

921,848.

F. KOCH.  
PASSENGER CAR.  
APPLICATION FILED JUNE 13, 1908.

Patented May 18, 1909.

2 SHEETS—SHEET 1.

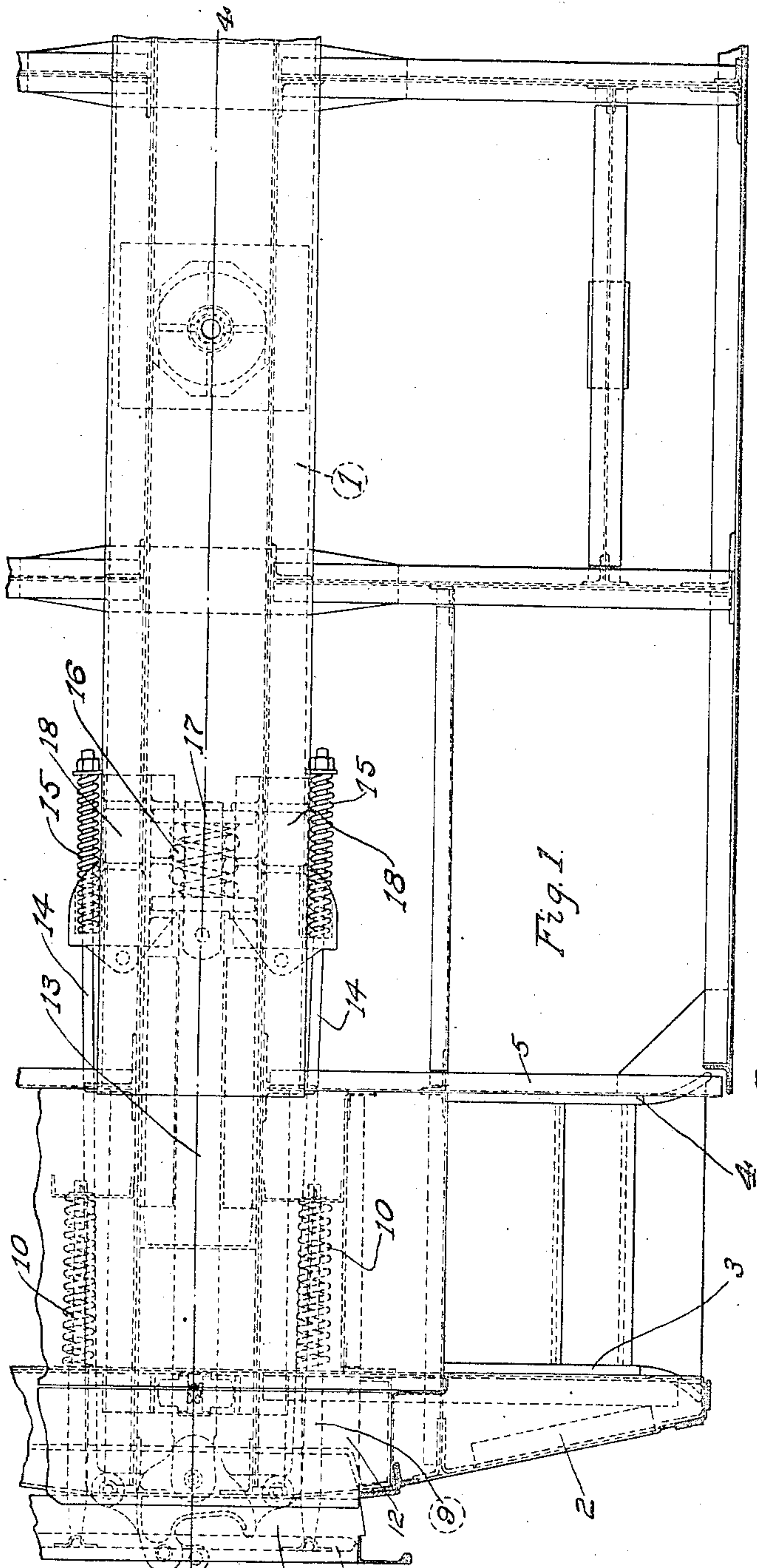


Fig. 1.

