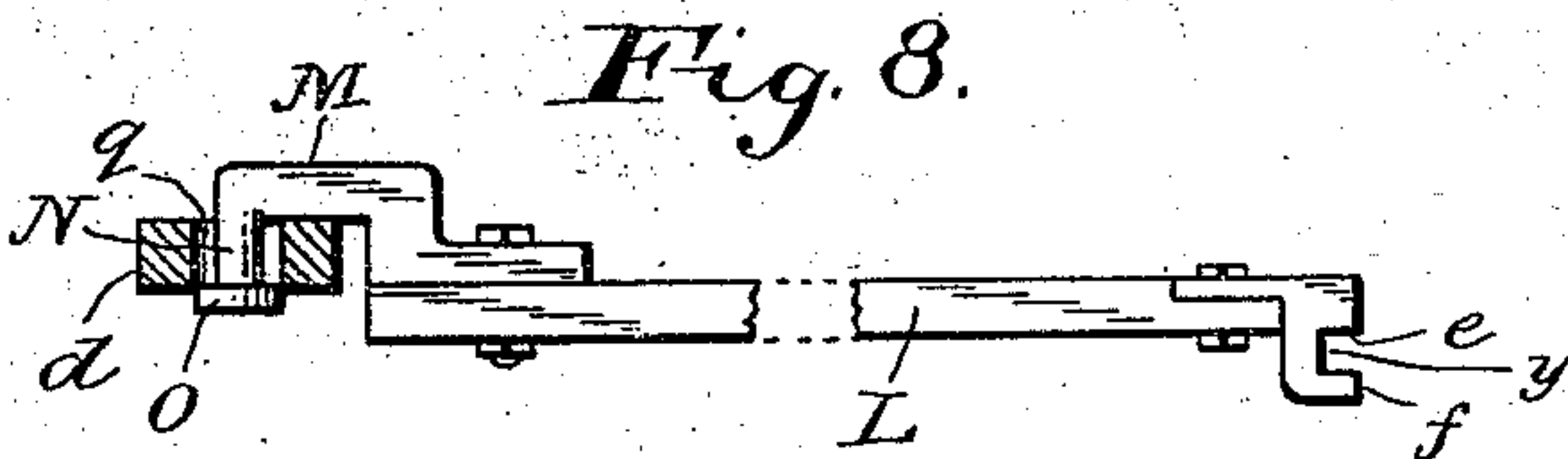
