D. C. LARSON.

CONTROLLER BOARD.

APPLICATION FILED SEPT. 16, 1916.

1,324,358.

Patented Dec. 9, 1919.

4 SHEETS—SHEET 1.

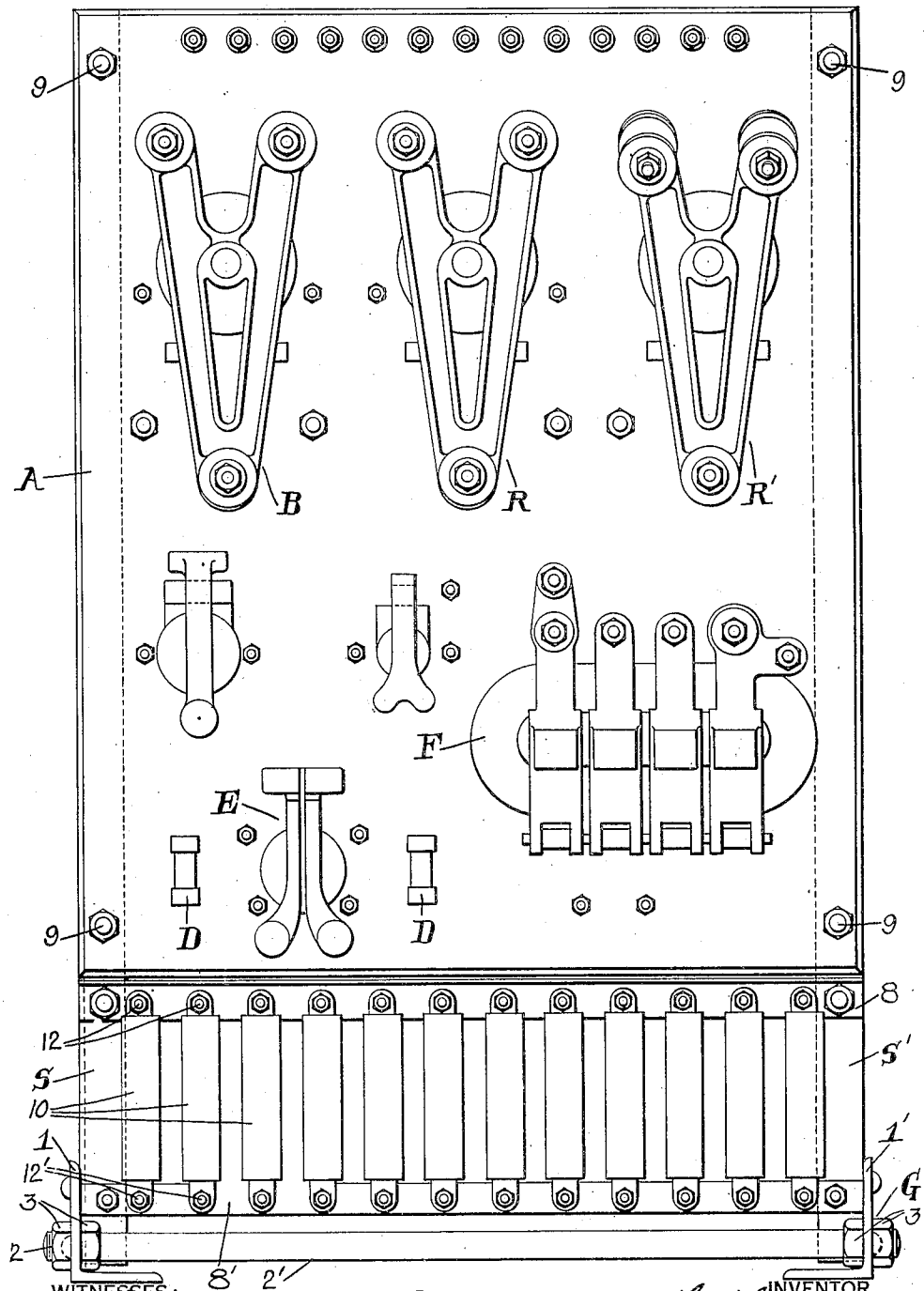


Fig. 1.

WITNESSES:

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James G. Bethell.

