(No Model.) 3 Sheets—Sheet 1.

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TRUCK.

No. 572,104. Patented Dec. 1, 1896.

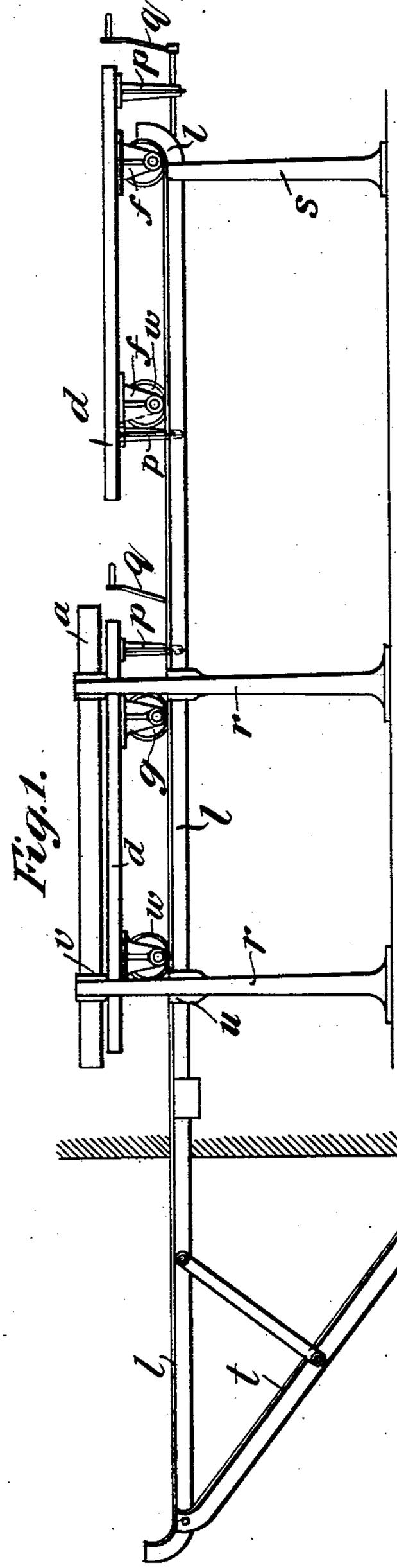

Fig. 1.

