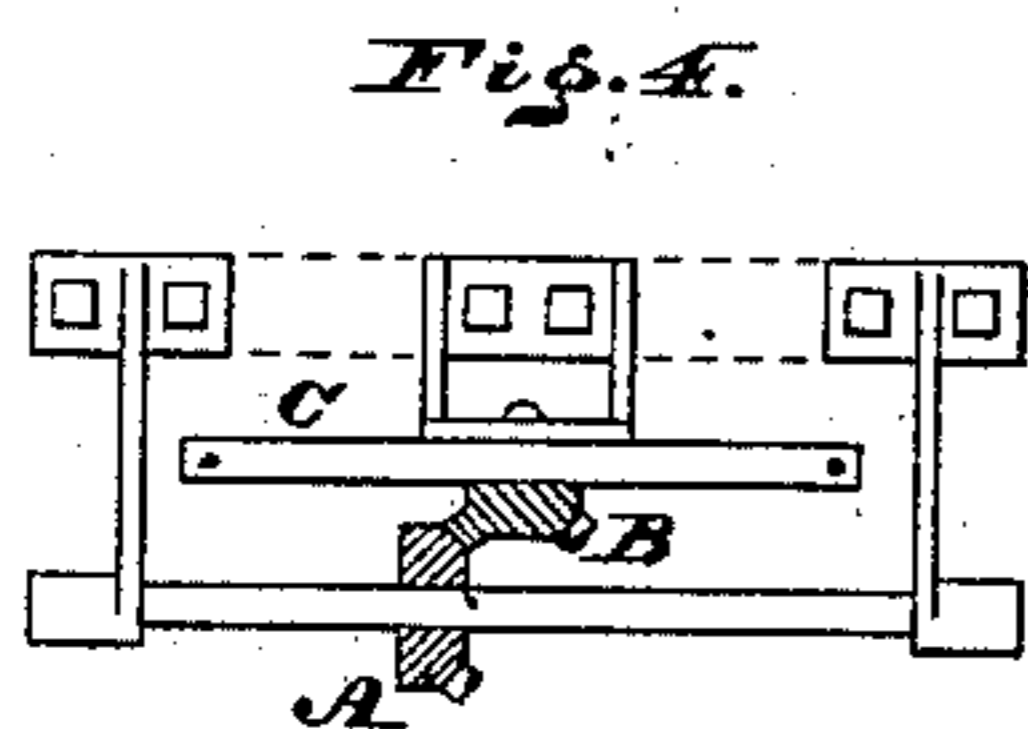
