

Patented Apr. 29, 1913.

1,060,396.

Fig. 1.

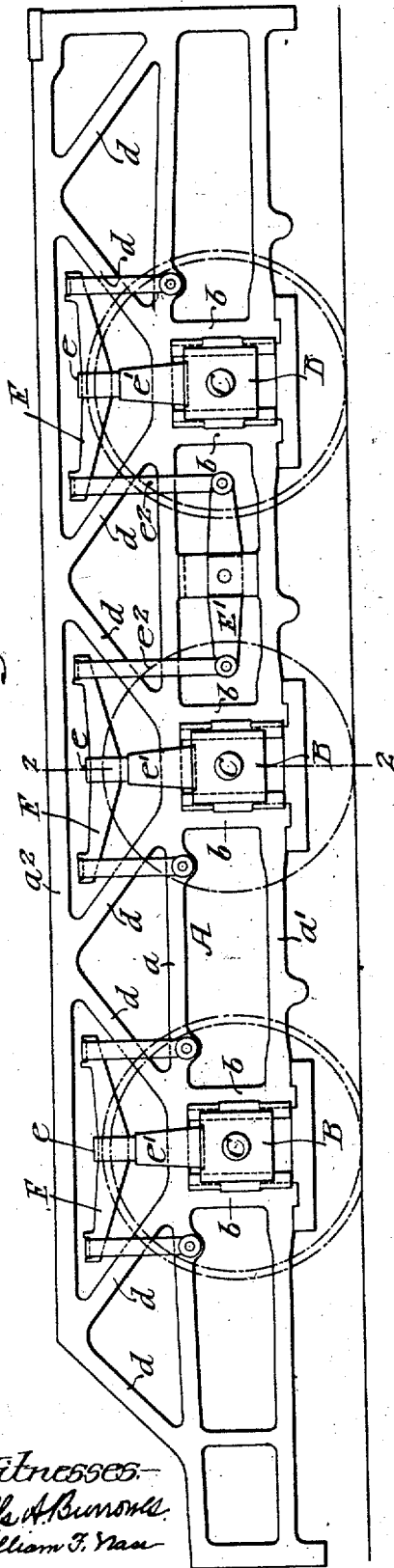


Fig. 3.

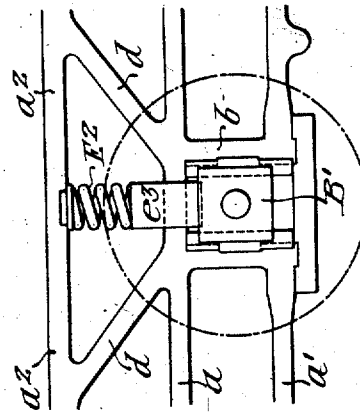
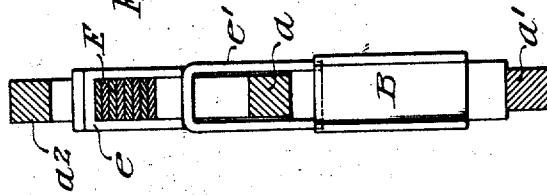


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE C. ABBE, OF LANSDOWNE, PENNSYLVANIA, ASSIGNOR TO THE BALDWIN LOCOMOTIVE WORKS, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

LOCOMOTIVE-FRAME.

1,060,396.

Specification of Letters Patent.

Patented Apr. 29, 1913.

Application filed September 20, 1911. Serial No. 650,325.

To all whom it may concern:

Be it known that I, GEORGE C. ABBE, a citizen of the United States, residing in Lansdowne, county of Delaware, State of Pennsylvania, have invented certain Improvements in Locomotive-Frames, of which the following is a specification.

My invention relates to certain improvements in frames used in connection with locomotives, especially of the electrical type.

The object of my invention is to provide a frame which will not break at the angles. This object I attain by extending the frame above the central line and forming a truss; the truss being so designed that it will not interfere with the springs of the equalizing gear.

In the accompanying drawings:—Figure 1, is a side view illustrating my side frame for locomotives, with the equalizing gear and other parts in outline; Fig. 2, is an enlarged sectional view on the line 2—2, Fig. 1; and Fig. 3, is a view showing a spiral spring substituted for the semi-elliptic spring illustrated in Fig. 1.

A is the side frame of the locomotive having a main chord a , a lower chord a^1 , and an upper chord a^2 .

b , b are the pedestals extending from the main chord to the lower chord and adapted to these pedestals are the boxes B, of the ordinary type, in which the axles C are mounted.

Usually, the frame consists only of the main chord a and the lower chord a^1 with the connecting members, but it has been found that in many instances the frame will break at the angles unless it is made of such a design that it will be cumbersome, but by forming a truss member above the normal line of the frame, I am enabled to make the frame perfectly rigid and to proportion it so that it will be comparatively light; either end being capable of being raised without the liability of breaking any of the parts. The truss member, in the present instance, consists of the upper chord a and diagonal members d , forming triangular openings, as clearly shown in Fig. 1. In the triangular openings, directly above the pedestals b are

mounted the springs E of the equalizing gear. These springs are of the semi-elliptic type, as illustrated in Figs. 1 and 2, and the strap e of each spring rests upon a block e^1 which bears upon the top of the box B. The springs may be separately coupled to the frame, or they may be connected through a beam E^1 and links e^2 , as illustrated. The springs are located in the triangular spaces above the boxes and the straps connecting the springs to the frame, or other members of the equalizing gear, extend on each side of the said frame.

In Fig. 3, I have shown a modification, in which a coiled spring E^2 is located in one of the triangular spaces above the box B^1 and this frame rests upon a block e^3 which is shaped to extend across the triangular opening. The spring E^2 is mounted between this block and a spring seat bearing against the under side of the upper chord a^2 of the frame.

In some instances, the links e^2 connecting the springs to the frame, or other member of the equalizing gear, may extend through openings in the diagonal members of the truss, but I prefer the construction illustrated in Figs. 1 and 2.

I claim:

1. An integral side frame for a locomotive having a continuous main chord and an interrupted lower chord; pedestals connecting the sections of the lower chord to the main chord; and a continuous upper chord and members connecting the upper chord to the main chord.

2. The combination of an integral side frame for a locomotive, of a continuous main chord and a continuous upper chord; diagonal members extending from one chord to the other; and an interrupted lower chord; pedestals connecting the sections of the lower chord to the main chord; boxes mounted in the frame between the pedestals; and caps coupling the sections of the lower chord.

3. An integral side frame for a locomotive in the form of a truss having a continuous main chord; a continuous upper chord; diagonal members connecting the upper

chord to the main chord, both chords being above the axle box openings; and a lower chord interrupted by the axle box openings; pedestals connecting the sections of the lower chord to the main chord on each side of the axle opening.

In testimony whereof, I have signed my

name to this specification, in the presence of two subscribing witnesses.

GEORGE C. ABBE.

Witnesses:

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R. M. CAMPBELL.