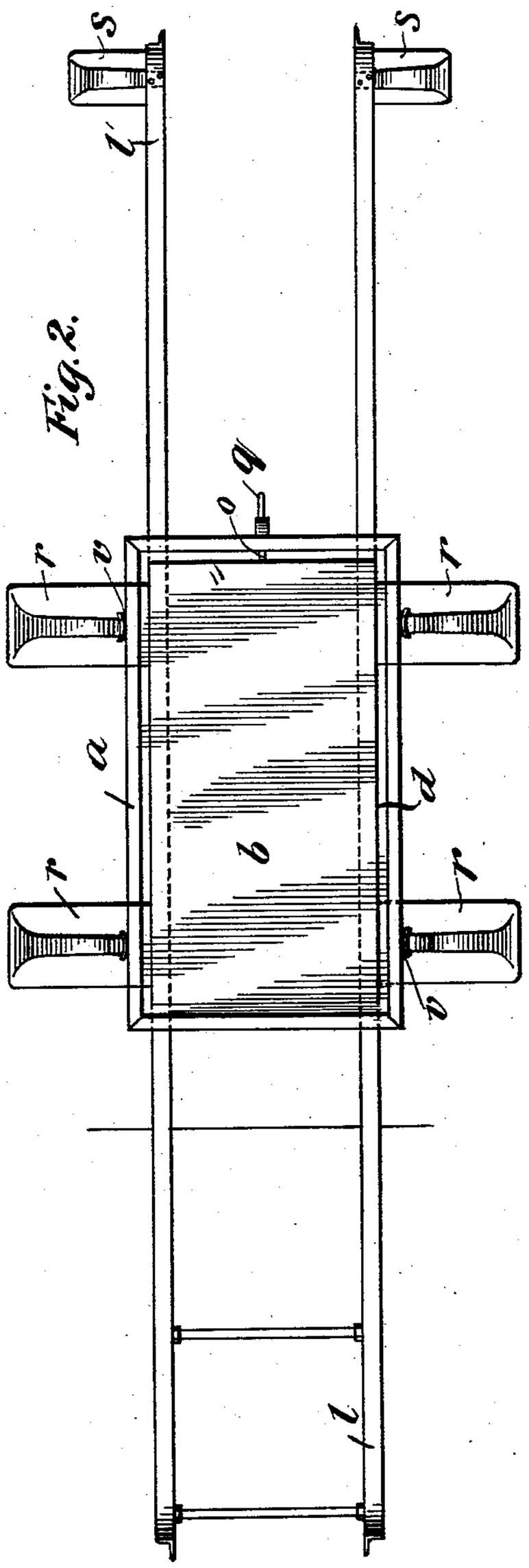

Fig. 2.

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Richard J. Elliott.

Victor Chartener Inventor
By his Attorney Henry Schreiter

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Fig. 3.

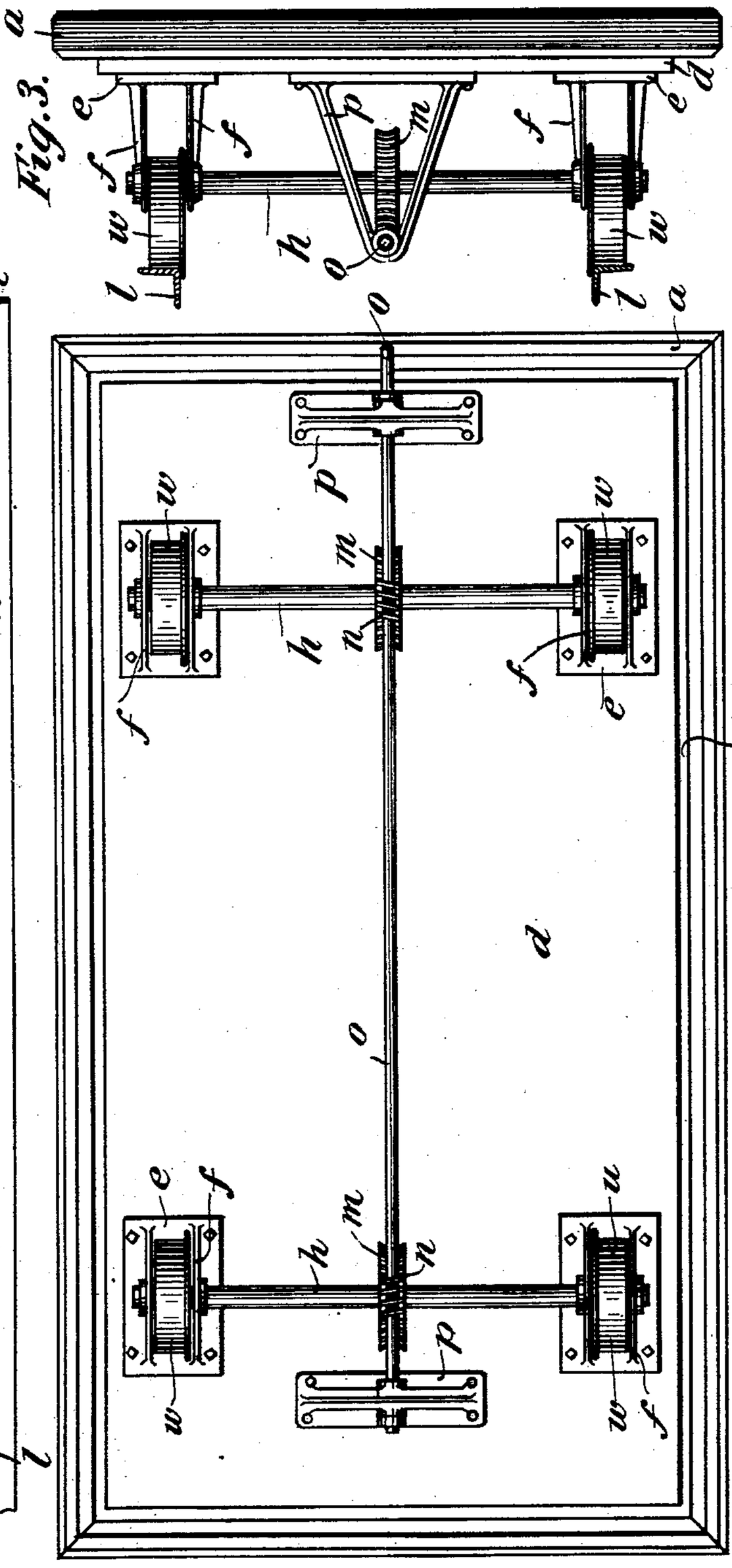

Fig. 4.

