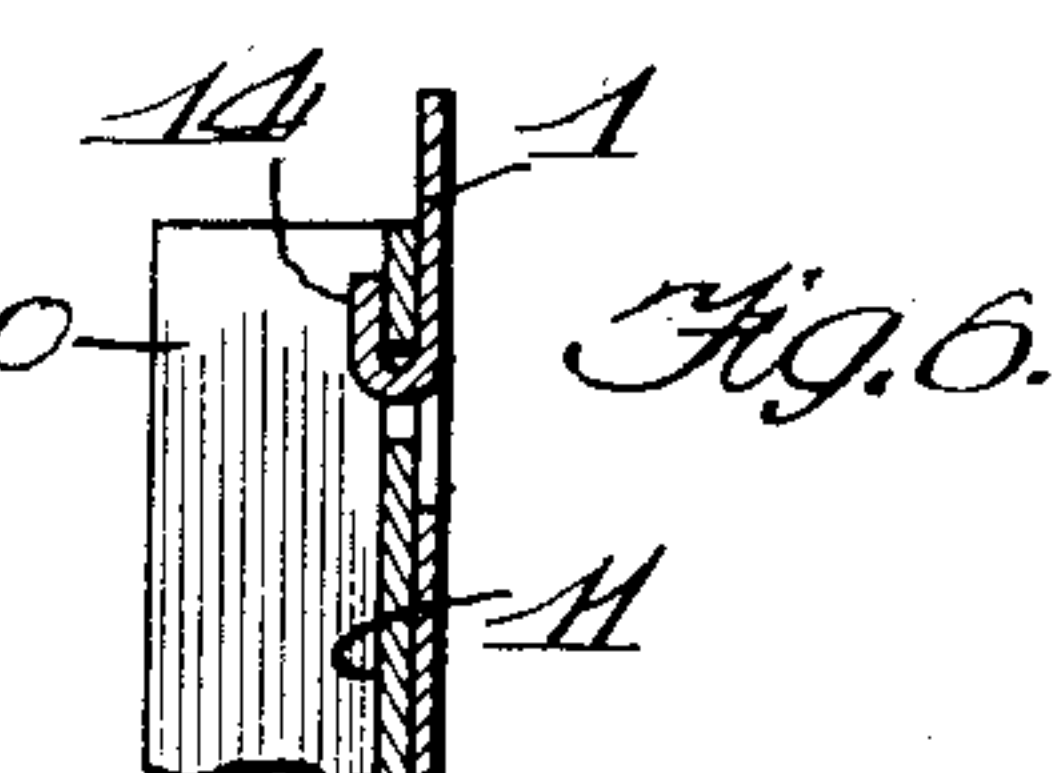
