

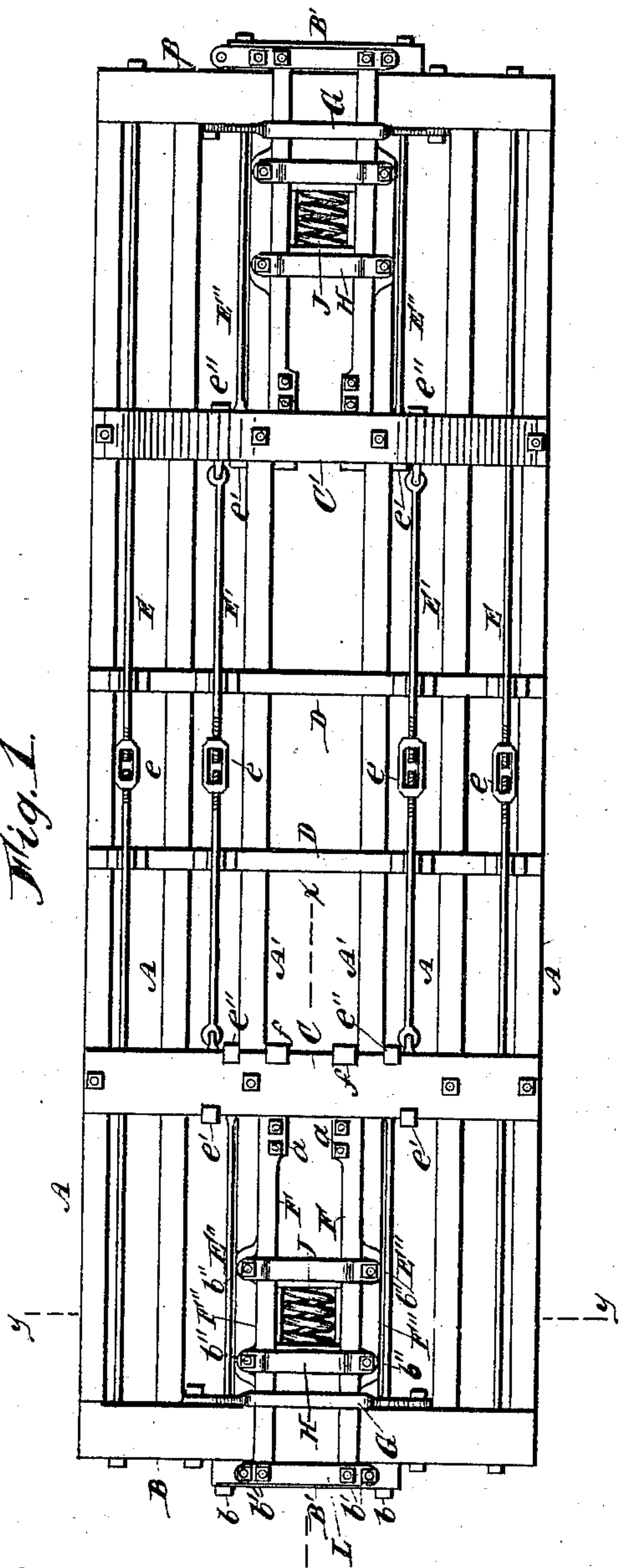
(No Model.)

W. H. RONEMUS.  
RAILWAY CAR CONSTRUCTION.

No. 545,096.

Patented Aug. 27, 1895.

Fig. 1.



Attest.  
L. A. St. John.  
Geo. Kulick.

Fig. 3.