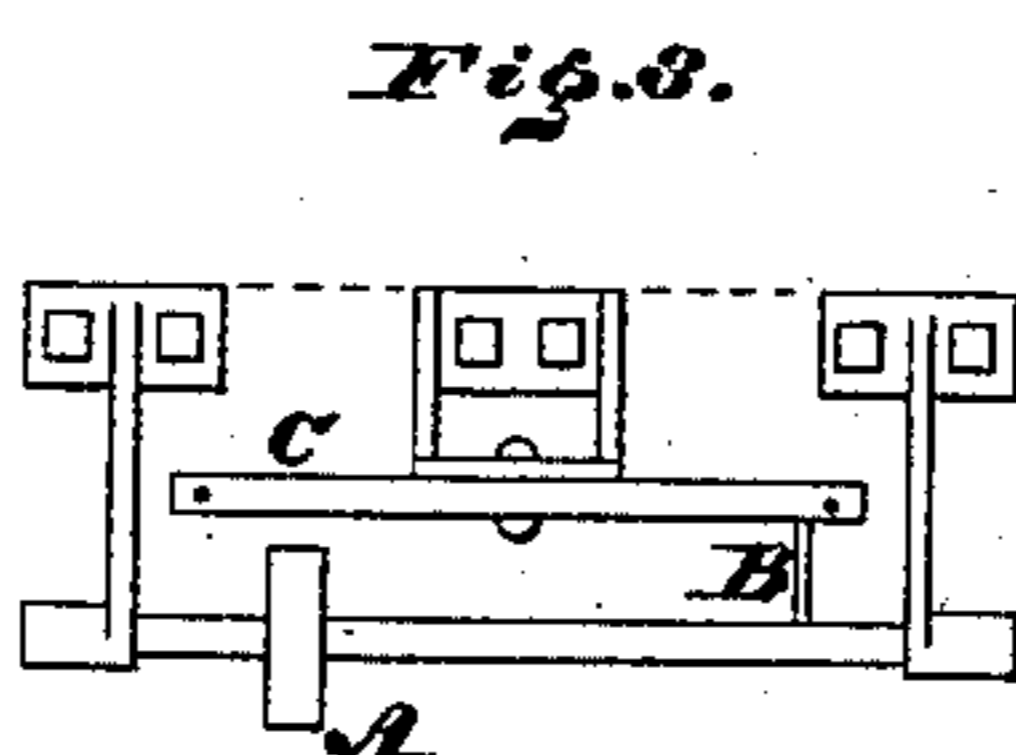
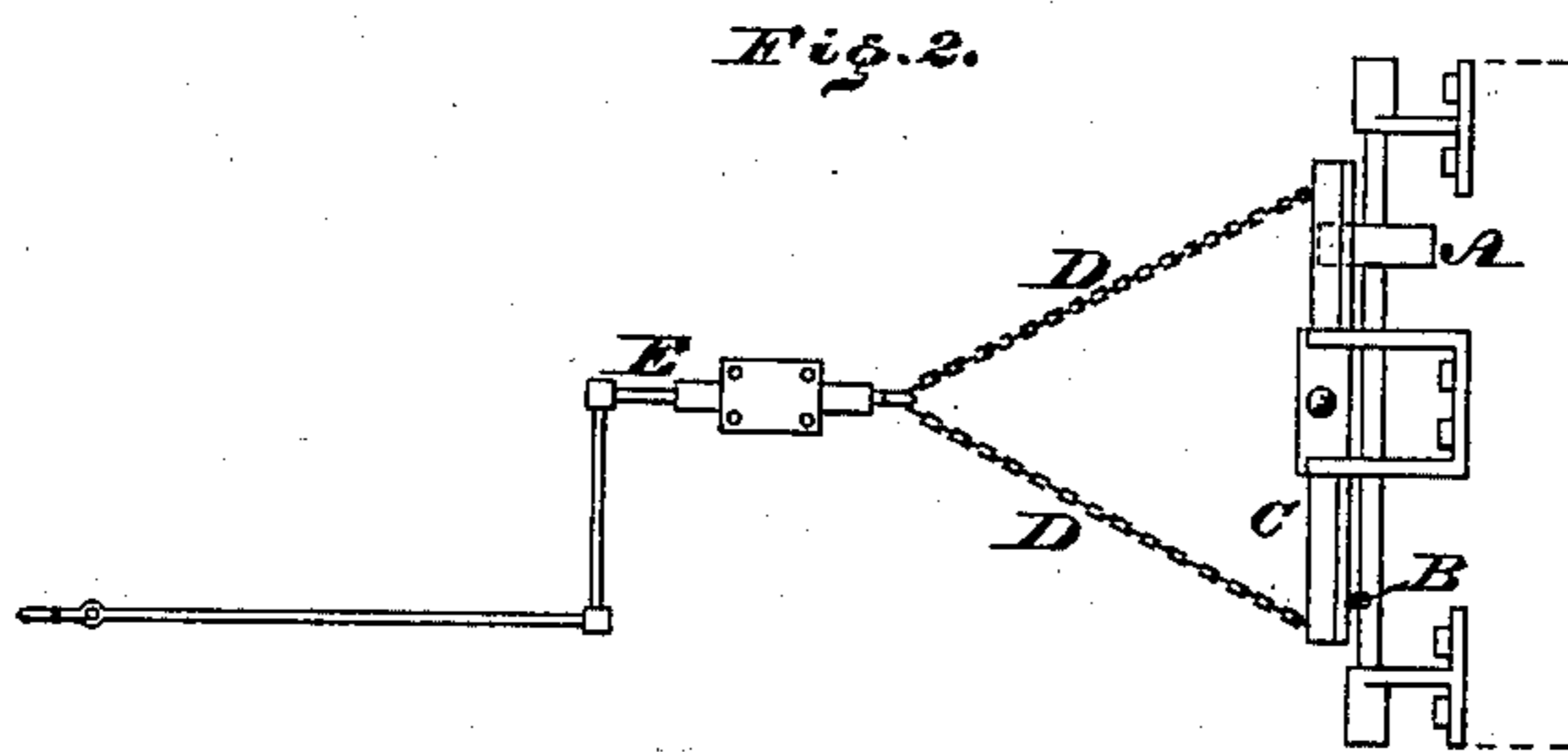