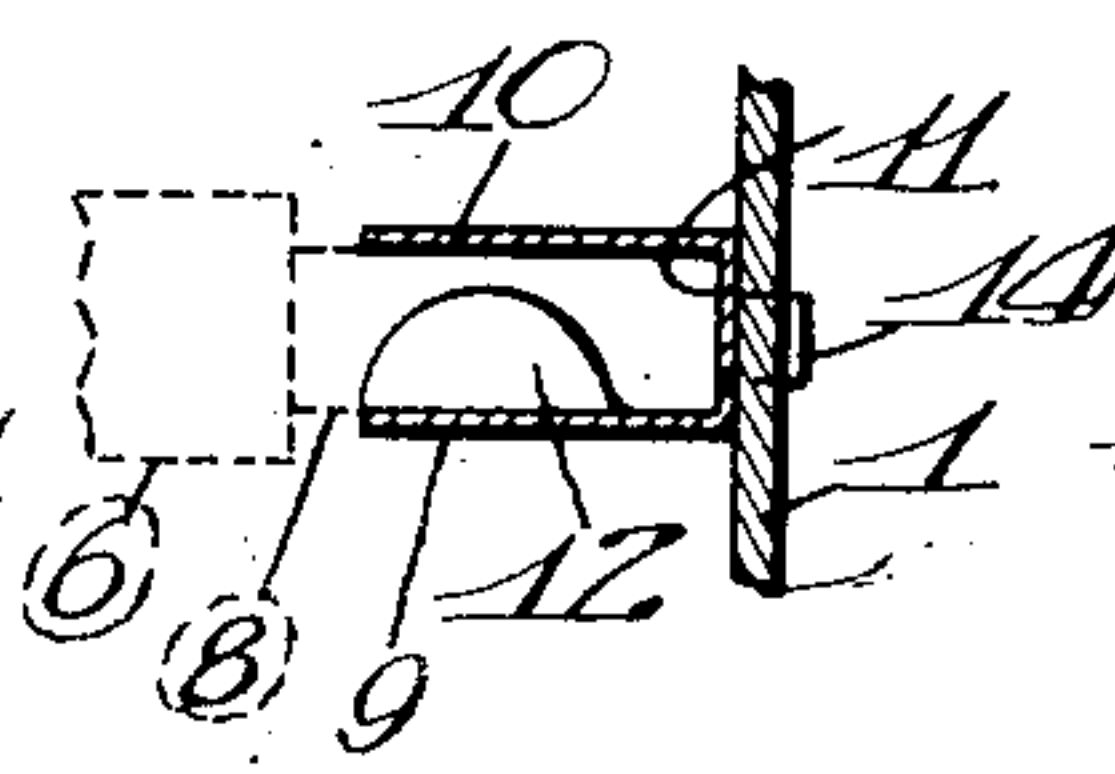
