

No. 897,281.

PATENTED SEPT. 1, 1908.

R. E. FRAME.  
CAR TRUCK.

APPLICATION FILED JAN. 19, 1907.

2 SHEETS--SHEET 1.

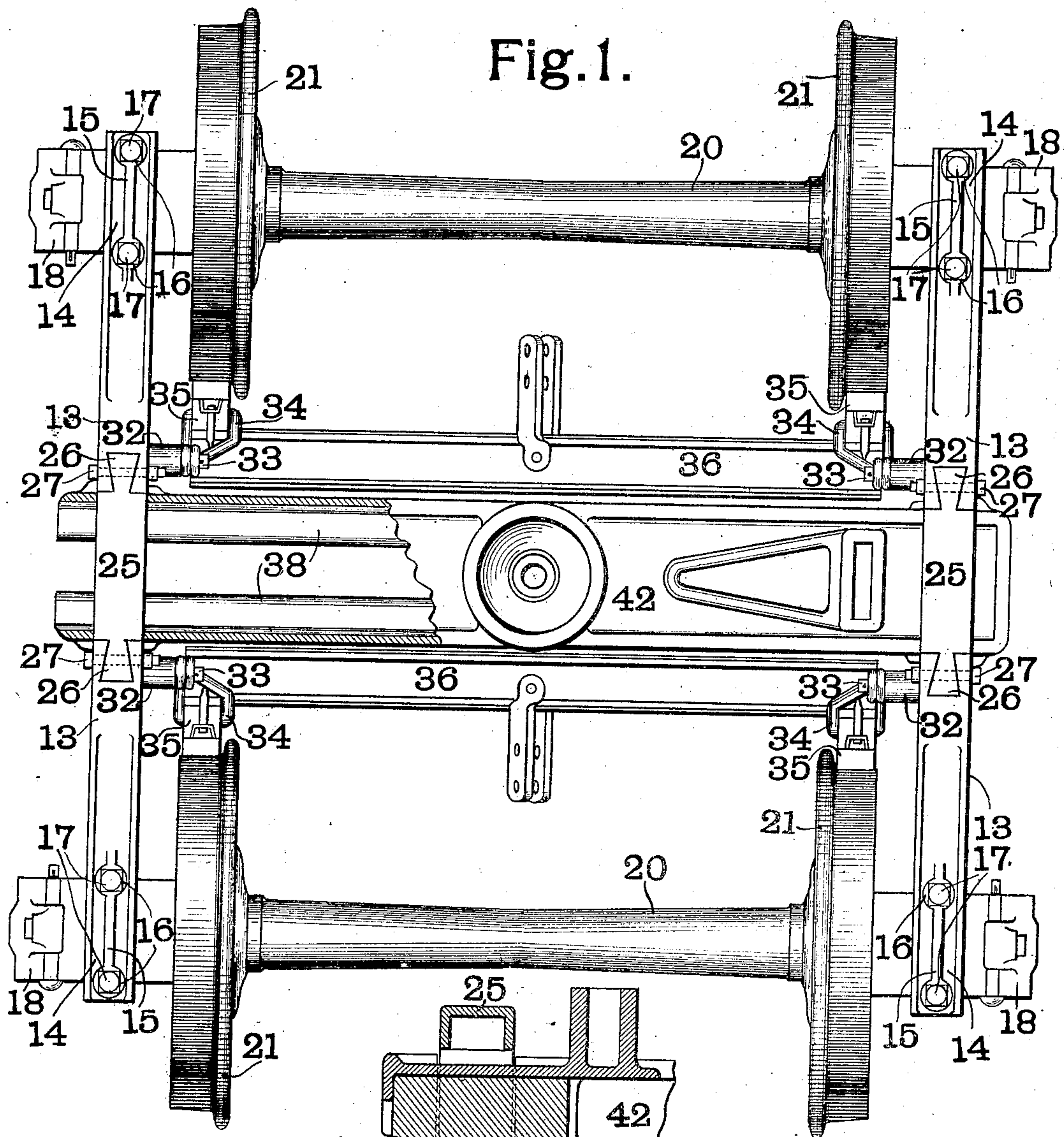
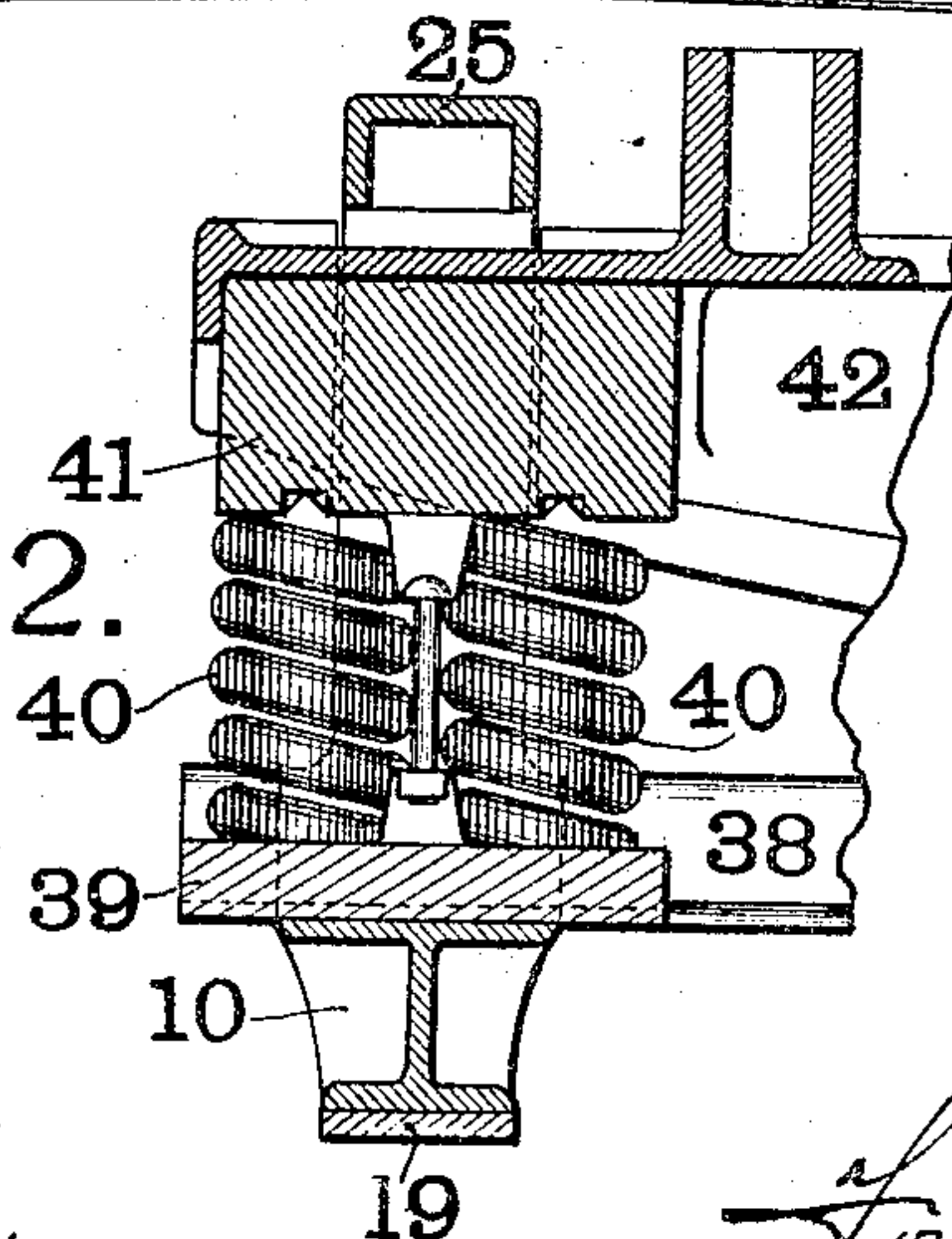


Fig. 2.