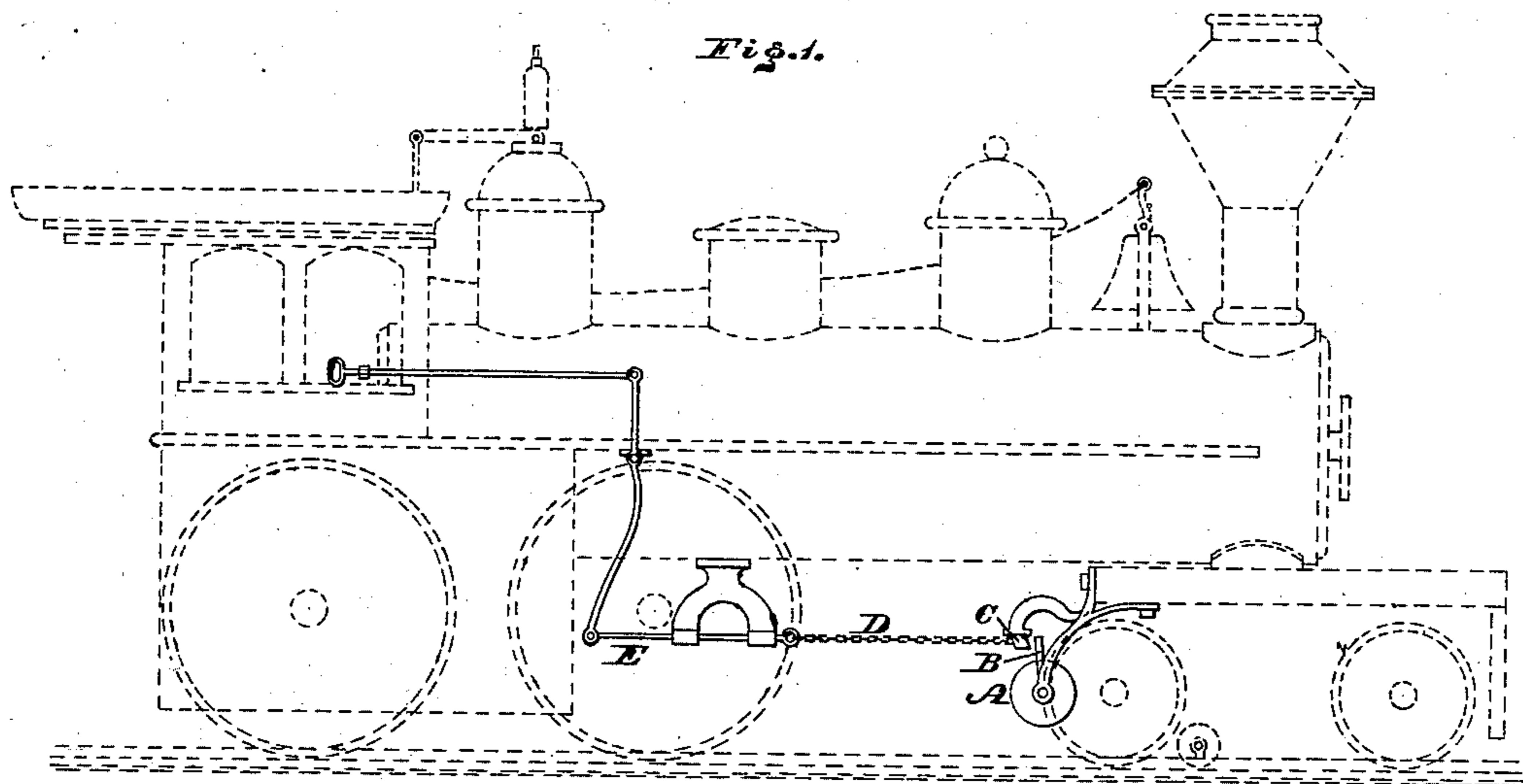
(No Model.)