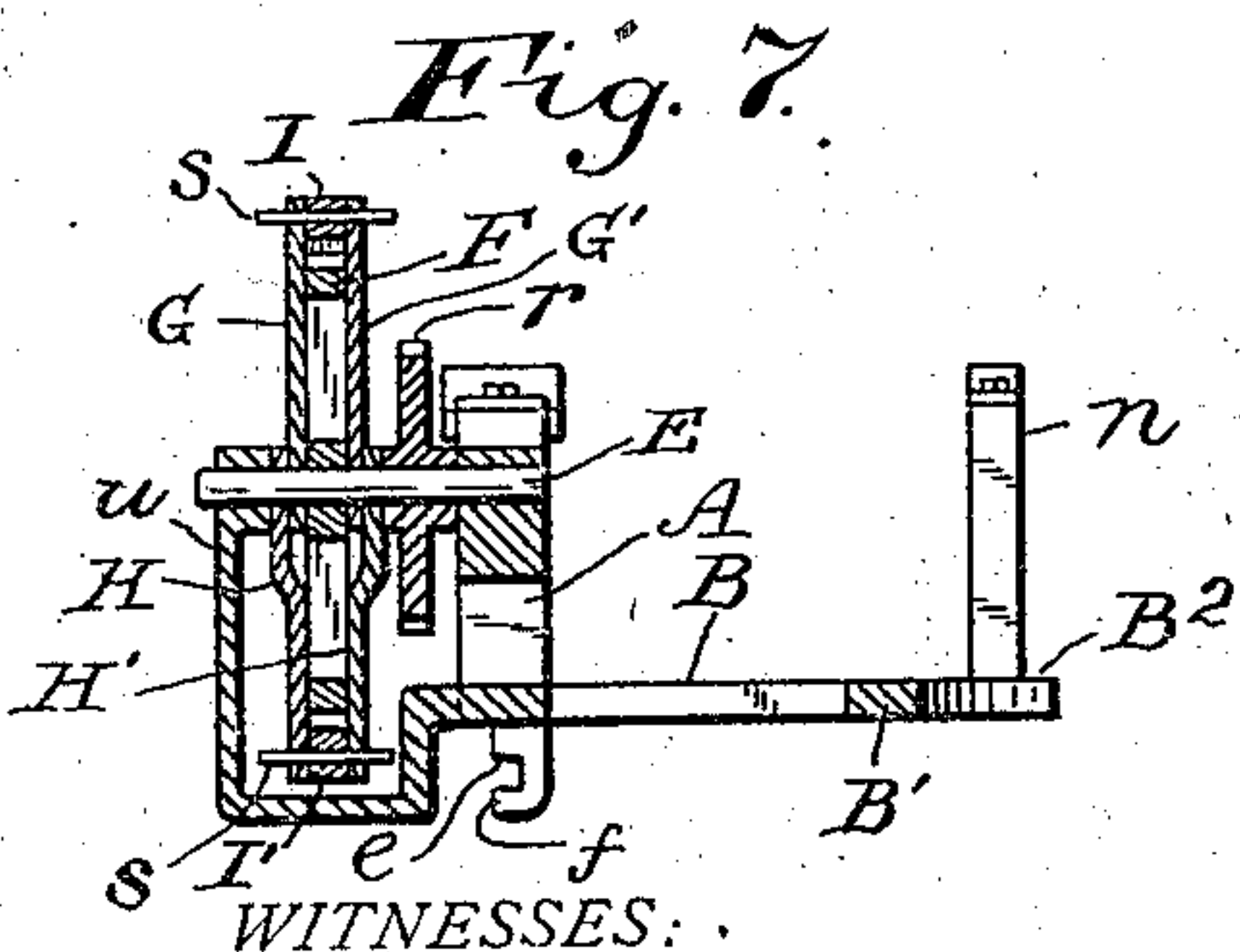
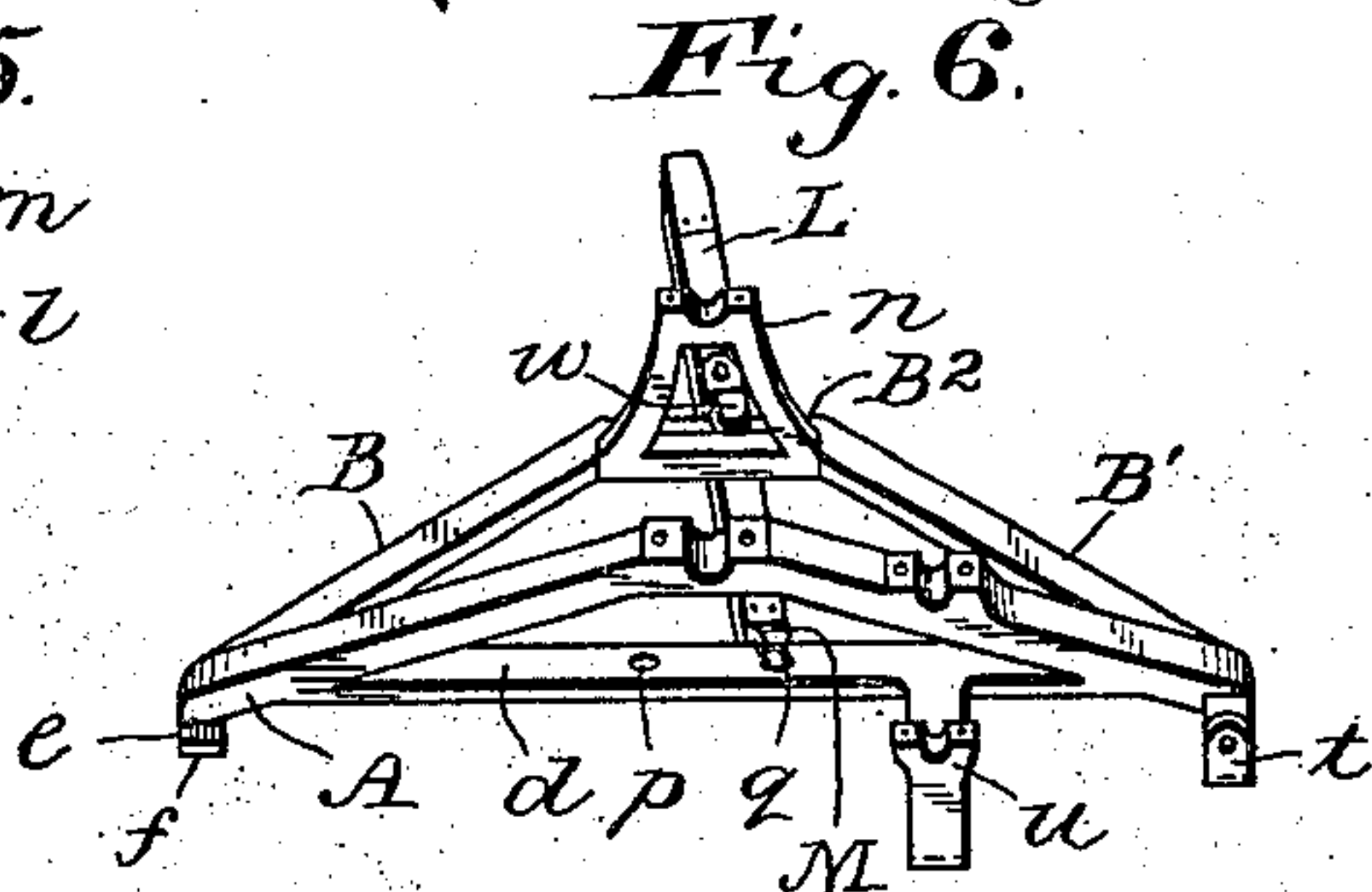