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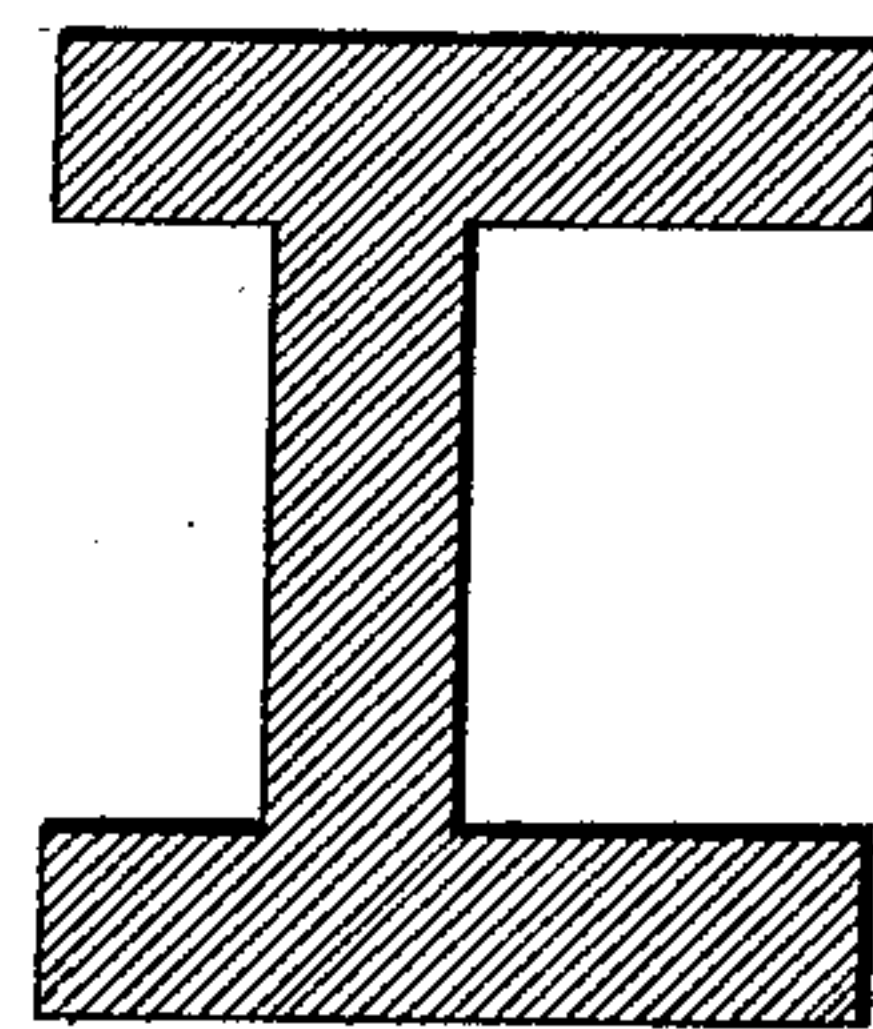