R. P. GARSED.

MECHANICAL MOVEMENT FOR OPERATING RAILWAY SIGNALS.

No. 267,184.

Patented Nov. 7, 1882.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT P. GARSED, OF NORRISTOWN, PENNSYLVANIA.

MECHANICAL MOVEMENT FOR OPERATING RAILWAY-SIGNALS.

SPECIFICATION forming part of Letters Patent No. 267,184, dated November 7, 1882.

Application filed March 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. GARSED, a citizen of the United States, residing at Norristown, in the county of Montgomery, State of Pennsylvania, have invented a new and useful Improvement in Mechanical Movements, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of the mechanical movement embodying my invention. Fig. 2 is a top or plan view thereof. Fig. 3 is an end view thereof. Fig. 4 is a front view of a modification. Fig. 5 is a front elevation of another modification.

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

My invention consists of means, substantially as hereinafter described, whereby a rod attached to certain mechanism is always operated in the same direction regardless of the forward or backward motions of a car, engine, or other object to which the device is applied.

Referring to the drawings, A represents a wheel mounted on a moving body—such as a locomotive-engine, tender, or other proper part of a train—and adapted to engage with a projection located on the bed of the railroad, and thus be rotated.

To the hub or central collar or side of the wheel is attached a salient arm, B, which projects radially, or may project tangentially, therefrom, and is so disposed as to strike a tappet, C, which is pivoted to the car or locomotive.

To each end of the tappet C is secured a chain, cord, or other flexible connection, D, the ends of the two connections opposite to the tappet being secured to a pivoted or sliding bar, rod, or crank-arm, E, which is properly sustained on the car or locomotive. The rod E is attached in a suitable manner to devices to be operated on the car, engine, &c., such as the bell or whistle, the throttle-valve, or air-brakes thereof.

In cases where it is desired to signal the engineer—such as when the engine has reached or is about to reach a switch which may be displaced, or the train is to be stopped or slowed—a projection on the road-bed is raised, either automatically by the mechanism of the switch or by a roadman, so as to engage with or strike the wheel A, whereby the latter is

rotated. The arm B, moving with the wheel, strikes the tappet C and turns it a sufficient distance so that one of the connections D is drawn forward, and the rod E is thereby advanced. The other connection, being flexible, yields or slackens, so that it does not interfere with the advance motion of the rod. As the rod is connected to devices named in the present case—viz., the bell or whistle, throttle-valve, or air-brake—said devices will be operated and the attention of the engineer directed to the state of the case, so that he may avert the danger or cause the object of the signal to be attained. The parts may be restored to their normal positions by pushing back the rod E; but the weight of the connections D D may be sufficient to accomplish the same, or springs may be employed for the purpose.

It will be seen that when one connection is drawn forward the other connection is slackened or yields, as has been stated. Consequently the direction of motion of the tappet does not vary the direction of the movement of the rod E. The car or locomotive may run backward, and the arm B thus strike the side of the tappet opposite to that first stated; but the rod E is moved in but one direction, whether the car or locomotive is advancing or backing, so that the devices to be operated do not fail in their execution in either direction of the passage of the train or object to which the device is applied.

In Fig. 4 the arm B is connected to a part of the pivot of the tappet C, and carries a bevel-wheel, which meshes with a bevel-wheel or teeth on the wheel A, and in Fig. 5 the arm is connected to one end of the tappet, and is engaged by a cross-bar or projection on the wheel, the operation of the rod E being thereby the same as that hereinbefore set forth.

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

A rotatable wheel and striker or its equivalent operated thereby, in combination with a tappet and rod and flexible connections intermediate of the tappet and rod, whereby by the operation of the tappet in either direction the direction of motion of the rod is not varied, substantially as and for the purpose set forth.

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Witnesses:

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