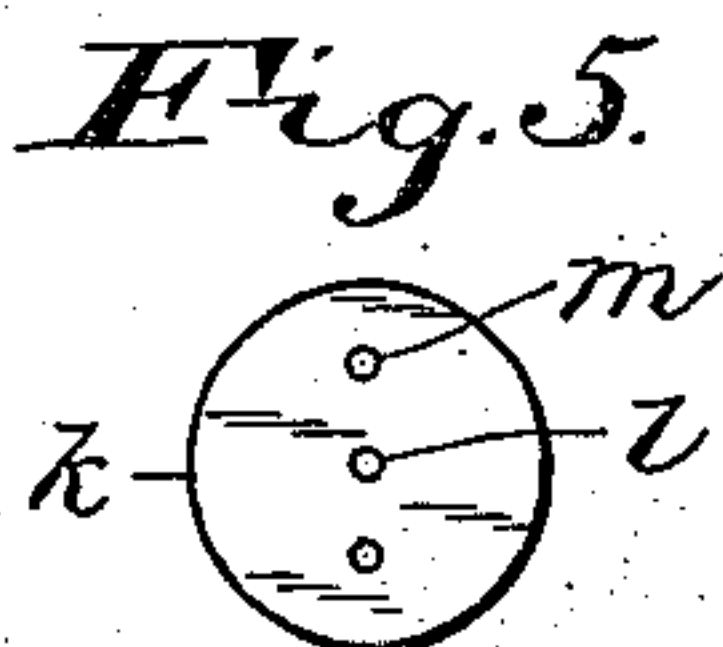