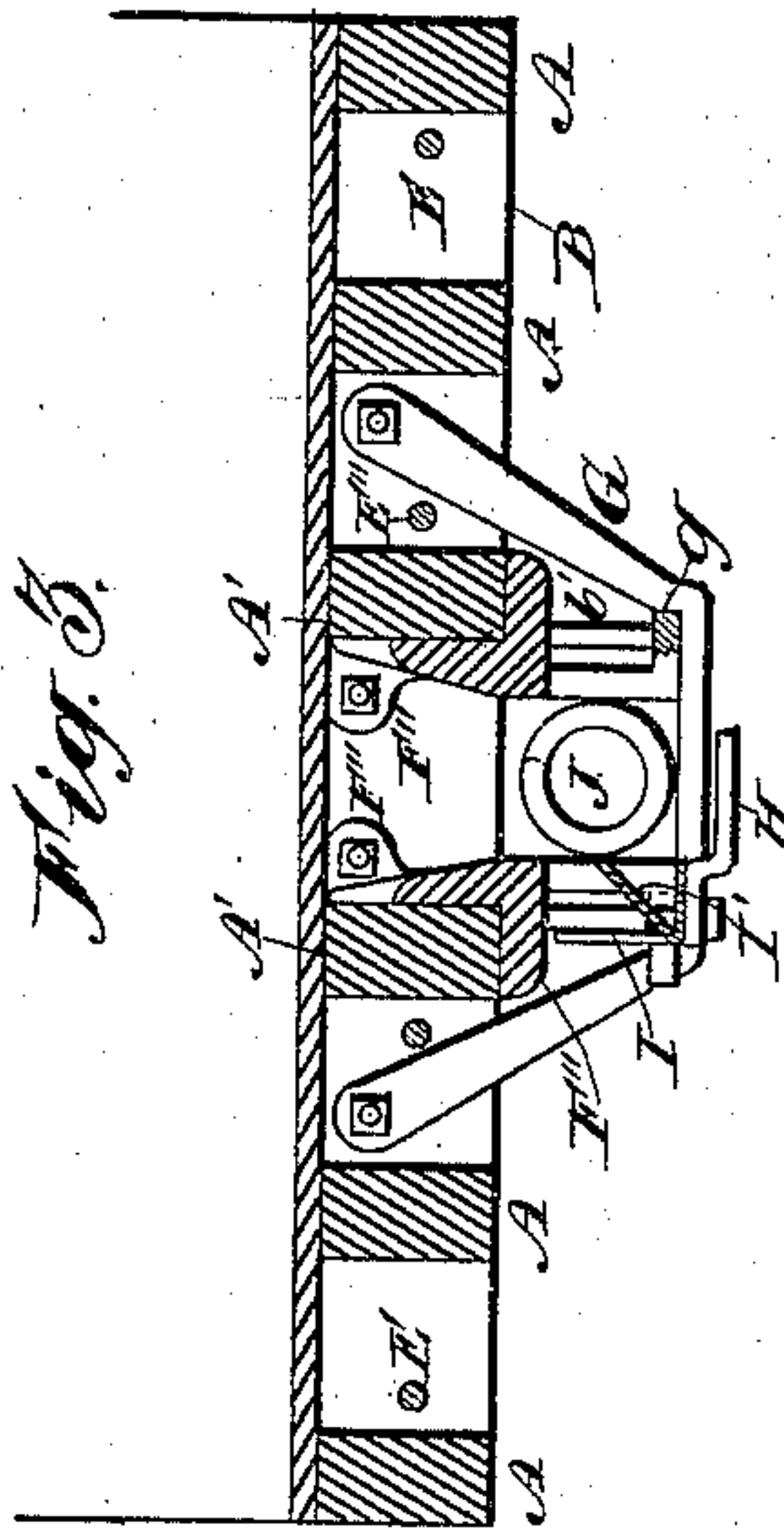


Fig. 2.