INVENTOR

David C. Larson

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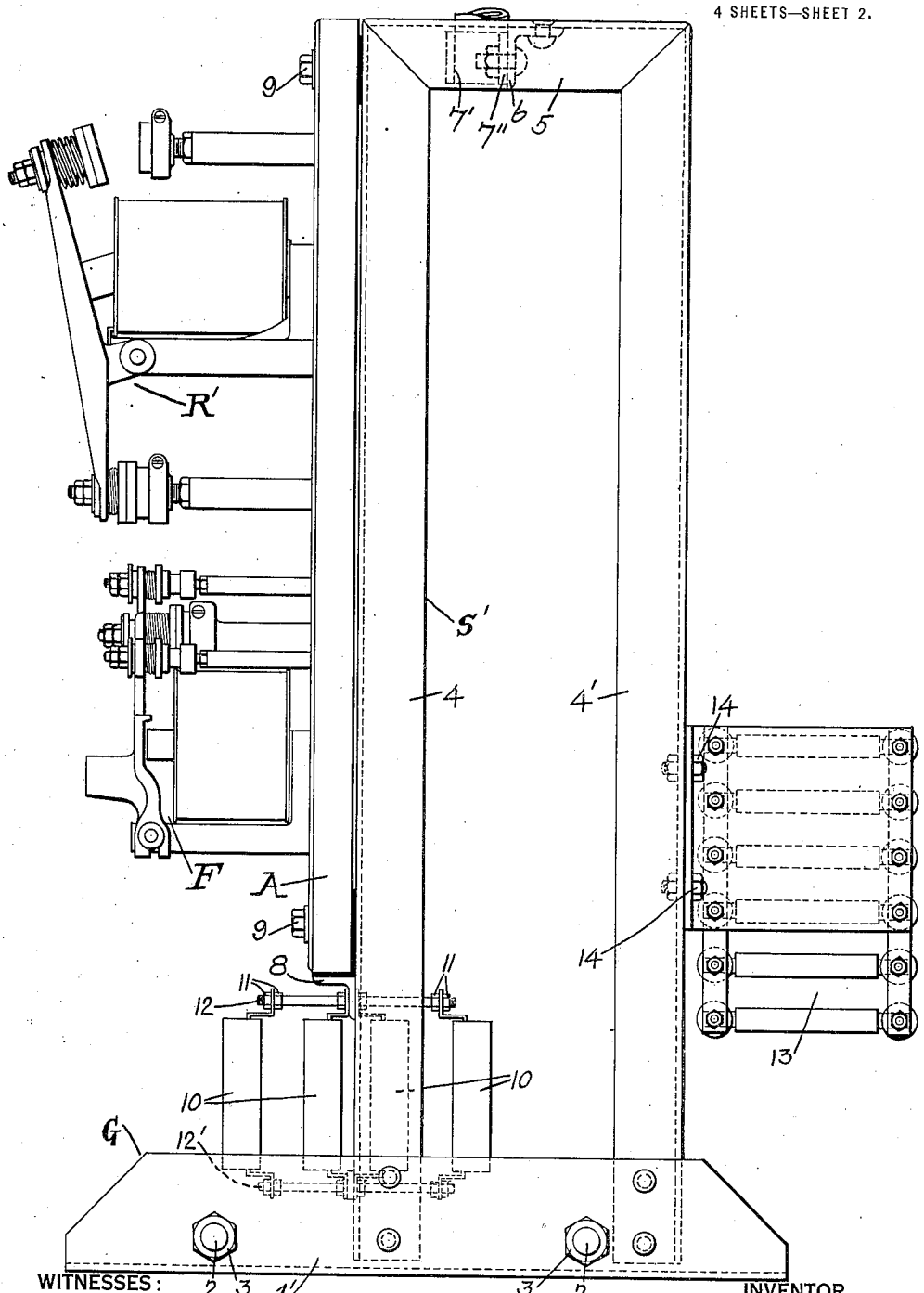
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Fig. 2.

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4 SHEETS—SHEET 3.

