

H. H. TUNIS.
SINGLE RAIL CAR.
APPLICATION FILED DEC. 31, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 2.

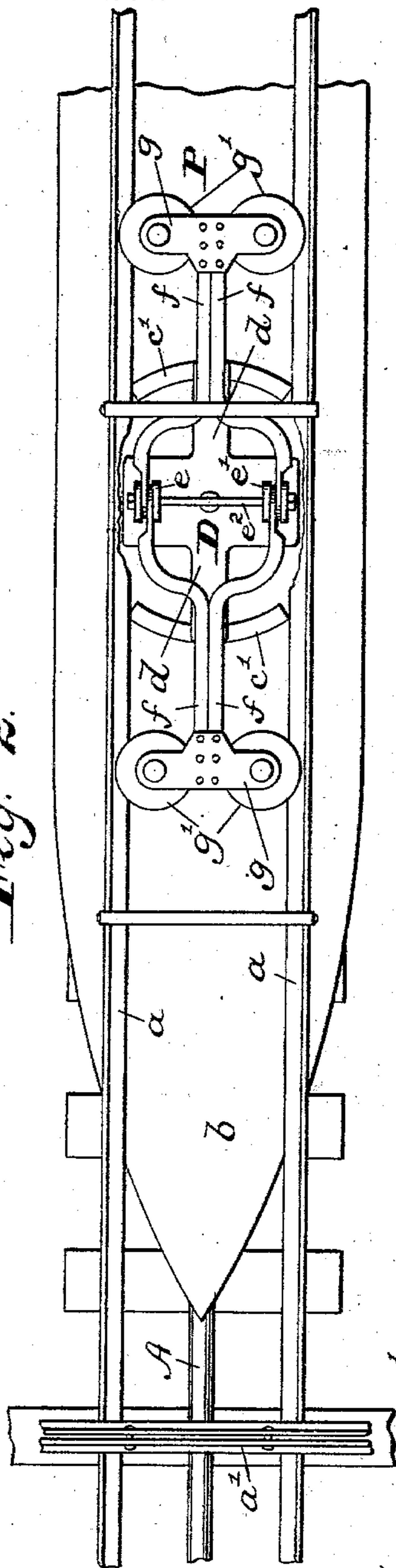


Fig. 1.