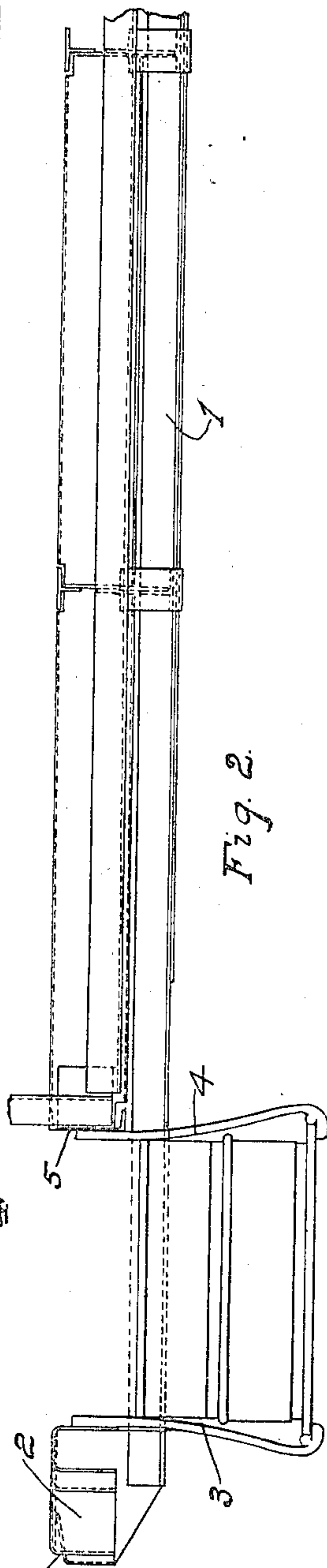


Fig. 2.

Witnesses  
Torsten Lundström  
John W. Boggs

Inventor  
Felix Koch  
By Harry A. Knight  
Attorney

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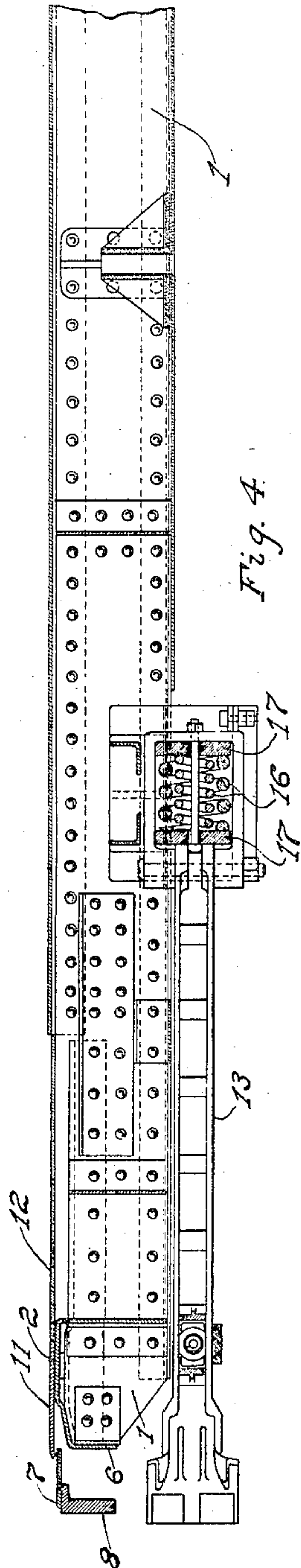


