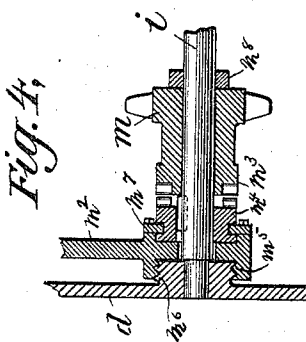
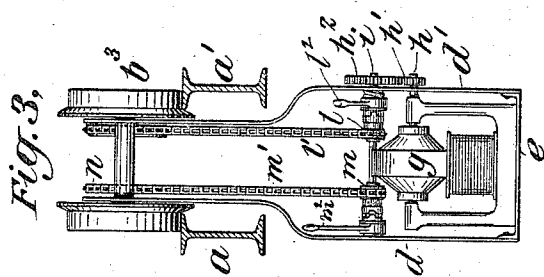
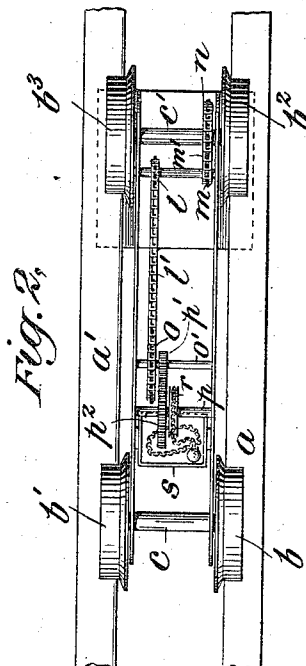
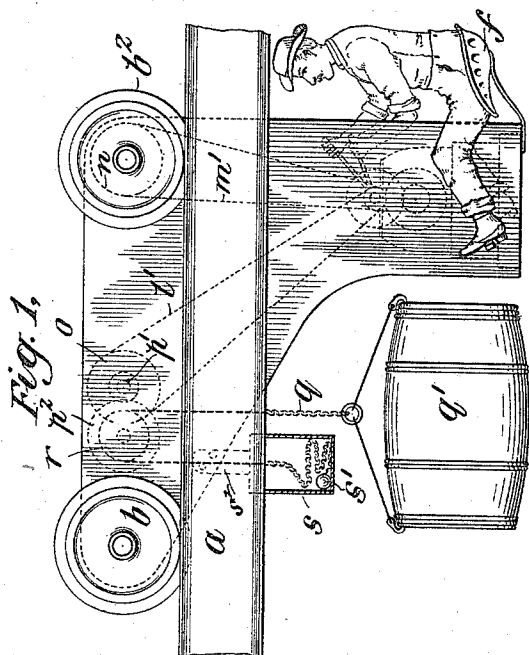


(No Model.)

T. S. MILLER.
CONVEYING APPARATUS.

No. 580,415.

Patented Apr. 13, 1897.



WITNESSES:

O. H. Raymond
M. Wilson

INVENTOR

Thomas Spencer Miller
BY *Lafford & Bull*

ATTORNEYS,

UNITED STATES PATENT OFFICE.

THOMAS SPENCER MILLER, OF SOUTH ORANGE, NEW JERSEY.

CONVEYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 580,415, dated April 13, 1897.

Application filed December 17, 1895. Serial No. 572,402. (No model.)

To all whom it may concern:

Be it known that I, THOMAS SPENCER MILLER, a citizen of the United States, and a resident of South Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Conveying Apparatus, of which the following is a specification.

My invention relates to improvements in hoisting and conveying apparatus of the kind in which the actuating-motor is carried by the load-carriage.

One of the advantages that may be derived from my invention is location of the hoist-wheel or hoist-actuator above the track. Other advantages and features will be apparent from the following description.

In the accompanying drawings, Figure 1 is a side view of the apparatus. Fig. 2 is a plan view. Fig. 3 is an end view. Fig. 4 is a detail.

a a' are the tracks.

b b' are the wheels fixed to axle *c*.

b² b³ are the wheels fixed to axle *c'*.

d d' are the side plates or frames of the car, of the form shown, suspended from the axles.

e is the bottom frame or plate of the car.

f is the seat for the operator, fixed to the car.

g is an electric motor on the car.

h is the shaft driven by the motor.

h' h² are gears between the shafts *h* and *i*.

l and *m* are sprocket-wheels free to revolve on the shaft *i*. They are respectively thrown into and out of engagement with the shaft by the hand-levers *l²* and *m²*, each operating a clutch mechanism similar to that shown in Fig. 4. Clutch member *m³* is fast to the sprocket-wheel. Coöperating clutch member *m⁴* is splined to shaft *i*. Lever *m²* is free to turn on the shaft, but carries on one side a screw-thread *m⁵*, engaging with a screw-thread *m⁶*, fast to the frame. On the other side it carries a fork *m⁷*, engaging with a groove in clutch member *m⁴*.

m⁸ is a collar fixed to the shaft *i*.

n is a sprocket-wheel fixed to axle *c'*.

o is a sprocket-wheel fixed to shaft *o'*.

Sprocket-chain *l'* connects sprocket-wheels *l* and *o*. Sprocket-chain *m'* connects sprocket-wheels *m* and *n*. A shaft *p* is geared to the shaft *o* by the gears *p' p²*.

q is the hoist-line, which may be a rope or chain, though preferably a chain.

q' is the load.

r is a wheel or sheave fixed to shaft *p* above the track over which the hoist-chain passes and which engages the chain in such manner as to compel it to move as the wheel moves.

s is a receptacle for the loose end of the chain, which receptacle is fixed to the frame of the carriage by the connection *s²*.

s' is a weight attached to the end of the chain.

The operator by the movement of the clutch-levers causes the motor to operate either the hoist-wheel *r* or the traction-wheel *b³*. Thus the operator causes the motor to hoist the load to the point desired and then causes the car to travel along the track to the point desired.

By placing the hoist-wheel above the track much economy of space is secured, the weight can be hoisted up as high as the track itself, and the motor and operator can be placed close up to the track, as shown in Fig. 1.

I claim—

In a hoisting and conveying apparatus, in combination, a track, a carriage running thereon and extending below the level of the track, a motor mounted on the carriage below the level of the track, a support for the operator also mounted upon said carriage below the level of the track, a hoist-line actuator mounted on said carriage above the level of the track, a hoist-line passing over said hoist-line actuator and hanging below the level of the track at both ends and means whereby said hoist-line actuator is driven by said motor, substantially as described.

THOS. SPENCER MILLER.

Witnesses:

ROBT. W. KALTENBACH,
J. H. DICKINSON.