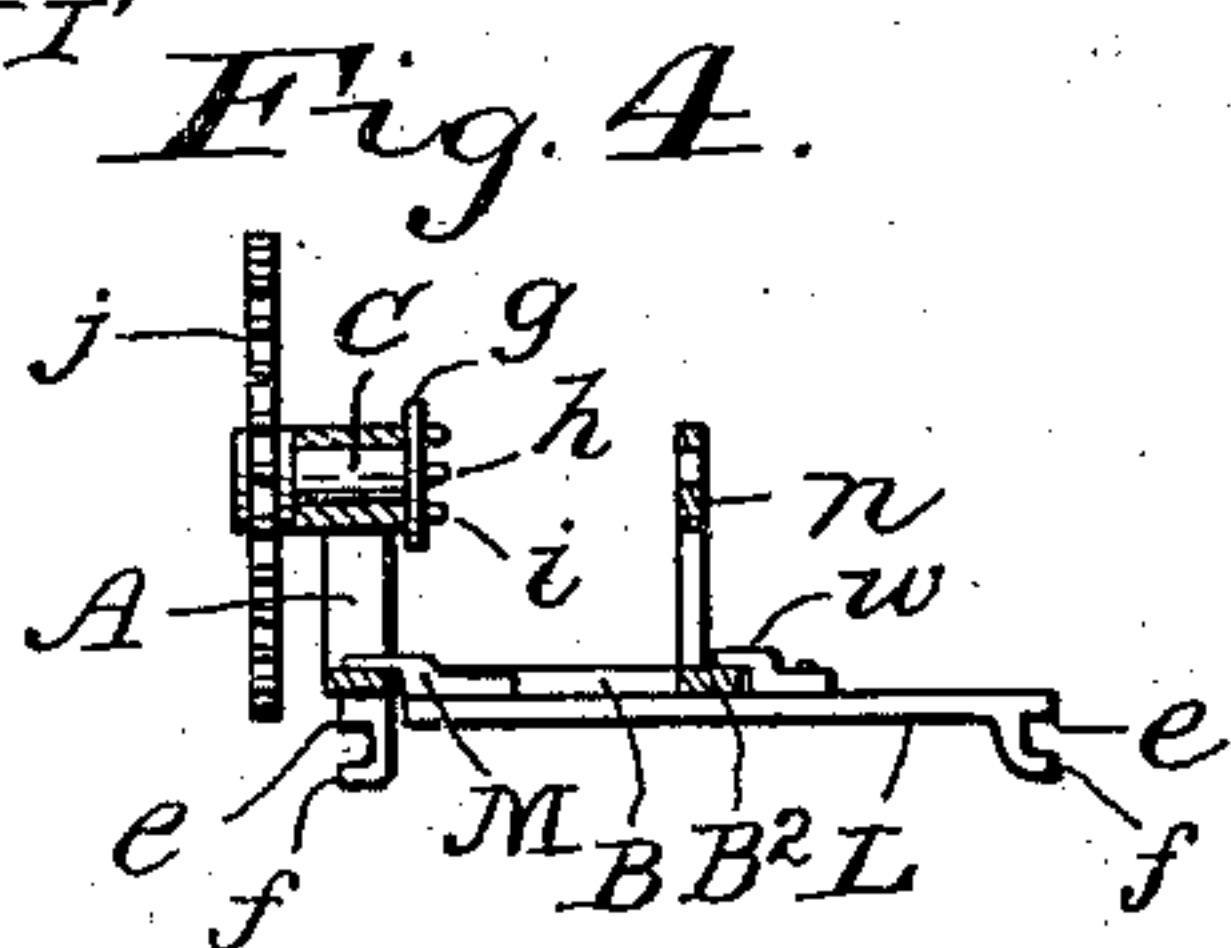