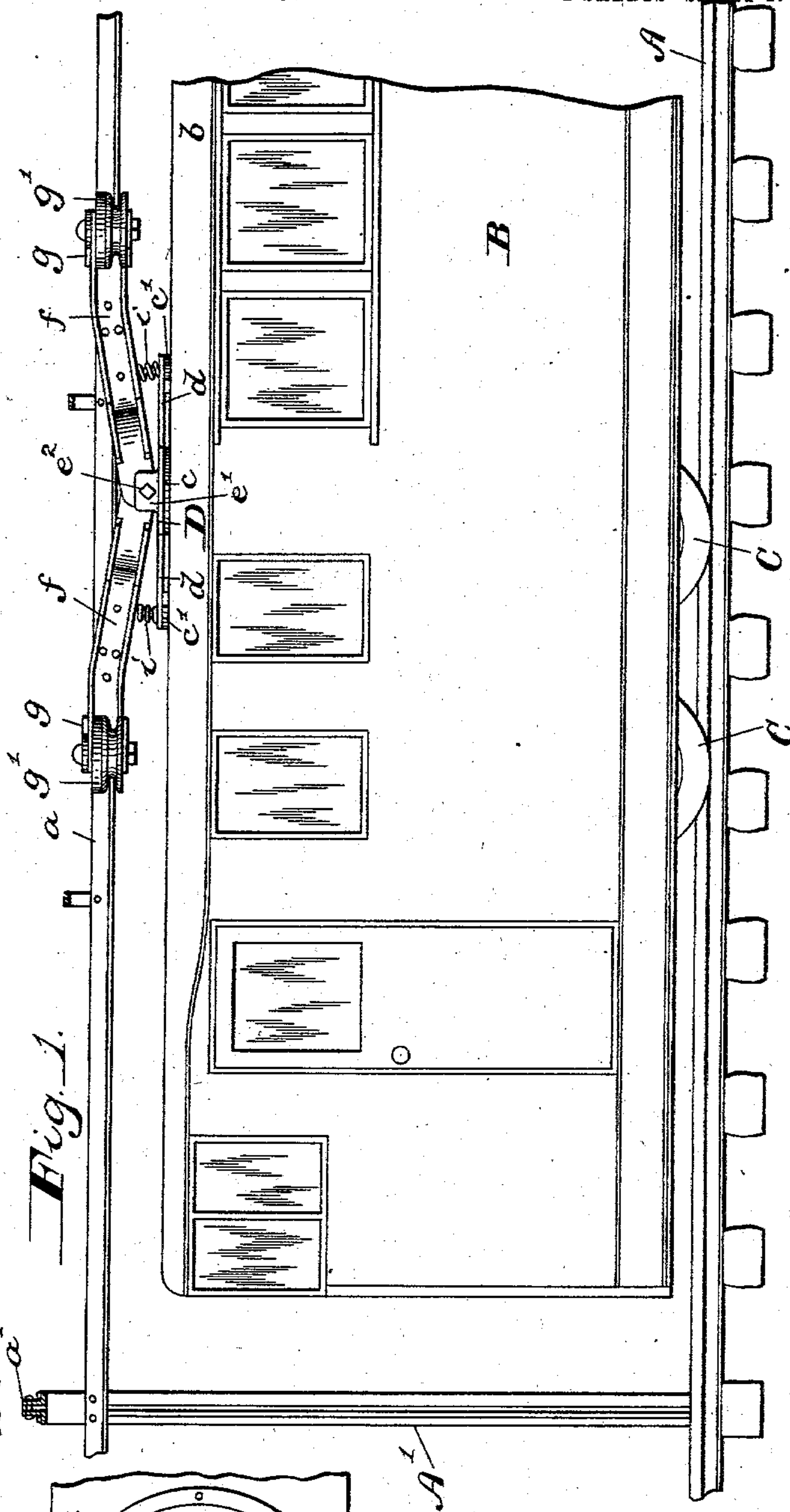