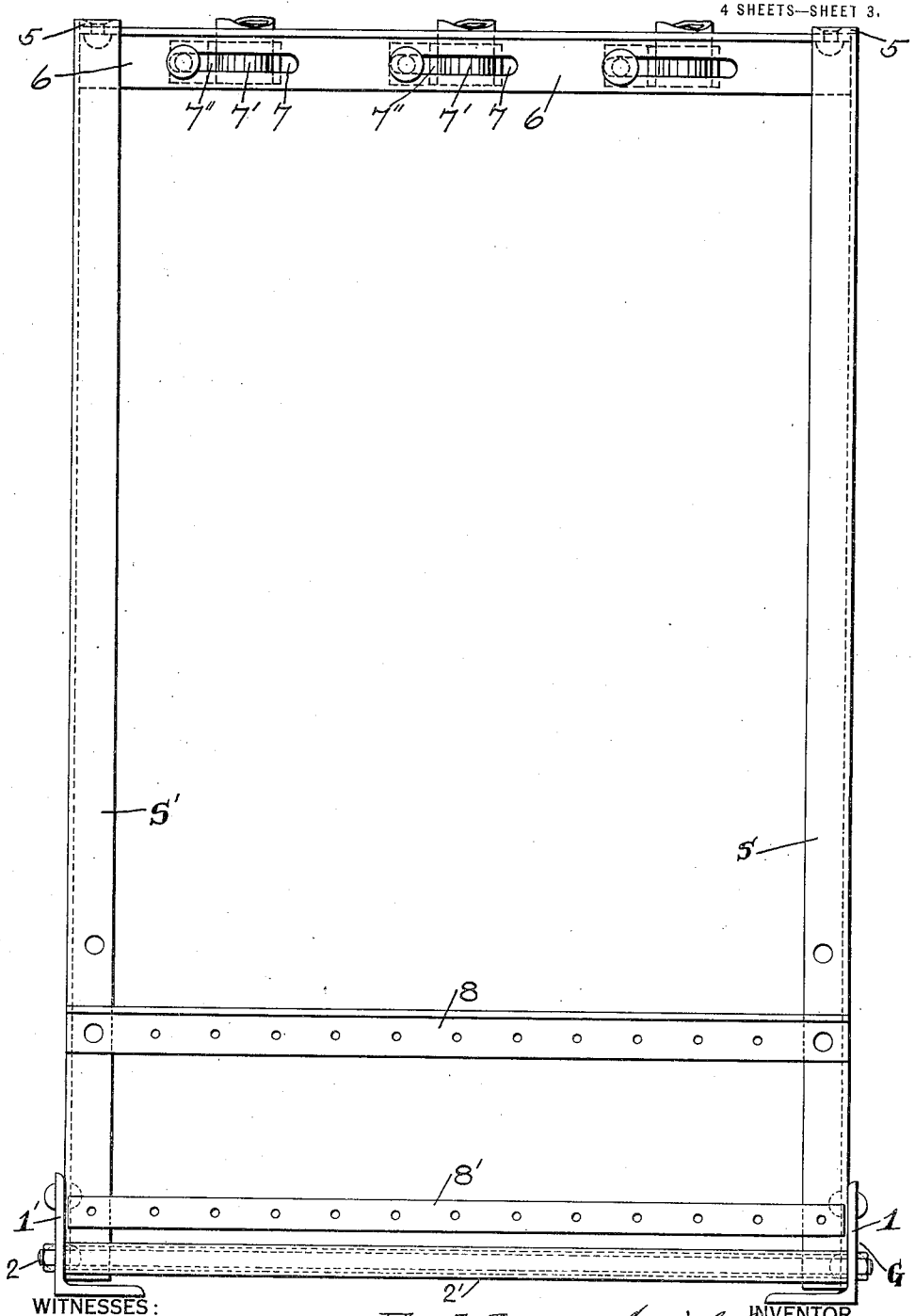


Fig. 3.