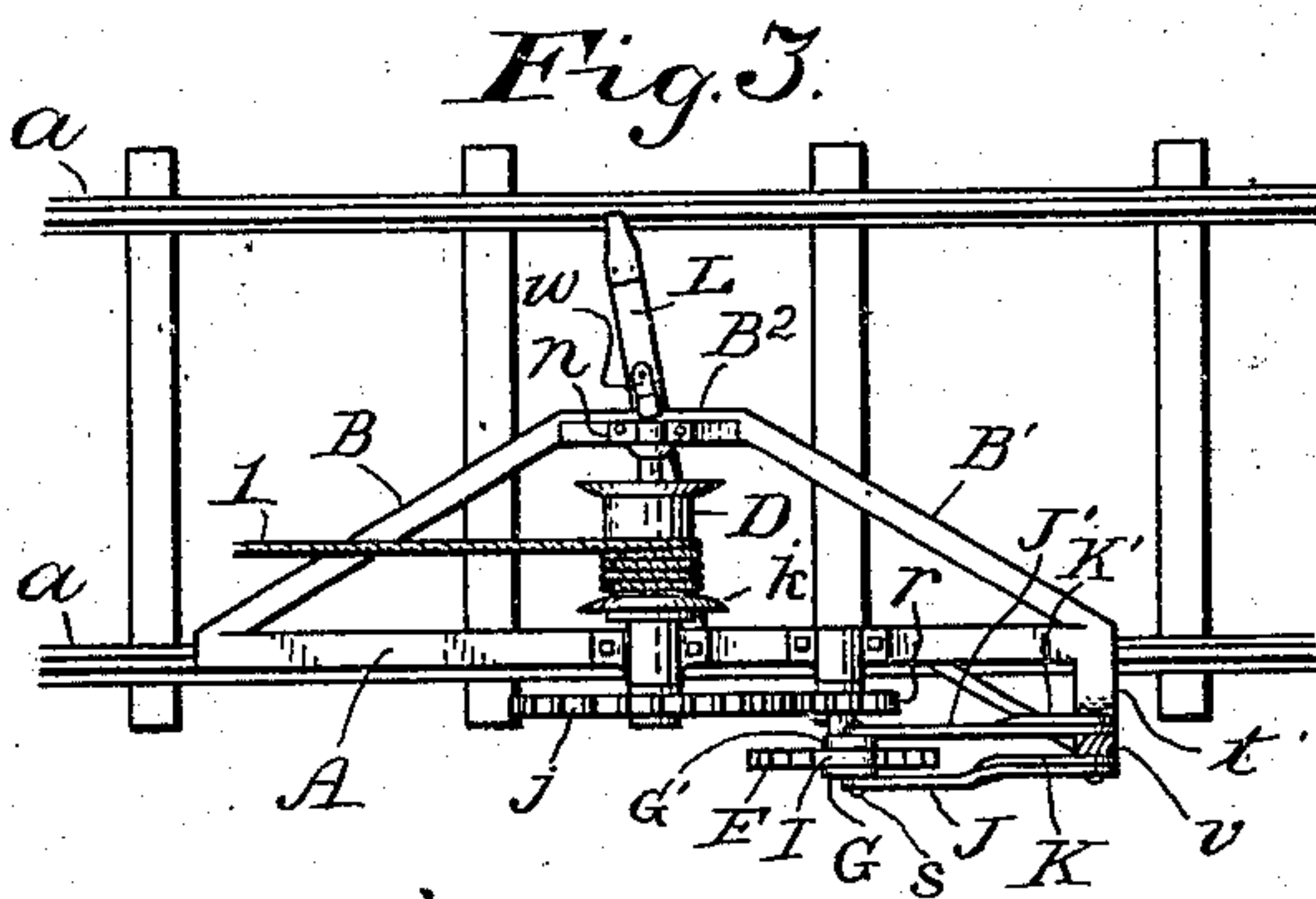
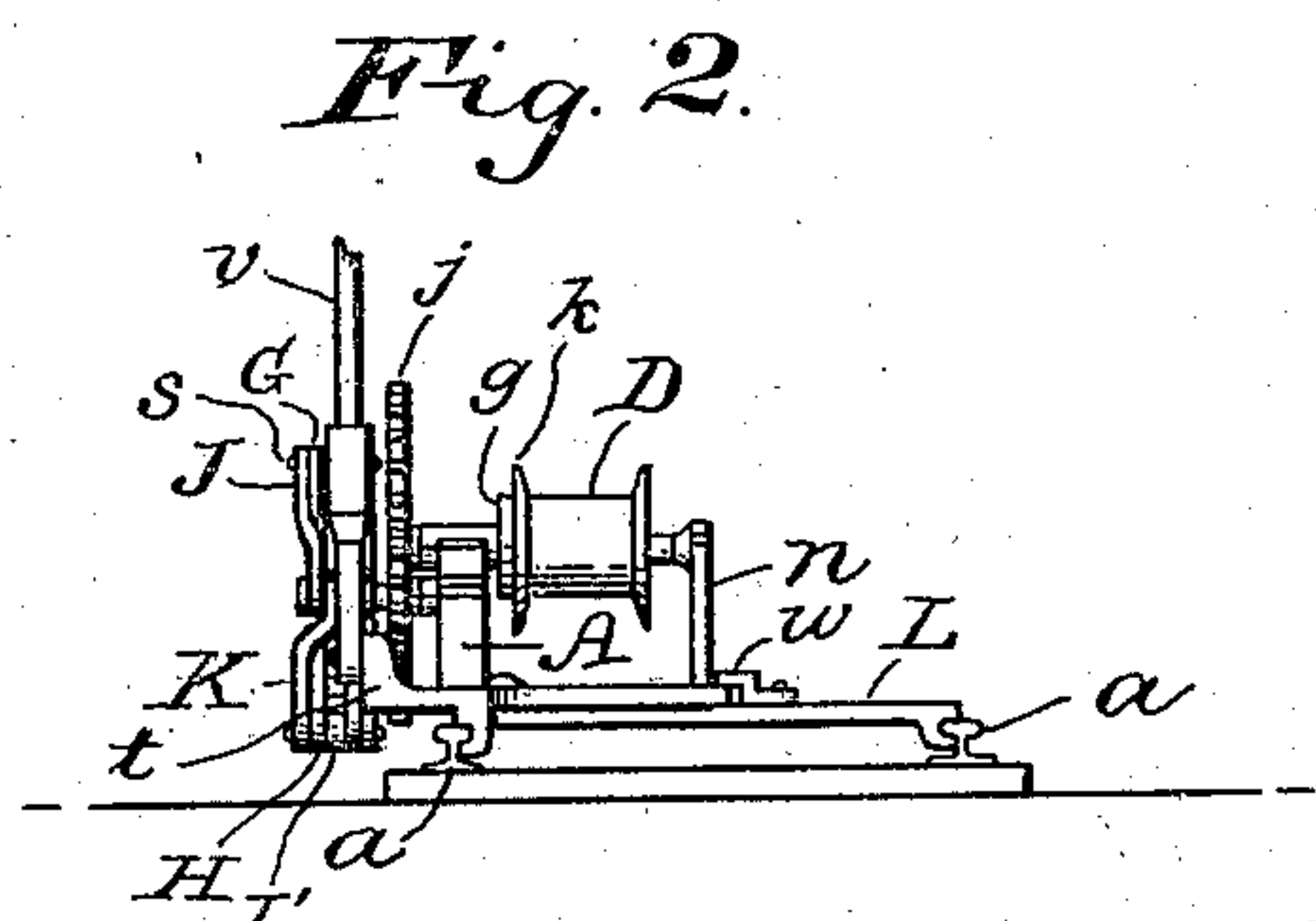