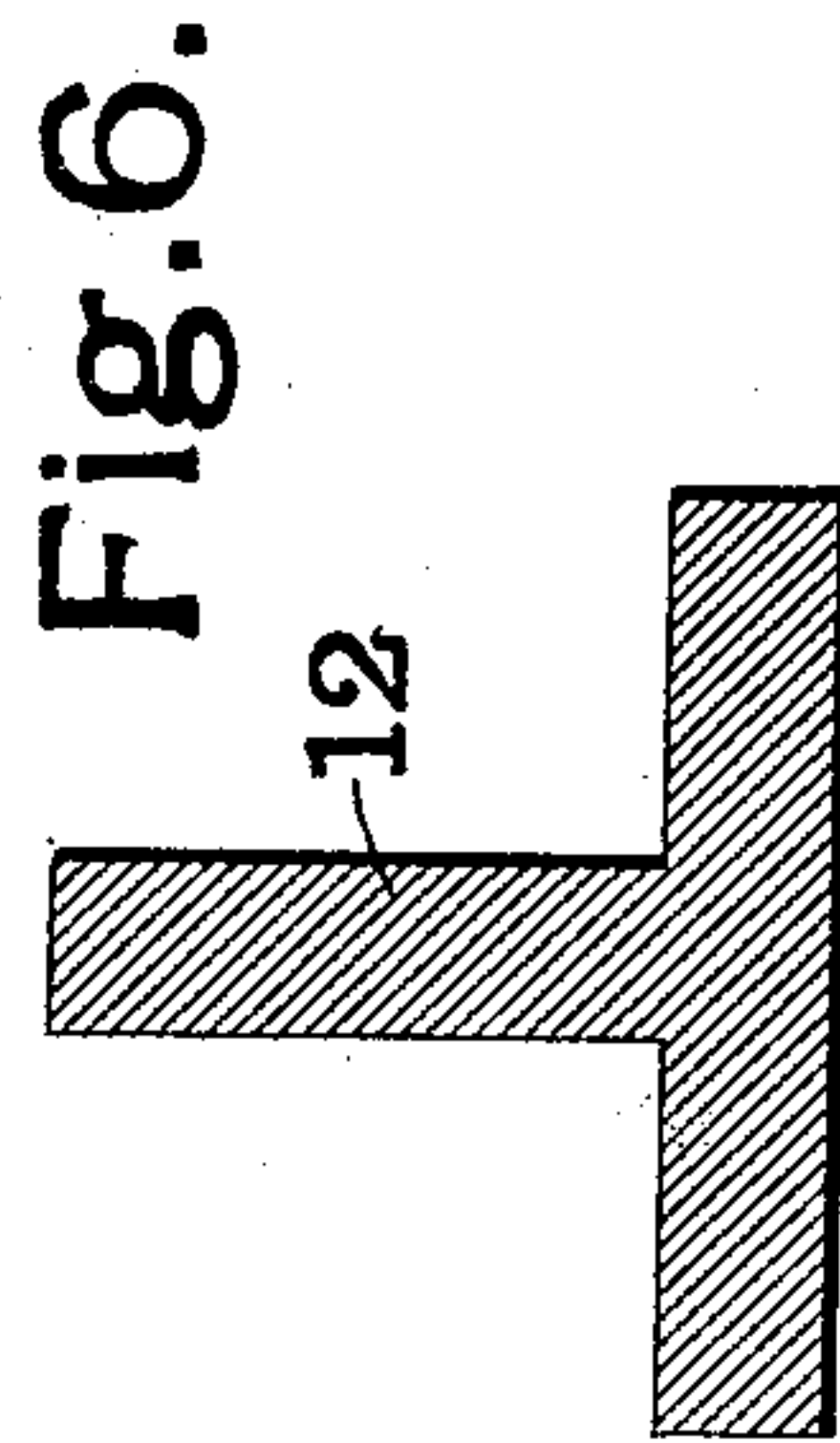
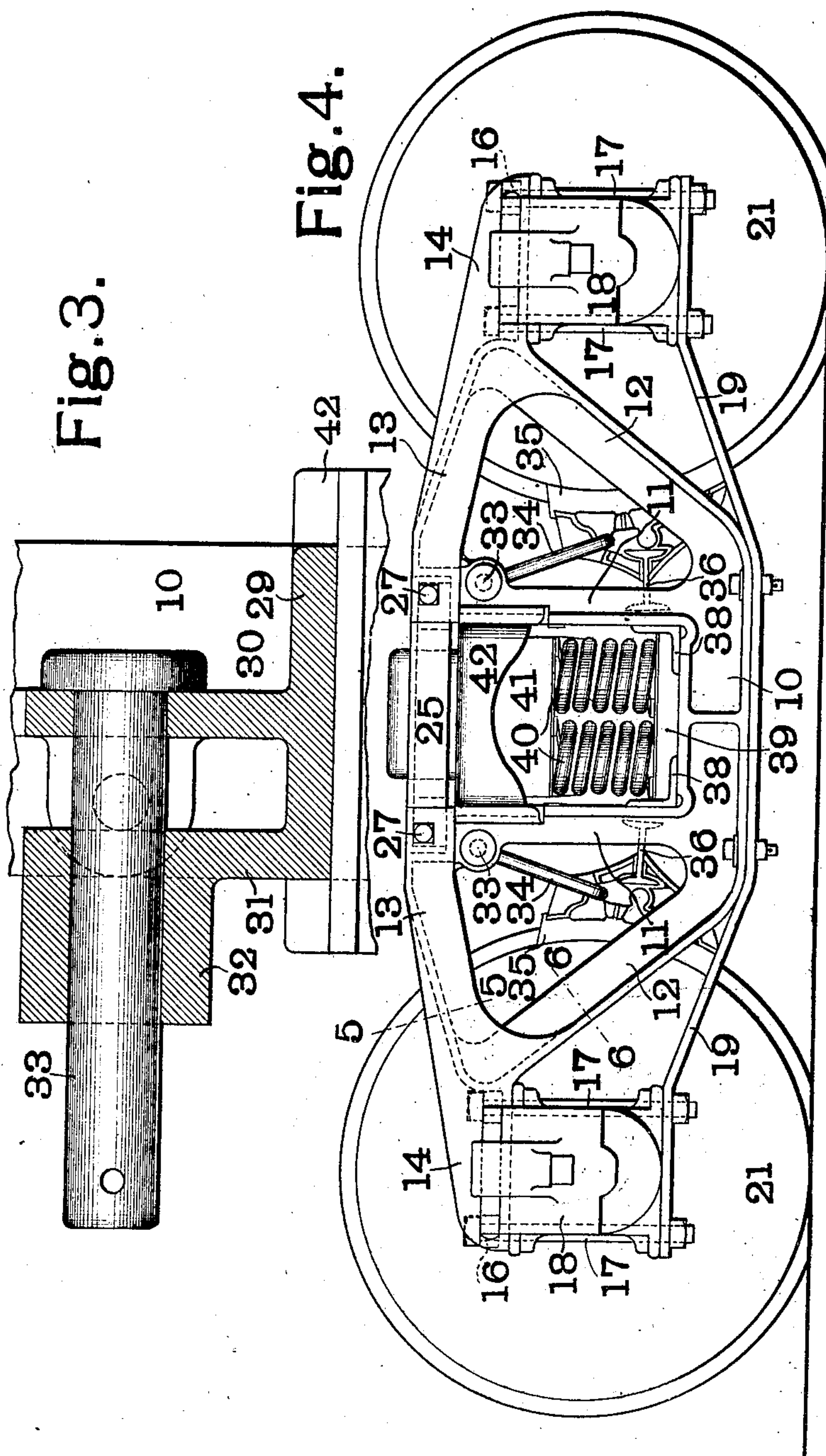
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# UNITED STATES PATENT OFFICE.