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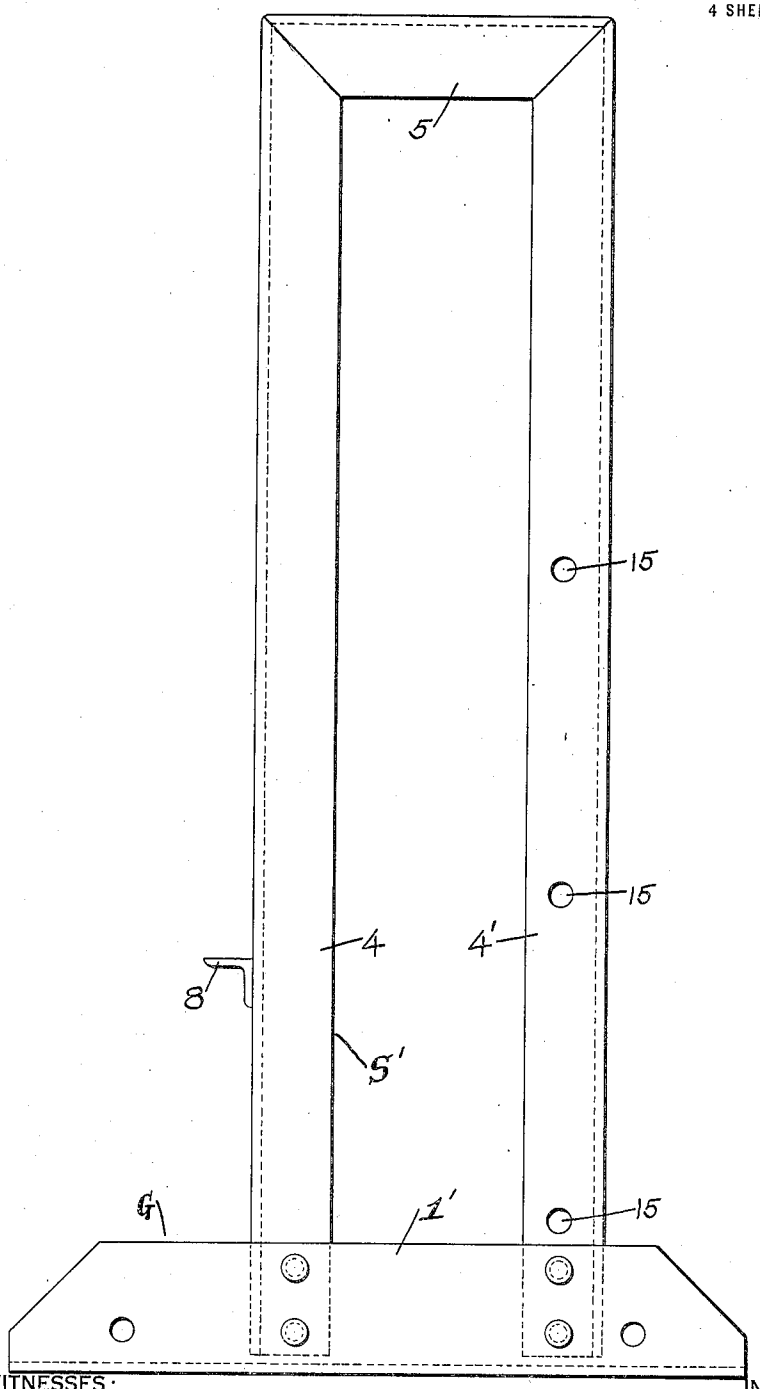
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4 SHEETS—SHEET 4.



WITNESSES:

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Fig. 4.

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UNITED STATES PATENT OFFICE.

DAVID C. LARSON, OF YONKERS, NEW YORK, ASSIGNOR TO OTIS ELEVATOR COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CONTROLLER-BOARD.

1,324,358. Specification of Letters Patent. **Patented Dec. 9, 1919.**

Application filed September 16, 1916. Serial No. 120,438.

To all whom it may concern:

Be it known that I, DAVID C. LARSON, a citizen of the United States, residing at Yonkers, in the county of Westchester and State of New York, have invented a new and useful Improvement in Controller-Boards, of which the following is a specification.

My invention relates to switch board apparatus more particularly of the type used in conjunction with electrical controlling apparatus for elevators.

The invention in its more essential details consists of an improved supporting structure or mounting for the switch panel and resistance elements, etc., the supporting structure involving certain improved structural features, which tend toward simplicity and cheapness, and providing on the whole, a switch board apparatus which is compact and pleasing to the eye.

In the accompanying drawings, Figure 1 illustrates a front elevational view of a controller board, etc., together with improved supporting structure therefor arranged in accordance with the present invention; Fig. 2 illustrates a side view of Fig. 1, and Figs. 3 and 4, illustrate the supporting structure as viewed from the rear and side respectively of Fig. 1.

In detail the apparatus comprises a switch panel commonly termed the controller board, designated by the reference letter A, on which are mounted the various switches involved in the control of an electric elevator, such as a main line switch B, reversing switches R, R′, an accelerating magnet F, miscellaneous magnets such as E, and the fuses D.

The supporting structure comprises a base G, formed by a pair of separated angle irons 1, 1′, united by a pair of rods 2 and clamping nuts 3, there being carried by the rods 2, a tubular space bar 2′. The upstanding side of the angle irons 1, 1′ are beveled at the ends as indicated in Fig. 2 to eliminate sharp corners which are more or less dangerous. Upright supports S, S′ are secured to the members 1, 1′, respectively, each support being substantially of an inverted U shape, with the open ends secured by rivets to the members forming the base. Each one of the supports, S, S′ is formed by means of the separated vertically disposed angle irons 4, 4′, the top ends of which are mitered and united by an angle iron 5 whose ends are mitered to form a flush joint with the angle irons 4, 4′, the joints being welded.

Angle iron 6 connects the angle irons 5, the former being provided with a series of slots 7 to facilitate the fastening of incoming conduit pipes 7′ to the angle iron 6, through the agency of clamps 7″ bolted to the said angle iron.