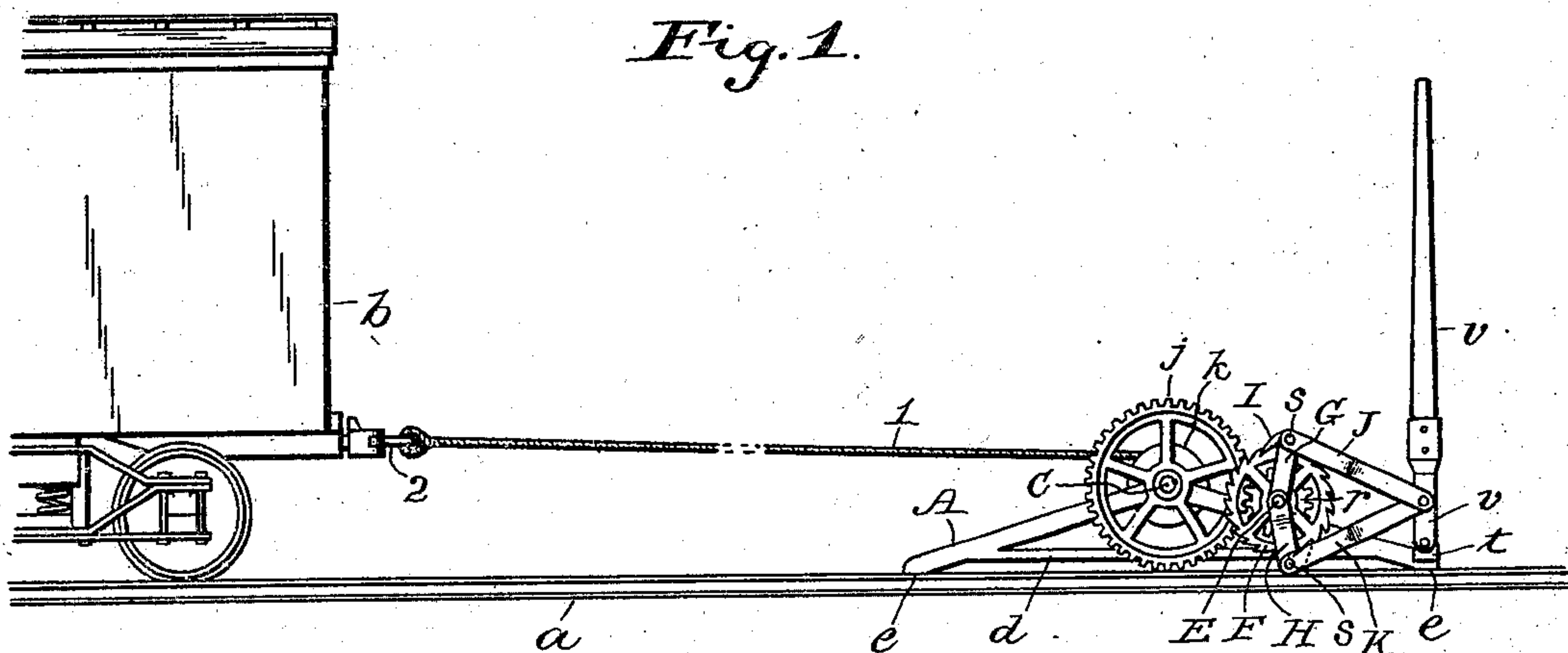