ROBERT E. FRAME, OF ST. LOUIS, MISSOURI, ASSIGNOR TO HERBERT W. WOLFF, OF ST. LOUIS, MISSOURI.

## CAR-TRUCK.

No. 897,281.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed January 19, 1907. Serial No. 353,100.

*To all whom it may concern:*

Be it known that I, ROBERT E. FRAME, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Car-Truck, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to car trucks, and more particularly to that class of trucks usually known as caststeel side frame trucks. I do not wish, however, to limit myself to the use of any particular material in the construction of the trucks.

The object of my invention is to provide a truck of the class referred to which will be simple of construction and at the same time light, strong and durable, and also to so construct the truck that the parts may be readily assembled or removed.

In the accompanying drawings are illustrated one form of truck made in accordance with my invention.

Figure 1 is a top plan view, a part of the bolster being broken away; Fig. 2 is a section through the central part of one of the side frames, together with the parts carried thereby; Fig. 3 is an enlarged sectional view showing the method of suspending the brake hanger; Fig. 4 is a side elevation; and Figs. 5 and 6 are enlarged sectional views through the truck on lines 5—5 and 6—6 respectively of Fig. 4.

Like marks of reference refer to similar parts of the several views of the drawings.

The truck consists of two side frames connected by cross pieces and a bolster, and also by the axles of the wheels. Each of the side frames is provided with a lower member 10 of I-section as best shown in Fig. 2. Formed integral with the lower member 10 are the two truck columns 11. Extending upwardly and outwardly from the lower member 10 at the base of the truck columns 11 are tie members 12. These tie members 12 are of T-section, as shown in Fig. 6. Extending outwardly and downwardly from the upper ends of the truck columns 11 are struts 13 which unite with the tie members 12. Forming a continuation of the struts 13 are oil box extensions 14. These oil box extensions 14 are of channel shape, as best shown in Fig. 1, and

are open at their outer ends so as to allow the discharge of any water which might collect in them. The struts 13 are of inverted channel section adjacent to the truck columns 11 and adjacent to the point where they unite with the tie members 12 and the oil box extension 14 they are of I-section as shown in Fig. 5. This construction, while light, gives very great strength to the frame at the point where it is most needed. Between the side flanges of the oil box extensions 14 are flanges 15 having enlargements or bosses 16 through which pass bolts 17 which secure the oil boxes 18 between the said oil box extensions 14 and the inverted arch bar 19. Journaled in the oil boxes 18 are the axles 20 carrying the wheels 21 of the truck.

Between the upper ends of each pair of truck columns 11 is a compression member 25. This compression member 25 is of inverted channel section as shown in Fig. 2, and is made removable to allow the insertion of the cross pieces and the bolster. In order to allow the removal of the compression member 25 each of said members is provided at each end with a dove-tailed extension 26 which is adapted to move vertically into and out of a corresponding dove-tailed recess in the top of one of the truck columns 11. An interlocking connection is thus obtained between the truck columns and the compression member. In order to further secure the compression member 25 in position, a bolt 27 passes horizontally through the top of each truck column and the dove-tailed extension 26 of the compression member 25.

Each of the truck columns 11, as best shown in Fig. 3, is composed of a bearing plate 29, a main flange 30, and an auxiliary flange 31. Each of the auxiliary flanges 31 is provided with an elongated bearing 32, and through this bearing 32 and an opening in the main flange 30 passes a pin 33 from the inner end of which is suspended the brake hanger 34. The brake hangers 34 carry the brake shoes 35 which bear upon the wheels 21 and are connected in the usual manner by I-beams 36.

Resting upon the lower members 10 of the side frames are angular cross pieces 38 which connect the two frames. Resting on these cross pieces 38 at each end is a spring block 39 upon which rest the springs 40. Placed upon the springs 40 is a second spring block 41 upon which in turn rests the bolster 42. It will be evident that by removing the com-



pression members 25, the bolster 42 and cross pieces 38 can readily be removed from the truck.