Fig. 5.

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Fig. 6.

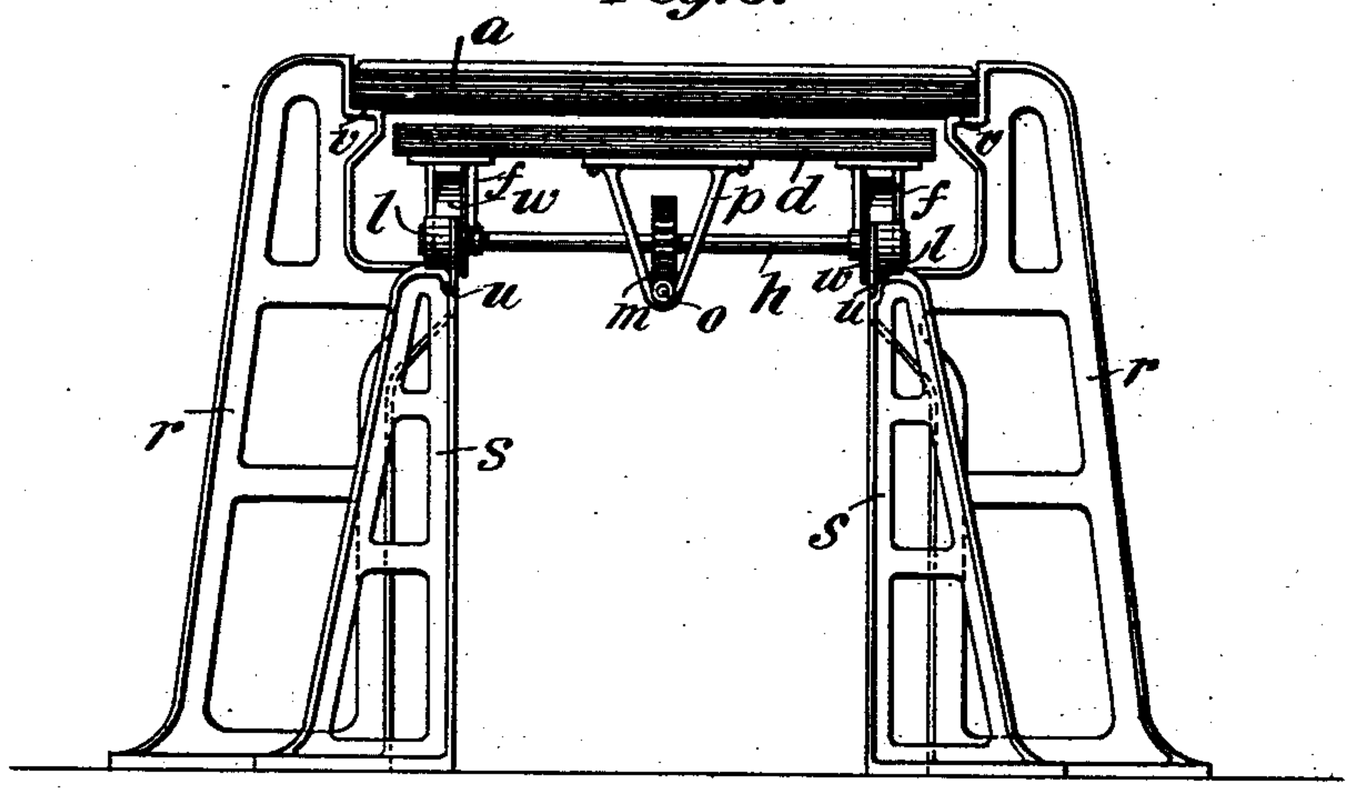


Fig. 7.