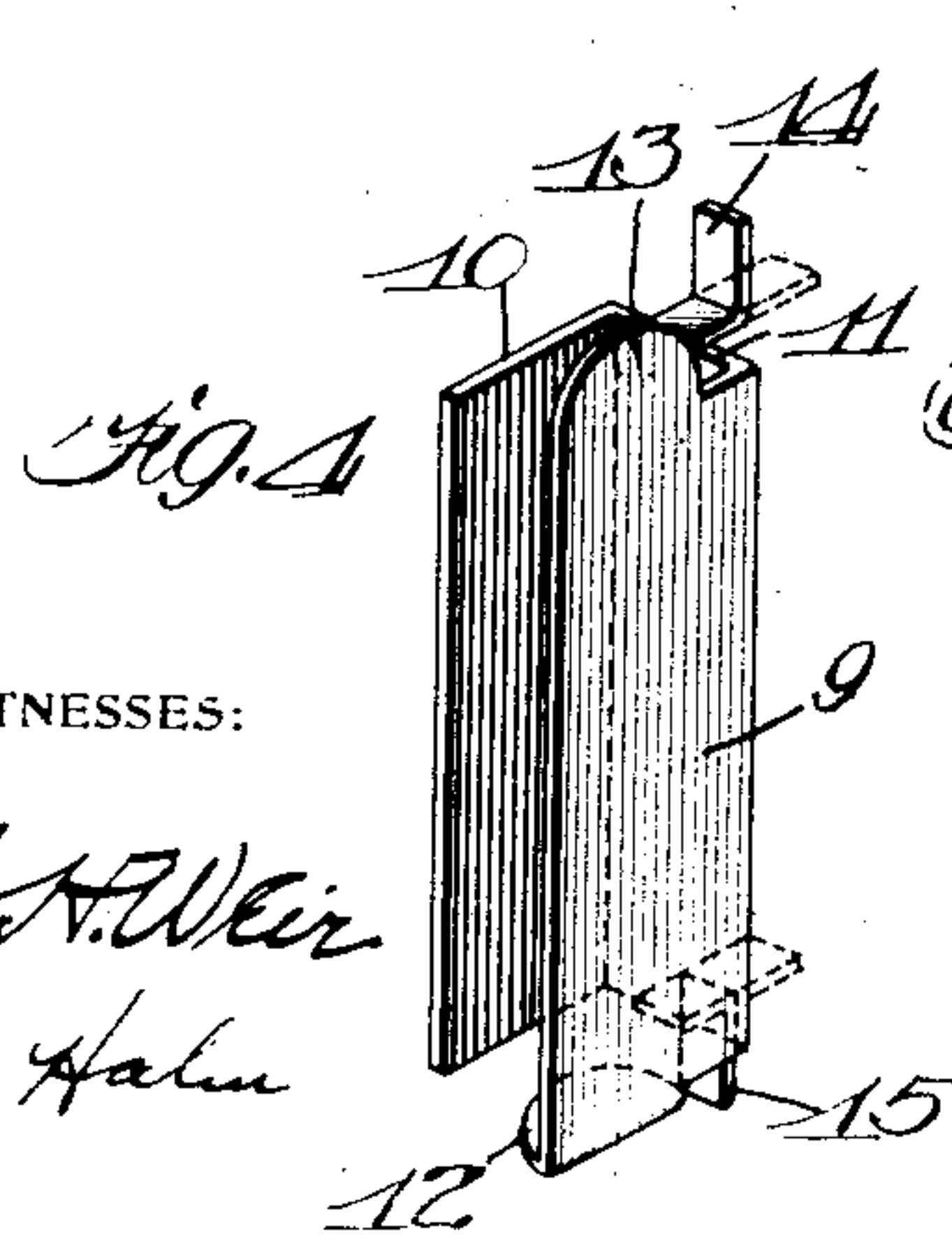
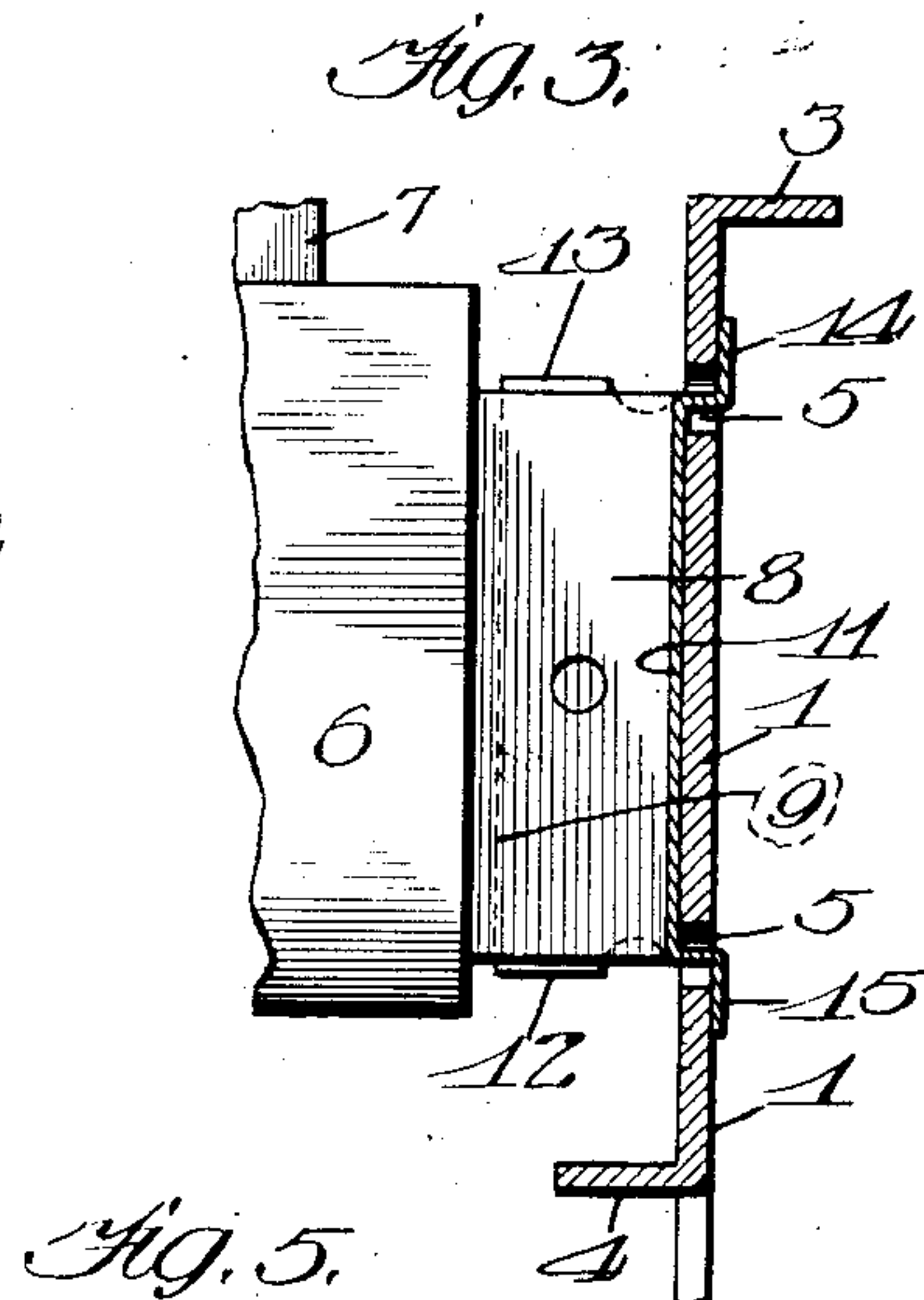