The construction of my side frames is such that, while the frame is very light, it is at the same time strong and durable and consists of but few parts. The channel-shape of the oil box extensions 14 aids in lightening the truck and at the same time such extensions being open at the ends, any water which might otherwise collect in the extensions will be discharged over the oil boxes. The inverted channel-shape of the compression member 25 makes them very light and strong, and at the same time prevents the collection of any water over the springs.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is:

1. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member provided with integral vertically removable interlocking means engaging with said truck columns to prevent relative movement of the part in the direction of the length of the compression member, and fastening means passing through said interlocking means and truck columns.
2. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member provided with interlocking means engaging the said truck columns, and horizontal fastening means passing through said interlocking means and said truck columns.
3. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member provided with vertically removable interlocking means engaging the said truck columns, and horizontal fastening means passing through said interlocking means and said truck columns.
4. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member provided with dove-tail end extensions, said truck columns having dove-tail recesses in their upper faces into and out of which said extensions are vertically movable.
5. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member of channel section provided with dove-tail end extensions, said truck columns having dove-tail recesses in their upper faces into and out of which said extensions are vertically movable.
6. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member of inverted channel section provided with dove-tail end extensions, said truck columns having dove-tail recesses in their upper faces into

and out of which said extensions are vertically movable.

7. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member provided with dove-tail end extensions, said truck columns having dove-tail recesses in their upper faces into and out of which said extensions are movable, and horizontal fastening means passing through said columns and extensions.

8. In a car truck, the combination with a pair of connected truck columns, of oil box extensions integral with said columns, said extensions being channel shaped throughout their length and each having a vertical web between its sides, and fastening means for the oil boxes passing through said webs.

9. In a car truck, the combination with a pair of connected truck columns, of a channel-shaped strut extending from the top of one of said columns, and a T-shaped tie member extending from the bottom of said column and connected to said strut with its web extending between the webs of said strut to form a triple webbed structure.

10. In a car truck, the combination with a pair of connected truck columns, of a strut extending from the top of one of said columns, said strut being of inverted channel section adjacent to said column and of I-section at the other end, and a tie member of T-section extending from the bottom of said column and connected to said strut with its web extending between the webs of said strut to form a triple webbed structure.

11. In a car truck, the combination with a pair of truck columns, of a strut extending from one of said columns, an oil box extension carried by said strut, said strut being of I-section adjacent to said oil box extension and of inverted channel section adjacent to said column, and a tie member of angle section connecting said strut and column and having a web extending between the webs of said strut to form a triple webbed structure.

12. In a car truck, the combination of a pair of connected truck columns, of a strut extending from one of said columns, an oil box extension carried by said strut, said strut being of I-section adjacent to said oil box extension and of inverted channel section adjacent to said column, and a tie member extending from the base of said column to the junction of said oil box extension and strut and provided with a web which extends between the webs of said strut to form a triple webbed structure.

13. In a car truck, the combination with a pair of connected truck columns, of a strut extending from one of said columns, an oil box extension carried by said strut, said strut being of I-section adjacent to said oil box extension and of inverted channel section adjacent to said column, and a tie member of T-



section extending from the base of said column to the junction of said oil box extension and strut and the vertical web of which extends between the webs of said strut to form a triple webbed structure.

14. In a car truck, the combination with a truck column, of a strut extending from the top of said column and carrying a channel shaped oil box extension, said strut being I-shaped adjacent to said oil box extension, the upper part of the vertical webs of said strut being extended to form the vertical webs of said oil box extension, and a tie member of T-section joined to the lower part of said webs, and having its web extending therebetween.

15. In a car truck, the combination with a side frame having truck columns, of an integral bearing adjacent to one of said columns, a removable pin passing through said bearing and column, and a brake hanger pivoted on said pin.

16. In a car truck, the combination with a side frame having a truck column, said column being provided with a main web and an auxiliary web having an elongated bearing, of a removable pin passing through said main web and said bearing, and a brake hanger pivoted on said pin.

17. In a car truck, the combination with a side frame having a truck column, said column being provided with a main central web and an auxiliary web substantially flush with one side of the column and provided with an elongated bearing, of a removable pin passing through said main web and said bearing, and a brake hanger pivoted on said pin.

In testimony whereof, I have hereunto set my hand and affixed my seal in the presence of the two subscribing witnesses.

ROBERT E. FRAME. [L. s.]

Witnesses:

W. A. ALEXANDER,  
ELIZABETH BAILEY.