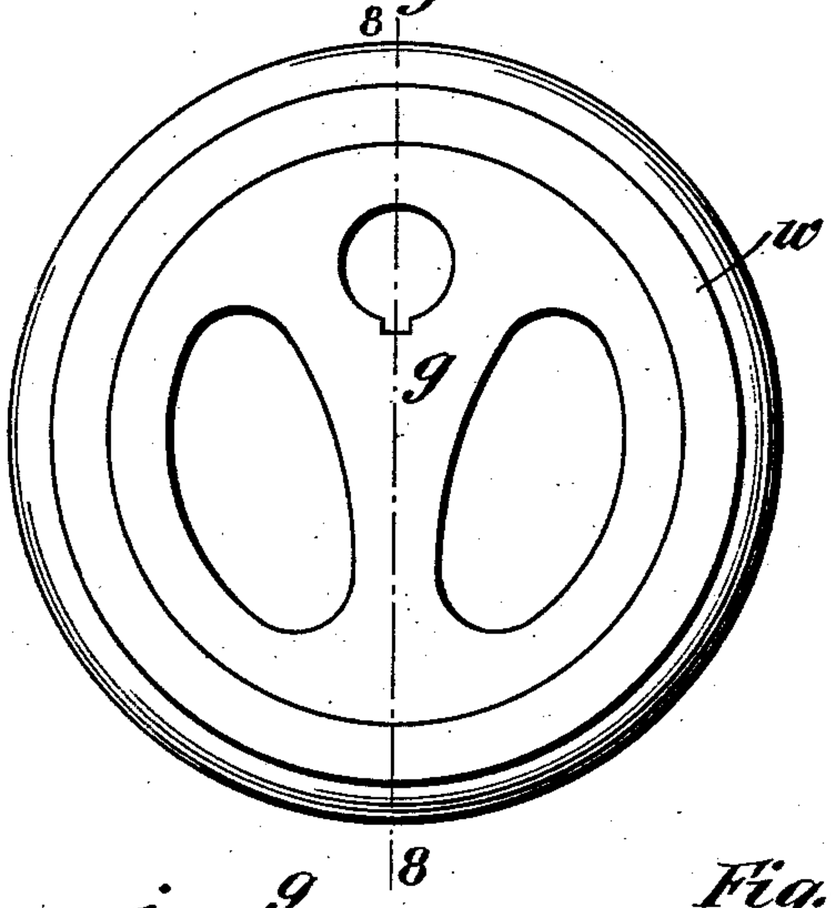


Fig. 9.