No. 726,764.

PATENTED APR. 28, 1903.

F. D. ROPER.
PORTABLE CAR MOVER.
APPLICATION FILED OCT. 9, 1902.

NO MODEL.



WITNESSES:

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FRED D. ROPER, OF INDIANAPOLIS, INDIANA.

PORTABLE CAR-MOVER.

SPECIFICATION forming part of Letters Patent No. 726,764, dated April 28, 1903.

Application filed October 9, 1902. Serial No. 126,403. (No model.)

To all whom it may concern:

Be it known that I, FRED D. ROPER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Portable Car-Movers; and I do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates to appliances that are designed to be removably attached to railway-rails, whereby cars and "dead" locomotives and motors may be moved short distances, and it has particular reference to devices for moving freight-cars on sidings at warehouses and like situations, the objects of the invention being to provide inexpensive means for the purpose above mentioned that may be handled and operated by one person and that will be durable and economical in use.

The invention consists in a drum and a connected cable, a frame supporting the drum and adapted to be frictionally connected to railway-rails, and means whereby the drum may be operated; and the invention consists also in the novel parts and in the combination and arrangement of parts, as hereinafter particularly described and claimed.

Referring to the drawings, in which similar reference characters indicate like parts, Figure 1 is a side elevation of a section of railroad-track and a portion of a car thereon, and the mover also upon the track connected with the car; Fig. 2, an end elevation of the mover arranged upon the track, minor parts of the mover being omitted; Fig. 3, a top plan view of the mover upon the track, minor parts being broken away and others omitted from the machine; Fig. 4, a transverse vertical sectional view taken centrally of the machine-frame, showing details of construction thereof; Fig. 5, an end view of the detachable drum; Fig. 6, a perspective view of the machine-frame; Fig. 7, a transverse vertical sectional view of the frame and principal operating parts in the plane of the counter-shaft; and Fig. 8, a transverse vertical sectional view of a portion of the frame, showing the clamping-bar connected thereto.

In the drawings, *a* designates the track-rails, and *b* the car.

In construction I provide a frame *A*, of suitable upright form, adapted to rest upon either one of the rails *a*, the frame having lateral substantially horizontal arms *B B'* attached thereto at or near the ends thereof and extending convergently, the ends of the arms being connected by a bar *B²*. The frame also has a horizontal bar *d* connecting the two end portions thereof in a plane above the bearings or contact parts *ee* of the frame with the rail. The parts *ee* have lugs *f* extending under the ball of the rail, so that the frame may have frictional contact with the rail at the top, the inner side, and the under side of the ball thereof.

A main rotative shaft *C* is mounted in a suitable bearing or bearings at the upper central portion of the frame *A* and extends transversely of the frame. The inner end of the shaft *C* has a flange *g*, having a center pin *h* and one or more driving-pins *i* projecting from the outer face thereof. The opposite end of the shaft is provided with a toothed or gear wheel *j*, secured thereto. An outer shaft-support may obviously also be provided, if desired. A drum *D*, having a head *k*, is provided with a center socket *l* in the face thereof and also one or more recesses *m* to receive the pins *i* for driving the drum, the head *k* bearing against the flange *g*. The opposite end of the drum has a shaft journaled in a support *n*, attached to the bar *B²*. The bar *d* has apertures *p* and *q* arranged nearly beneath the shaft *C*, one at either side of the longitudinal center of the frame *A*.

A counter-shaft *E* is mounted rotatively on the frame *A* and is provided with a pinion *r* and also with a ratchet-wheel *F*, both secured to the shaft, the pinion engaging the gear-wheel *j*. Upper radius-bars *G G'* and lower radius-bars *H H'* are pivotally mounted on the counter-shaft at the sides of the ratchet-wheel *F*, the free ends of each pair of bars, as *G G'*, being connected by pivotal pins *s*. Pawls *I I'* are mounted on the pins *s*, and any suitable type of spring may be employed to hold the pawls in contact with the ratchet-wheel, such spring-pawls being well known. A bracket *t* is attached to the frame

A, to which a lever *v* is pivoted, and connecting-rods J J' and K K' are pivoted to the lever and also to the pins *s* in pairs adjacent to the radius-bars. A bracket *u* may be attached to the bar *d* or other part of the frame

A, in which the shaft E may also be journaled. The clamping-bar L is provided with a head M, having a stud N provided with a head O, slightly smaller in diameter than the apertures *p q* in the bar *d*, the stud being considerably smaller than the apertures, so that when the head O is pushed through an aperture and then moved laterally it may engage the under side of the bar at one side of the aperture. The opposite end of the bar L has a rail-bearing *e* and a lug *f*, and the bottom of the recess *y*, between the bearing and the lug, may be roughened, if desired, to better bite the rail head or ball. A swinging button *w* is pivotally attached to the top of the bar L, and when the latter is connected to the frame A, with the bar B² resting upon the bar L, the button may be brought into engagement with the bar B² to hold it down and poise the frame.

A cable 1 is attached to and wound about the drum D and has a link 2 or similar device adapted to be connected to a car or other similar vehicle.