Fig. 4

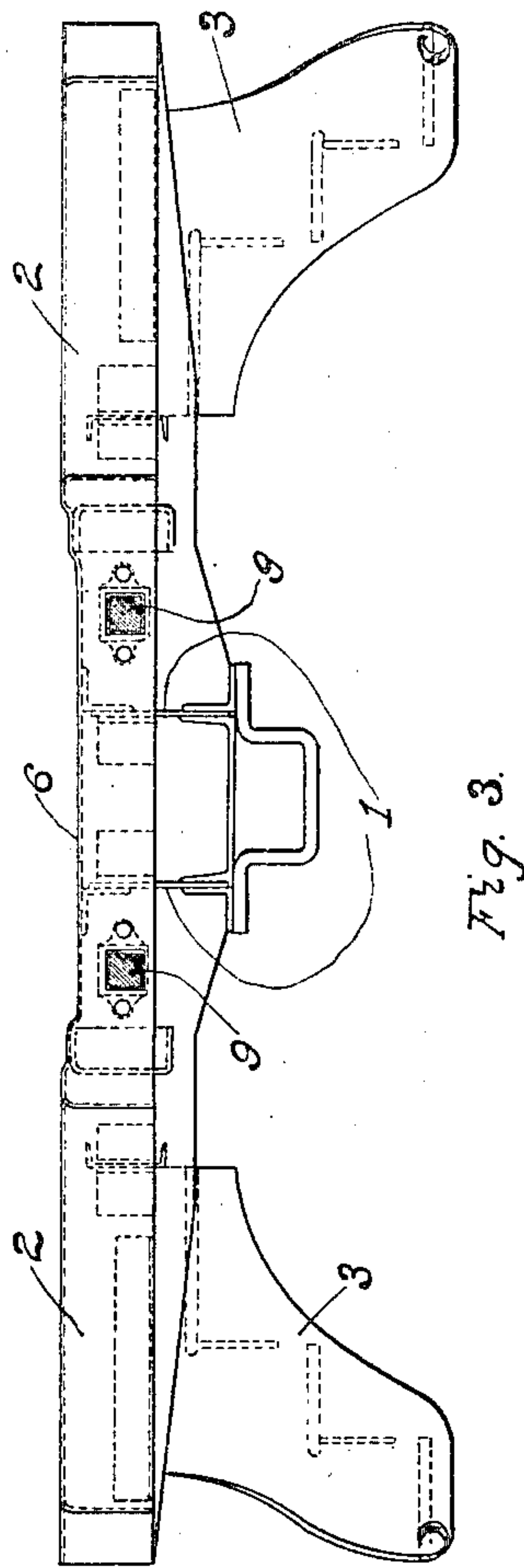


Fig. 3

Witnesses  
*Torsten Lundström*  
*John W. Boggs*

Inventor  
*Felix Koch*  
By *Harry A. Knight*  
Attorney



# UNITED STATES PATENT OFFICE.

FELIX KOCH, OF BELLEVUE, PENNSYLVANIA, ASSIGNOR TO PRESSED STEEL CAR COMPANY,  
OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

## PASSENGER-CAR.

No. 921,848.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed June 13, 1908. Serial No. 498,344.

To all whom it may concern:

Be it known that I, FELIX KOCH, residing at Bellevue, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Passenger-Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which like reference characters refer to like parts, and in which—

Figure 1 is a plan view of slightly more than one-half of the end underframe of a passenger car embodying the elements of the invention; Fig. 2 is a side elevation of the same; Fig. 3 is an end-elevation of the same, and Fig. 4 is a longitudinal section on the line 4—4 of Fig. 1.

An object of the present invention is to construct an underframe for a passenger car in which the material is economically disposed, in which great strength is procured and a good appearance of the structure preserved.

A specific object of the present invention is to provide an improved end sill forming a support for the car steps and a recess or pocket for the sliding foot-plate carried by the buffer plate, and likewise forming a shapely end for the car.

Another specific object of the present invention is to provide an improved combined side stem bracket and follower lug plate for the car draft rigging and buffing mechanism.

Referring now in detail to the drawings, 1 represents the car center sills continuous throughout the entire length of the car from end sill to end sill; 2 are the end sills carried by the center sills 1 at their ends. End sills 2 are of pressed metal formation preferably, although same may be of built-up form; they are of modified inverted channel shape, being bent or shaped in a broken line along their outer flanges to give the proper shape to the end of the car. The inner flanges of said end sills are at the outer end of the end sills of greater depth than the outer flanges of the end sills, and these inner flanges of the end sills form rigid supports for the car step hangers 3, the opposite hangers 4, of the stairway being supported by the car body and sills 5, of any suitable construction. End sills 2 are provided in their upper surface centrally with recesses or pockets 6

adapted to receive a sliding foot-plate 7 carried by buffer plate 8 supported on buffer stems 9 passed through perforations in the front and rear flanges of end sills 2, through which means buffer stems 9 are supported and guided in their movement.

10 are buffer springs mounted on stems 9 and confined in position in any suitable manner.

11 is a foot-plate riveted or otherwise secured to the upper surface of end sill 2, projecting outwardly over recess or pocket 6 and overlapping sliding plate 7.

12 is the platform floor plate or sheeting, its outer edge resting on and supported by the upper surface of end sill 2.

Center sills 1 may extend through the inner flanges of end sills 2 if desired and be riveted to the outer flanges and thus form a stiffener or strut between the two flanges of each end sill.

13 is the coupler shank, 14 the coupler side stems and 15 the side stem springs.

16 is the draft spring or springs mounted on shank 13 in suitable manner between follower plates 17.

18 are combined follower lug and side stem bracket castings. Castings 18 are provided with suitable seats or pockets for springs 15 and suitable lugs adapted to be engaged by the followers 17. These castings are so shaped that the side stem spring seats or sockets, when the castings are riveted in place on the center sills, are located on the outside of the center sills and the follower lugs are located on the inner side of the center sills, that is, between the two sills. This arrangement of casting is far simpler than structures heretofore made and is more simply and quickly secured to the center sills. This casting may, furthermore, be suitably ribbed and reinforced for the purpose of strength.

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

1. In a car underframe, an inverted channel-shaped end sill having inner and outer flanges perforated on either side of their longitudinal centers in combination with buffer stems extending through said perforations.

2. In a car underframe, an end sill having an inner flange deeper at its outer end than

the outer flange and increasing in depth toward its center in combination with a step hanger supported by said inner flange.

3. In a car underframe, an end sill having  
5 an inner flange deeper at its outer end than the outer flange and increasing in depth toward its center.

4. In a car underframe, an inverted channel-shaped end sill having an outer flange of  
10 the same depth throughout its length extend-

ing in a broken line and a straight inner flange deeper at its outer end than the outer flange and increasing in depth toward its center.

The foregoing specification signed at McKees Rocks, Allegheny county, Pennsylvania, this twenty-eighth day of May, 1908.

FELIX KOCH.

Witnesses:

T. J. JONES,  
G. C. LAMBE.