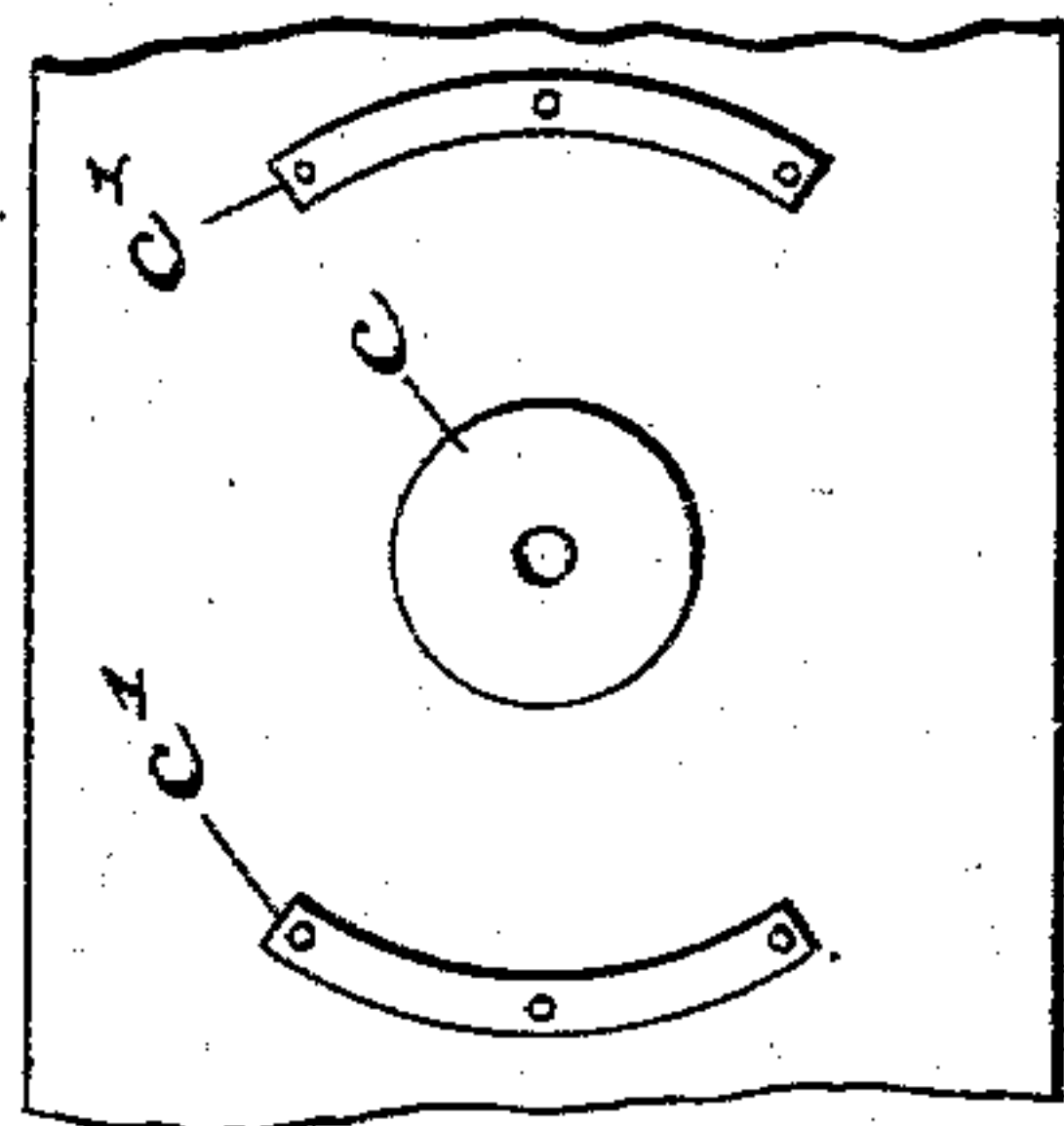