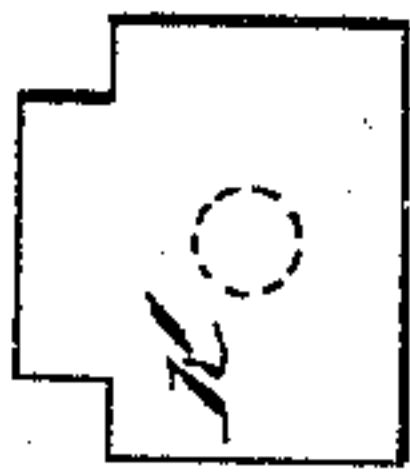
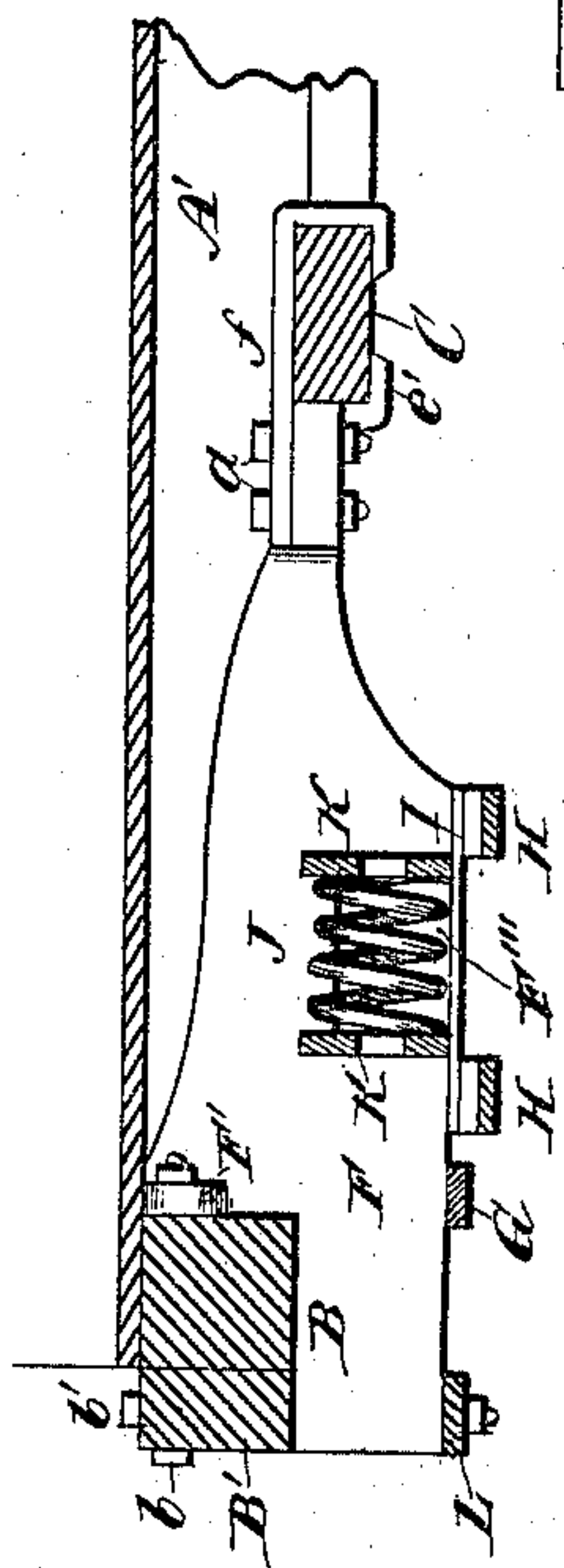


Fig. 4.

Inventor  
William H. Ronemus.  
By J. M. St. John.  
Atty.



# UNITED STATES PATENT OFFICE.

WILLIAM H. RONEMUS, OF CEDAR RAPIDS, IOWA.

## RAILWAY-CAR CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 545,096, dated August 27, 1895.

Application filed May 27, 1895. Serial No. 550,882. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. RONEMUS, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Construction of Railway-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to improve the construction of cars, more particularly freight-cars, so as to make it possible to repair the draft apparatus and connected parts without the necessity of going inside the car.

The invention consists in the construction, combination, and arrangement of parts, as hereinafter fully set forth and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view from below of a device embodying my invention as applied to an ordinary freight-car. Fig. 2 is a sectional elevation of the same in the line *xx*. Fig. 3 is a transverse section thereof in the line *yy*. Fig. 4 is a view of one of the plates against which the spring of the draw-bar bears.

Similar letters of reference indicate corresponding parts.

In the repairing of cars as now constructed, more especially in the repairing of the draft apparatus, or those parts which connect with the draw-bar, much difficulty is often experienced, from the fact that the parts constitute practically a portion of the framework of the car. It becomes necessary, therefore, in many cases to take out some of the timbers and replace them with new ones, or to splice broken timbers, and in any case this cannot be done without access to the interior of the car, as many of the parts are bolted through the floor and sills thereof. This invention is designed to remove this difficulty by a construction which admits of the entire draft apparatus being taken out or put in without going inside the car. The advantage of this will be apparent when it is considered that these repairs often are necessary to cars in transit loaded full of merchandise, locked, and sealed.