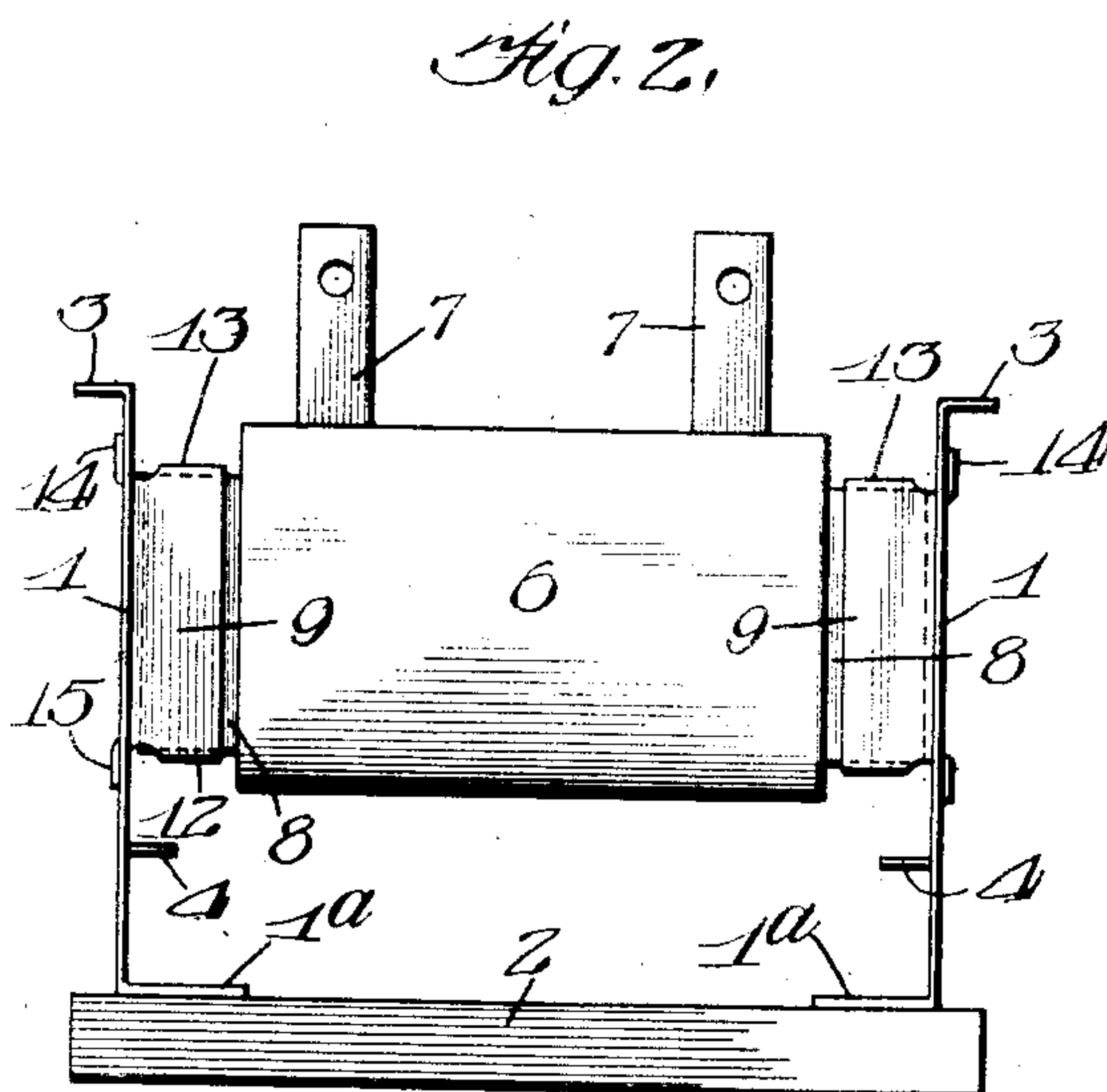