Fig. 3.



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No. 730,586.

PATENTED JUNE 9, 1903.

H. H. TUNIS.
SINGLE RAIL CAR.

APPLICATION FILED DEC. 31, 1902.

NO MODEL.

2 SHEETS—SHEET 2.

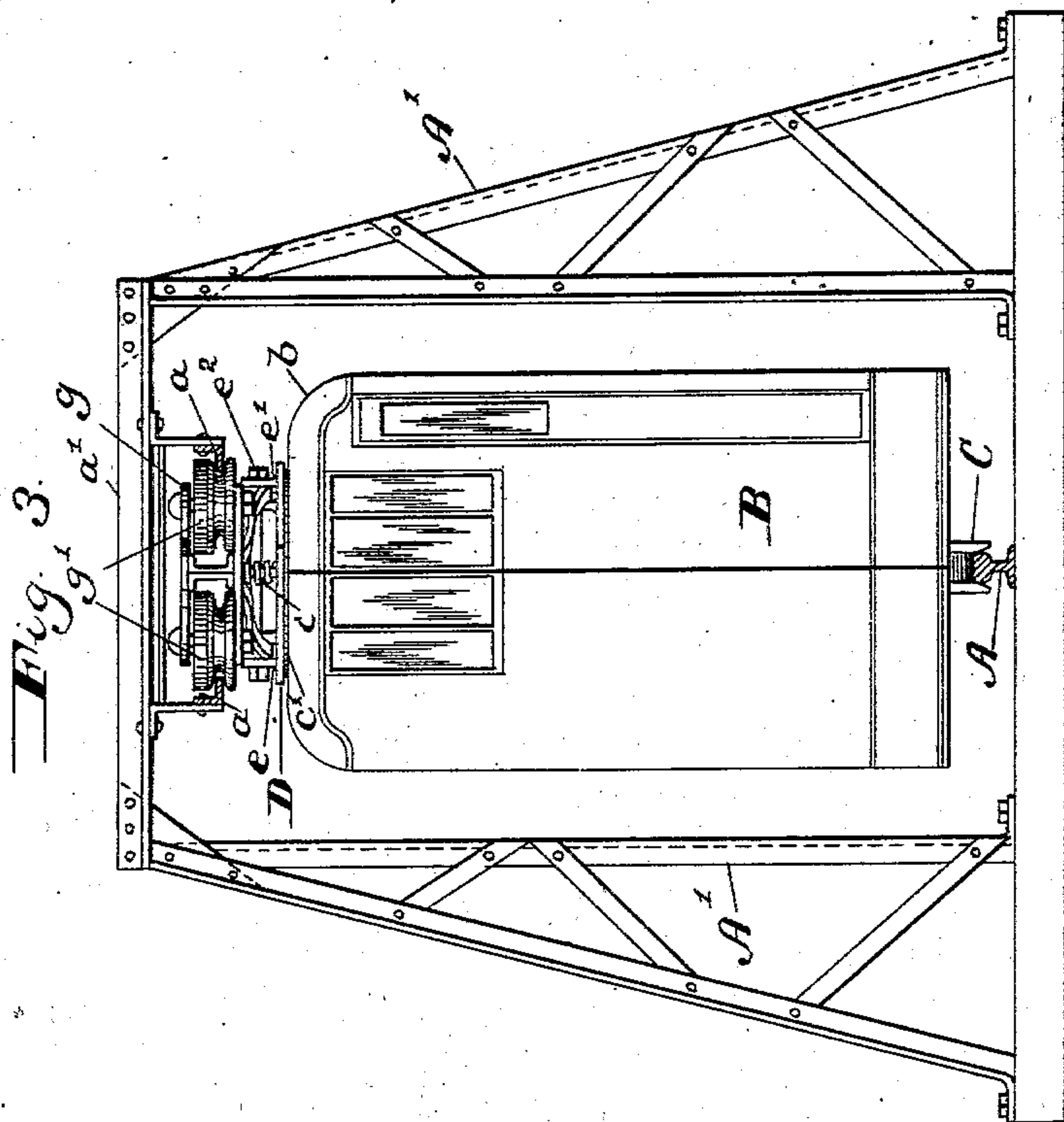
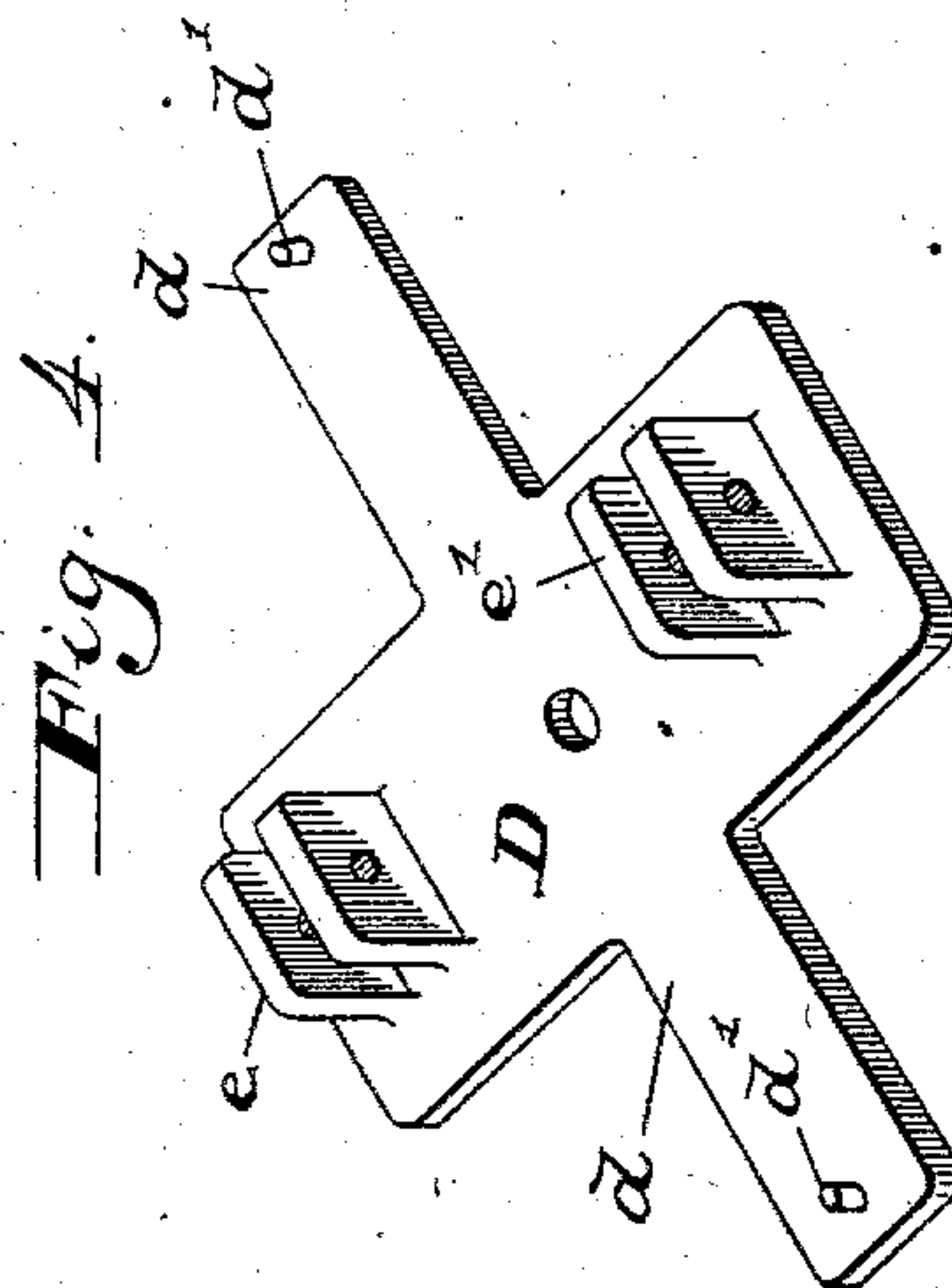
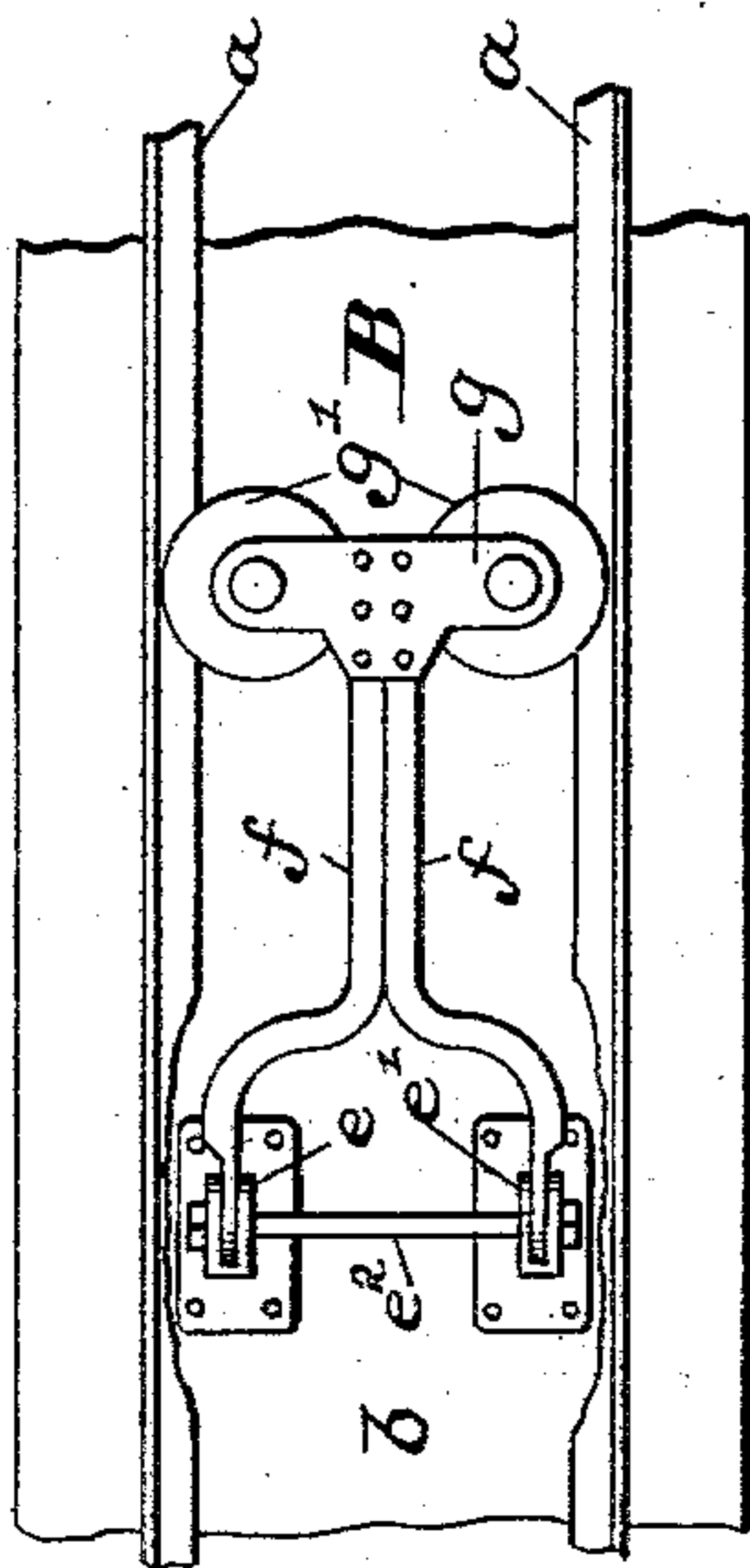