A transverse angle iron 8 bolted on the front side of the supports S, S′, forms a seat for the controller board, the latter being suitably secured to the supports at the points designated 9.

Resistance tubes 10 are supported in an upstanding position, their top and bottom ends being clamped by nuts 11, to two series of horizontally disposed rods 12, 12′, respectively. The series of rods designated 12 are supported by the depending portion of the transverse angle iron 8, the series 12′ being supported by a transverse strip 8′ bolted to the front side of the supports S, S′. These resistance tubes it may be said form a bank occupying and substantially filling the space below the controller board and between the upright supports S, S′, the tubes extending four rows deep, and being spaced equal distances apart as viewed from both the front and side thereof. The front and back or first and fourth rows of tubes as viewed from the side as in Fig. 2, are disposed near the ends of their supporting rods, and the second and third rows are disposed and clamped to the opposite faces of the depending portion of the angle iron 8.

Provision is made for an additional bank of resistance tubes as indicated at 13 in Fig. 2, this bank of tubes being secured at points 14, to upright supports. Drillings as indicated at 15, in the angle irons 4′, are provided to accommodate supporting rods for the well known type of grid resistance.

It will be seen that the switch panel and supporting structure therefore as herein provided represents simplicity, compactness and durability with but a small cost for material and construction, the apparatus as a whole presenting a superior and attractive design.

Having thus described the invention, what

I claim as new and desire to secure by Letters Patent of the United States is:—

1. A supporting structure for switch panels, comprising spaced angle irons adapted to rest upon a floor, a pair of spaced U-shape members inverted and secured to the said angle irons, to form an upright support to which the switch panel is secured, and an angle iron forming a seat for the switch panel.

2. A supporting structure for switch panels, comprising a base formed by a pair of angle irons, means forming an upright support for the switch panel comprising a pair of substantially U-shape members inverted with the open ends of the two members being secured to different angle irons; and an angle iron secured to the U-shape members forming a seat for the switch panel.

3. In switch board apparatus, the combination of a base, adapted to rest upon the floor, and comprising spaced parallel angle irons; substantially U-shape members secured to the base and maintained in an upstanding position thereby to form an upright support for the controller board, and a bank of resistance tubes disposed below the controller board.

4. In switch board apparatus, the combination of a base, adapted to rest upon the floor, and comprising spaced parallel angle irons; substantially U-shape members secured to the base and maintained in an upstanding position thereby to form an upright support for the controller board, and a bank of resistance tubes supported by the U-shape members below the controller board.

5. In switch board apparatus, the combination of a base, a controller board, substantially U-shape members secured to the base to form an upright support for the controller board, and a bank of resistance tubes supported by the U-shape members below the controller board, the said tubes being spaced equal distances apart as viewed from the front and side thereof.

6. In switch board apparatus, a pair of substantially U-shape members forming a support for the switch board, and a bank of resistance tubes supported by the U-shape members in an upstanding position.

7. In switch board apparatus, a base, a pair of substantially U-shape upright supports secured to the base, and a bank of resistance tubes supported by the upright supports in an upstanding position.

8. In switch board apparatus, a base, a pair of substantially U-shape upright supports secured to the base, and a bank of resistance tubes supported in an upstanding position by the upright supports, the said tubes being spaced an equal distance apart as viewed from the front and side thereof.

9. In switch board apparatus, a base, a bank of resistance tubes, a pair of spaced U-shape upright supports secured to the base, and members connecting the U-shape members, each member supporting a series of rods arranged to support the bank of resistance tubes in an upstanding position.

10. In switch board apparatus, a base formed by a pair of united angle irons spaced apart, a pair of upright supports, each support formed by angle irons to form substantially a U-inverted with the open ends secured to the base, a transverse angle iron secured to the said supports to form a seat for the switch board, an additional transverse member disposed below the first named transverse member, a bank of resistance tubes and a series of rods supported by the two named transverse members, to support the bank of resistance tubes in an upstanding position.

11. In switch board apparatus, the combination of a switch board, a base formed by a pair of parallel angle irons spaced apart, a pair of substantially U shaped members, inverted and the open ends of the two members being secured to different angle irons, an angle iron secured to the said members and forming a seat for the switch board, an additional angle iron secured to the said members, said angle iron having a slot, a conduit pipe, and a connection engaging the slot to clamp the conduit pipe to the said additional angle iron.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID C. LARSON.

Witnesses:

ERNEST L. GALE, Jr.,

JAMES G. BETHELL.