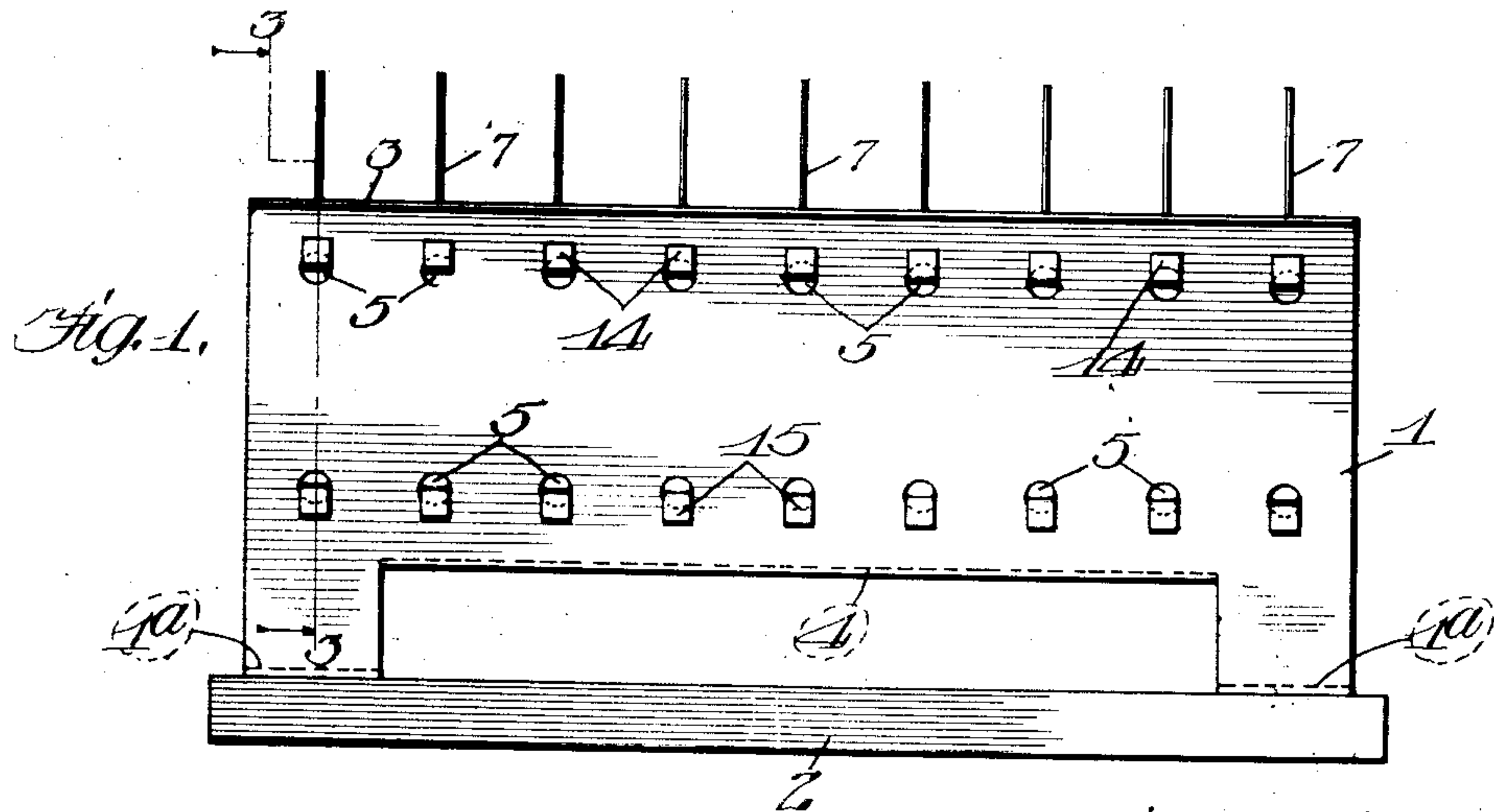