Fig. 6.



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UNITED STATES PATENT OFFICE.

HOWARD H. TUNIS, OF WINDSOR HILLS, MARYLAND.

SINGLE-RAIL CAR.

SPECIFICATION forming part of Letters Patent No. 730,586, dated June 9, 1903.

Application filed December 31, 1902. Serial No. 137,266. (No model.)

To all whom it may concern:

Be it known that I, HOWARD H. TUNIS, a citizen of the United States, residing at Windsor Hills, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Single-Rail Cars, of which the following is a specification.

This invention relates to improvements in single-track railways which employ a central bearing-rail and side balancing devices.

The invention consists in the novel construction and combination of parts, as hereinafter described and claimed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 illustrates a side elevation of a railway and part of a car employing my improved device. Fig. 2 is a plan view of same. Fig. 3 is a front elevation of same. Fig. 4 is a perspective view of the plate which carries the balancing-wheels. Fig. 5 is a plan view of a portion of the top of the car, showing the bearing-plates; and Fig. 6 illustrates a plan view of a modified form of balance device.

In the drawings, A designates the bearing-rail, which may be on a road-bed or elevated, as desired, and may be of any suitable construction. A structural angle-iron frame A' of any suitable construction and located at intervals along the road-bed supports a pair of overhead balance-rails *a*. These rails are constructed of angle-iron and are suspended from an overhead beam *a'*. The car B is supported at either end by a pair of flanged wheels C, which are connected to suitable power mechanism.

The car may be of any suitable construction, but is preferably long and narrow and at each end is pointed.

Secured to the roof *b* of the car are a circular bearing-plate *c* and two segment bearing-plates *c'*.

A plate D, having two oppositely-disposed arms *d*, is pivotally secured so as to turn on the circular plate *c*, and the arms *d* of said plate project over the segment-plates *c'* and have frictional bearing thereon. This plate D is also provided at opposite sides with a pair of vertically-projecting lugs *e* and *e'*, each pair of which forms a bearing, and the ends of the two arms of said plate are each provided with a pin *d'*.

Two arms *f* each have one of their ends pivotally secured in each pair of lugs *e* and *e'*, and at their free ends each of said arms is provided with a head *g*, which carries a pair of grooved balancing-wheels *g'*. These wheels *g'* revolve in a horizontal plane and contact with the balance-rails *a*. These arms *f* are constructed of two channel-irons the flat surface of which are riveted together from the free end toward the pivoted end, and at the latter end said channel-irons spread apart and the end of one channel takes between the lugs *e*, while the end of the other channel takes between the lugs *e'*, and a bolt *e²* serves to pivot the ends of said channels between said ears.

By reference to Figs. 1 and 2 it will be seen that two arms *f* are pivotally secured on the plate D and project in opposite directions. A spiral spring *i* takes around each of the pins *d'* on the arms *d*, and the upper ends of said springs take beneath the arms *f* and press the same upward, and thereby relieve the rails *a* of the weight of the arms and also prevents wear on the grooves in the wheels *g'*. It will be seen that the arms *f* and wheels *g'* are supported by the plate D and also that the latter is pivotally connected to the car, so that in rounding curves the arms *f* may turn and relieve the rails *a* of strain.

The modified form illustrated in Fig. 6 differs from the preferred form in that only one arm *f'* is employed and is pivoted between stationary lugs *e²* and is not swiveled.

The operation is obvious.

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

1. In a single-track railway the combination of a lower bearing-rail; two stationary balance-rails above said bearing-rail; a car; an arm pivoted at one end to said car and at its free end carrying a pair of wheels which take between said balance-rails, and means for yieldingly supporting the free end of said arm.

2. In a single-track railway the combination of a lower bearing-rail; two stationary balance-rails above said bearing-rail; a car; a plate pivotally connected to said car, and an arm pivoted at one end to said plate and the free end of said arm carrying a wheel

which takes between and connects with said balance-rails and revolves in a horizontal plane.

3. In a single-track railway the combination of a lower bearing-rail; two stationary balance-rails above said bearing-rail; a car; a plate pivotally connected to said car; an arm pivoted at one end to said plate and the free end of said arm projecting up between
10 said balance-rails and having a head, and a pair of wheels carried by said head and each contacting with one of said balance-rails and adapted to be revolved in a horizontal plane.

4. In a single-track railway the combination of a lower bearing-rail; two stationary balance-rails above said bearing-rail each having an inturned flange; a car; an arm pivoted at one end to said car and at the other end carrying a pair of grooved wheels which

contact with the inturned flanges on said balance-rails. 20

5. In a single-track railway the combination of a lower bearing-rail; two stationary balance-rails above said bearing-rail; a car; a plate pivotally connected to said car and
25 provided at opposite sides with an arm; an arm pivoted to said plate and at its free end carrying a pair of wheels which contact with said balance-rails and a spring supported on
30 each of the arms of said pivoted plate and each of said springs taking beneath the free end of one of said pivoted arms.

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

HOWARD H. TUNIS.

Witnesses:

CHARLES B. MANN, Jr.,
FREDERICK S. STITT.