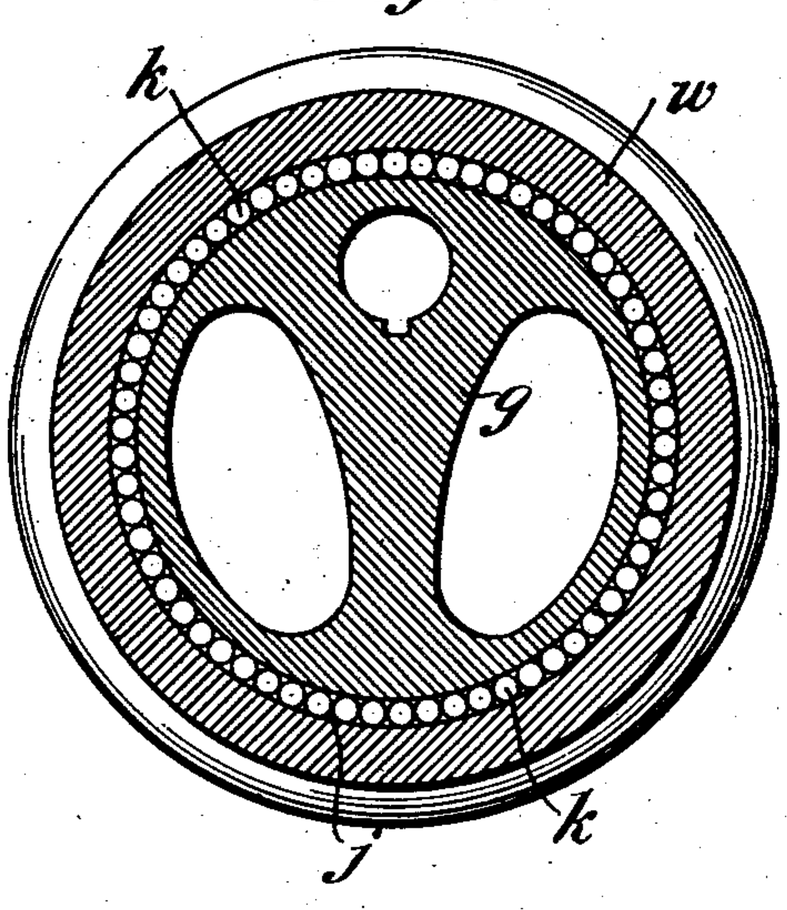
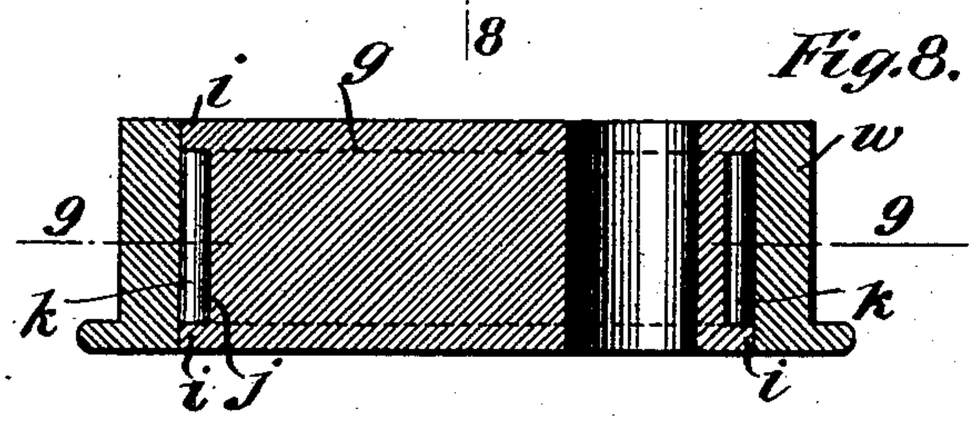


Fig. 8.



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UNITED STATES PATENT OFFICE.

VICTOR CHARTENER, OF PITTSBURG, PENNSYLVANIA.

TRUCK.

SPECIFICATION forming part of Letters Patent No. 572,104, dated December 1, 1896.

Application filed March 21, 1896. Serial No. 584,311. (No model.)

To all whom it may concern:

Be it known that I, VICTOR CHARTENER, a citizen of the United States, residing in Pittsburg, county of Allegheny, State of Pennsylvania, have invented certain new and useful Improvements in Trucks, of which the following is a specification.

My invention relates to trucks; and it consists of mechanism for elevating and lowering trucks and their frames respectively.

My invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of my improved truck with a photographic-printing frame, the truck being shown in two positions on the tracks. Fig. 2 is a top view thereof. Fig. 3 is an end view, and Fig. 4 is a side elevation and part section of the truck and of the frame. Fig. 5 is a bottom view of the truck and frame. Fig. 6 is an end elevation showing the structure and the sun-printing apparatus mounted thereon. Fig. 7 is a side elevation of the truck-wheel and of the eccentric. Fig. 8 is a section on line 8 8 indicated in Fig. 7. Fig. 9 is a section on line 9 9 in Fig. 8, showing the roller-bearing between the truck-wheel and the eccentric.

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

For conveying of heavy or easily-breakable loads or of such that cannot be handled trucks must be provided whose platforms can be lifted and lowered, and different hoisting apparatuses were devised for the purpose.

The devices used heretofore for the handling of heavy or breakable loads require, however, complicated apparatus for the lifting of the platform, and their operation is dependent on special hoisting apparatus. The mechanism I have devised for this purpose is contained in the truck itself and so constructed that even a heavy load will be safely and easily handled.

The truck consists of four wheels *w*, mounted in pairs on eccentrics *g*, rigidly keyed to axles *h*, pillowed in brackets *f*, combined in pairs and supporting the platform *d*, screwed to plates *e*, and of the lifting-gear, comprising worm-wheels *m*, keyed to the axles *h*, worms *n*, set on shaft *o*, pillowed in hangers *p*, screwed to the platform of the truck.