Referring now to the drawing, the bottom

of a freight-car is illustrated in Fig. 1. This has the usual longitudinal sills *A A A A' A'*, endsills *B B*, with "dead-woods" *B' B'*, bolsters *C* or *C'*, the former wood and the latter a truss of iron, and middle cross-beams *D D*. These timbers are strengthened by truss-rods *E E* of the usual construction, and rods *E' E'* and *E''* and *E''*, specially adapted to the requirements of this invention, as will be hereinafter more fully explained. Between the timbers *A' A'* at each end are attached two cheek-plates or brackets *F F*. These form the supports and guides or housing for the draw-heads (not shown) and are entirely plain on the inner sides, excepting a lug at *F'*, through which passes a bolt *b*, securing the part to the cross-sill *B* longitudinally, and an offset at the tail end, to which is bolted by bolts *a a* the hook *f*, connecting this portion of the cheek-plate with the bolster *C*. The forward portion of the plate passes forward under the cross-sill *B* and is bolted vertically thereto or to the dead-wood *B'* by a suitable bolt or bolts *b'*. The outer portion of the plate below the sill *A'* projects a little laterally, so as to form a bearing its entire length along the under side of the sill. Near the middle of the cheek-plate is a recess *F'''* to receive the followers *K K*, forming the end bearings for the spring *J*. A reinforcing-flange *F''* serves to strengthen the plate at this point and to give increased bearing on the under side of the sill.

The form of the followers *K K* is shown in Fig. 4, the projecting ends extending over the shoulder at each end of the recess and preventing any upward movement of the followers or draw-bar at this end. Where a stirrup or "pocket" is used at the inner end of the draw-bar the followers may be solid, as shown in Fig. 4. In case a "tail-bolt" is used a hole is bored through each, as shown in Fig. 2.

To give the cheek-plates additional stability of attachment and truss them against lateral strains, a yoke *G* passes under them just back of the cross-sill and is securely bolted thereto. It is to be noticed that this yoke has an angular shoulder at *g*, bearing against the bottom flange of the cheek-plate, as shown in Fig. 3. It is to be understood that the construction is the same on both



sides, though but one is shown, some of the intervening parts being broken away for that purpose.

The cheek-plates are connected at the bottom by a strong tie L, which forms one of the supports for the draw-bar. This is preferably provided with two bolts  $b' b'$ , connecting with each plate.

Across the recess  $F'''$  extends an angle-plate I, having an inwardly-bent tongue  $I'$  to retain the draw-bar spring in position laterally. It is to be understood that one of these is attached to each cheek-plate, though only one is shown in Fig. 3. Below these plates I I are two cross-ties H H, firmly connecting the lower portions of the cheek-plates at these points by suitable bolts  $b'' b''$ , extending through lugs or flanges of the cheek-plates. These cross-ties are offset, as shown, to give room for the pocket of the draw-bar.

The truss-rods  $E' E'$  connect with each bolster by strong hooks  $e' e'$ . For convenience of attachment these are preferably connected to the rods by eyes, as shown. Each bolster is also coupled to its respective cross-sill by a pair of truss-rods  $E'' E''$ , provided with suitable hooks  $e'' e''$ . It will thus be seen that each bolster has a rigid connection with each end of the car, and is thereby enabled to resist the powerful shocks and strains to which it is subjected. The truss-rods are provided with the usual turnbuckles  $e e$ . It will be seen that no bolts used in connecting the cheek-plates or their adjuncts with the car pass through the sills or floor thereof and all are accessible from the under side of the car. It thus becomes possible to remove either the draw-head or the entire draft apparatus without going inside the car, and a great saving

of time and labor is effected thereby. The cheek-plates must necessarily have great tensile strength, and should therefore be made of malleable iron or steel. It is to be observed that the construction is such as to admit of the use of any of the draw-bars in general use without change, and that by reason of not being bored for bolts the sills of the car are much stronger than otherwise and less liable to break or splinter.

Having thus described my invention, I claim—

1. The combination with a car, of the cheek-plates F F, having suitable lugs  $F' F'$  to connect them with the end sills B, recesses  $F'''$  on the under side, hooks  $f f$  at the other ends of said cheek-plates, and the bolster C with which said hooks connect, substantially as and for the purpose set forth.

2. The combination with a car, of the cheek-plates F F having recesses  $F''' F'''$  adapted to receive the followers for the draw-bar springs, followers K K, and angle plates I I having inwardly bent tongues  $I' I'$  to hold said spring laterally in position.

3. The combination with a car having bolsters, substantially as described, of the cheek-plates F F provided with hooks  $f f$  engaging said bolsters, truss-rods  $E' E'$  with hooks  $e' e'$ , connecting said bolsters, and truss-rods  $E'' E''$  with hooks  $e'' e''$  connecting each bolster with the end sill of the car, substantially as and for the purpose set forth.

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

WILLIAM H. RONEMUS.

Witnesses:

FRANK L. RONEMUS,  
J. M. ST. JOHN.