In practical use the frame A is to be set uprightly on a rail *a*, the bearings *e* upon the rail, and the lugs *f* under the rail head or ball at the inner side of the rail, the head M being connected to the bar *d* in a pivotal manner. The clamping-bar L may then be moved radially, so that its free end engages the inner side of the opposite rail *a* of the track, the bearing *e* on the top and the lug *f* under the rail-head. This will cause the stud N to bear against the farther side of the aperture *q*, with the head O under the bar *d*, and thus the frame A will be clamped or bound to the rail upon which it rests or between the two rails, as it were. The button *w* may then be brought into engagement with the bar B². The mover may be set so as to pull in the direction opposite to that shown by placing the stud N in the aperture *p*, in which case the bar L would be oblique in an opposite angle to that shown, so that the draft will have a tendency to tighten the grip of the machine-frame upon the rails. The cable being connected to a car, for instance, as shown, the lever *v* may be moved forward and backward, and each movement thereof will cause the ratchet-wheel, and consequently the drum, to rotate, and thus draw the car toward the machine. In order to quickly remove the machine from the track, the button *w* may be turned from engagement with the bar B², and the latter and the arms B B' may then be slightly elevated, thus relieving the pressure of the bar L between the bar *d* and the rail *a*, so that the bar L may be easily moved away from the rail, when the whole machine may be tilted or lifted from the track.

It will be understood that any suitable com-

pound gearing for increasing the relative power of the lever *v* may be arranged in connection with the counter-shaft E, such devices being well known, the simple direct gearing shown being rather illustrative of the invention than arbitrary. It will also be understood that the pinion *r* is relatively larger in the drawings than it should be in practice. It may be stated also that in Fig. 1 the machine is shown on a larger scale than that of the car, the machine in practice being comparatively small and light, so as to be easily handled by one man. The drum D being removable, the cap for the journal-bearing of the support *n* may be designed to be quickly removed, as will be understood.

Having thus described my invention, what I claim is—

1. A car-mover including a frame adapted to engage a rail of a track, a clamping-bar connected to the frame and adapted to engage the opposite rail of the track, a drum mounted in the frame, a cable attached to the drum, and operating-gearing for the drum.

2. A car-mover including a frame having bearings at the ends thereof adapted to engage the top and the under side of the head of a rail of a track, a clamping-bar connected with the frame and having a bearing at the free end thereof adapted to engage the top and the under side of the head of the opposite rail of a track, a drum mounted in the frame, a cable connected to the drum, and operating mechanism connected with the frame and the drum.

3. A car-mover including a frame, a clamping-bar attached to the frame and extending laterally therefrom, a drum mounted in the frame, a cable connected to the drum, a lever pivotally mounted on the frame, a ratchet-wheel mounted on the frame, connecting-rods pivoted to the lever, pawls connected with the connecting-rods and having engagement with the ratchet-wheel, radius-bars connected with the shaft of the ratchet-wheel and also with the pivots of the pawls, and gearing having operative connection with the ratchet-wheel and the drum.

4. A car-mover including a frame having lateral members and also bearings adapted to engage a rail of a track, a drum mounted in the frame, a cable attached to the drum, a clamping-bar having connection with a main portion of the frame and also with a lateral member and also having bearings adapted to engage the opposite rail of a track, a lever pivoted to the frame, a ratchet-wheel mounted on the frame, connections between the lever and the ratchet-wheel, and connections between the ratchet-wheel and the drum.

5. A car-mover comprising a frame, a drum, a cable, a clamping-bar pivotally connected to the frame, a lever pivoted to the frame, a counter-shaft mounted in the frame, a ratchet-wheel mounted on the counter-shaft, radius-bars mounted on the counter-shaft, pawls connected with the radius-bars and having

contact with the ratchet-wheel, connecting-rods pivoted to the lever and also connected operatively with the pawls and also with the radius-bars, and gearing operatively connecting the counter-shaft with the drum.

5 6. A car-mover comprising a frame having lateral members, a clamping-bar having connection with the main portion of the frame and also with the lateral members, a rotative
10 shaft mounted in the main portion of the frame, a drum detachably connected with the rotative shaft and also removably supported by the lateral members, a cable attached to

the drum, a lever pivoted to the frame, a gear-wheel secured to the rotative shaft, a ratchet- 15 wheel mounted on the frame, mechanism connecting the lever with the ratchet-wheel, and mechanism operatively connecting the ratchet-wheel with the gear-wheel.

In testimony whereof I affix my signature 20 in presence of two witnesses.

FRED D. ROPER.

Witnesses:

WM. H. PAYNE,
E. T. SILVIUS.