In the drawings, my improved truck is illustrated as designed for use in an apparatus for making photographic prints from large negatives, such as prints of large working drawings requiring a very large glass plate and correspondingly large frame. In this case the wooden table *d*, forming the platform of the truck, is fitted into the frame *a*, holding the glass plate *b*.

Platform or table *d* is screwed to the four plates *e*, combining brackets *f*, bearing the boxes for axles *h* in pairs to a set, holding the wheels *w* and eccentrics *g* in their relative position. Eccentrics *g* are rigidly keyed to the axles *h*. They are grooved on their circumference, and the surface of the groove is smoothly finished and hardened. The truck-wheels *w* form thus practically only a rim around the eccentrics, gliding with their smoothly-finished inner surfaces on antifriction-rollers *k*, traveling in groove *j* between flanges *i*. Axles *h* are thus set eccentrically in relation to the truck-wheels, and as the platform of the truck rests on the axles the vertical position of the platform will be changed by changing the position of the eccentrics within the truck-wheels. This is done by one gear, constructed in the following manner: On axles *h* are set worm-wheels *m*, rigidly keyed thereto, and are driven by worms *n*, set in corresponding position on the shaft *o*, pillowed in hangers *p*, screwed to the platform. The worm-gears are right and left handed, respectively, in order to make the motion of the eccentrics within the truck-wheels go on in opposite directions, whereby their action on the truck-wheels *w* is counteracted. The end of the shaft *o* is squared and handle *q* fitted to it. Worm-shaft *o* is operated by the handle *q*, eccentrics *g* being turned thereby to equal angles, (though in opposite directions,) and by thus changing their relative position to the truck-wheels *w* lift the platform or table of the truck.

This construction of the truck is the principal part of my invention and may be applied to any purpose where it is required to change the vertical position of the platform of the truck. In cases where it is necessary to lift only one end of the platform, as may be by wagons conveying the charge to a fur-

nace, &c., this could be done by leaving out the worm-gear on one axle or by making worm *n* adjustably revoluble on the shaft *o*.

In the sun-printing apparatus illustrated on the drawings my improved truck runs on track *l*, made of angle-iron, and passes through the wall or window of the building, and the rails are bent upward at each end to prevent sliding off of the truck. The track is supported on the outside of the building by suitable bracing *t* and within the building by standards *r* and *s*. Standards *s* support only the tracks, secured to their tops. Standards *r*, which are correspondingly higher, support the tracks on shoulders *u* and the frame *a*, holding the glass plate *b* on shoulders *v*. The relative height of these shoulders *u* and *v* is calculated to give the plate *d* suitable clearance underneath the frame *a* when in its lowest position on the track, and the frame *a* is correspondingly high, holding the glass plate in such position that platform *d* will be gently pressed against the glass plate *b* when lifted on the truck.

I claim as my invention and desire to secure by Letters Patent—

1. In a sun-printing apparatus, the combination with a frame, adapted to hold a glass plate, and supported on standards, and with tracks, mounted underneath the frame, of a carriage, comprising a platform, brackets, supporting the platform; axles, pillowed in the brackets; eccentrics, rigidly secured to the axles; wheels, mounted on the eccentrics; worm-wheels, rigidly secured to the axles; a shaft mounted transversely to the axles in hangers secured to the platform, a worm, gearing with the worm-wheel, rigidly secured to the transverse shaft, and a crank for rotating the transverse shaft, whereby the eccentrics are simultaneously turned and the platform of the carriage lifted or lowered.

2. The combination with a truck, composed of wheels mounted in pairs of two on eccentrics, of worm-wheels, rigidly secured to the axles, a transversely-mounted shaft, worms, gearing with the worm-wheels, rigidly secured to the shaft and means for rotating the transverse shaft whereby the platform of the truck is lifted or lowered.

In witness that I claim the improvements described in the foregoing specification I have signed my name in the presence of two subscribing witnesses.

VICTOR CHARTENER.

Witnesses:
E. T. SCHAFFNER,
HENRY KALKHOF.