No. 868,272.

PATENTED OCT. 15, 1907.

F. JOHANNSMEYER.
SUPPORT FOR ELECTRICAL RESISTANCES.

APPLICATION FILED FEB. 21, 1907.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK JOHANNMEYER, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO THE CUTLER-HAMMER MANUFACTURING COMPANY, OF MILWAUKEE, WISCONSIN, A CORPORATION OF WISCONSIN.

SUPPORT FOR ELECTRICAL RESISTANCES.

No. 868,272.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed February 21, 1907. Serial No. 358,567.

To all whom it may concern:

Be it known that I, FREDERICK JOHANNMEYER, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have
5 invented new and useful Improvements in Supports for Electrical Resistances, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

10 My invention relates to supports for electrical resistances.

It will be understood that commercial electrical resistance units consist of resistance conductors mounted in or upon an insulating member. The form of support which I have selected to illustrate my present invention is what is commercially known as an inclosed resistance unit and the object of the invention is to provide a simple and efficient support which may be easily and cheaply constructed and which may be
15 readily adapted to hold any number of resistance units without altering its principle of construction.

In the form of structure illustrated in the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of the structure, Fig. 2 is an end elevation thereof showing a resistance unit in position, Fig. 3 is a fragmentary view taken in section on the line 3—3, Fig. 1, Fig. 4 is a perspective view of one of the supporting brackets, Fig. 5 is a fragmentary sectional view illustrating in detail the construction of the brackets and the manner of securing the same to the supporting member, and Fig. 6 is a detail view showing a modification of part of my invention.

Similar numerals refer to similar parts throughout
35 the several views.

In the preferred forms of my invention shown in the drawing, the supporting members 1, 1, which are preferably made of sheet metal, are arranged in upright position and may be secured preferably by means of a foot or flange 1^a to a suitable base 2. Each supporting member is preferably provided with two webs 3 and 4, one at the top and the other at the bottom, running lengthwise, said webs being formed by bending part of the body of the member transversely thereto. These
45 webs stiffen the members and thus keep them from bending. Each supporting member has a plurality of apertures 5, 5, which, in the present instance, are arranged in two horizontal rows.

The particular form of resistance unit for which my support is especially designed consists of a casing 6, within which is arranged a suitable resistance to which are connected suitable terminals 7. The casing is mounted upon a rectangular insulating base 8 which extends through said casing and carries said resistance.
55 The ends of said base protrude beyond the ends of said

casing and are adapted to be held by brackets mounted upon the supporting members 1. In the preferred form, these brackets consist of sheet metal stamped from a single piece and having portions 9, 10, 11, 12, 13, 14, and 15. The portions 9 and 10 in the finished
60 bracket are bent so as to form approximately parallel side walls connected by a rear wall 11. Wall 11 is designed to lie adjacent to the inner surfaces of the supporting members 1, and the side walls 9 and 10 are designed to engage the sides of the base 8 of the units and
65 prevent lateral displacement thereof. The portions 12 and 13 are both shown to be integral with wall 9 which is a suitable design, but these portions may both be on wall 10 or may be arranged one on one wall and one on the other. In the finished article, portions 12 and
70 13 are bent inwardly to substantially horizontal position, and serve to prevent vertical displacement of the unit. The portions 14 and 15 are located preferably at the top and bottom of the rear wall 11 of the bracket and constitute lugs or tongues which, in the finished
75 article, pass through the apertures 5, 5, in members 1, and are bent over to thereby securely hold the brackets in position upon said supporting members. It will be seen that a unit support constructed upon this principle may be quickly and cheaply made, for it may be
80 made entirely of stamped metal and the whole consists of but two shapes or blanks. Moreover, the number of units which may be mounted in the support may be varied by merely varying the length of the side supporting members 1 and adding a sufficient number of
85 brackets. The parts are readily assembled also, for the only work necessary is to slip the lugs 14 and 15 through the apertures 5 while said lugs are still in the straight condition shown in dotted lines in Fig. 4 and subsequently bend said lugs over. The structure has also
90 the advantage of being very rigid due to the presence of the stiffening webs or ribs 3 and 4.

The supporting members 1 may assume various forms and may constitute parts of a unitary frame or may be separate pieces as shown in the drawing. Where said
95 members are separate pieces, the same may be supported in position in any suitable manner. The means by which the brackets are attached to the supporting members may be varied in form and arrangement without departing from the principles of my invention. 100
In Fig. 6 I have illustrated a structure in which lugs are stamped up from the supporting member, pass through apertures in the bracket and bent over.

To facilitate description, I have described the device in the position shown in the drawings and have accordingly employed such terms as "top", "bottom", "sides", etc. It is obvious, however, that any device responding to the construction described will come within the spirit of the claims, irrespective of the position in which such device may be placed. 110

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

1. In a support for a resistance unit, a supporting member and a bracket, one of which has an aperture and the other a lug passing through said aperture and bent over to secure the parts together, said bracket being adapted to support the resistance unit.
2. In a support for a resistance unit, a supporting member and a bracket, one of which has an aperture and the other a lug passing through said aperture, and bent over to secure the parts together, said bracket having parallel sides for engaging the resistance unit and preventing lateral displacement thereof and said bracket having means for preventing vertical displacement.
3. In a support for a resistance unit, a supporting member and a bracket, one of which has an aperture and the other a lug passing through said aperture and bent over to secure the parts together, said bracket having parallel sides for engaging the resistance unit and preventing lateral displacement thereof, and parts formed integral with said bracket and bent over to prevent vertical displacement.
4. In a support for a resistance unit, a supporting member and a bracket, one of which has an aperture and the other a lug passing through said aperture and bent over to secure the parts together, said bracket consisting of a piece of sheet metal bent in such manner as to form two side walls, a top portion and a bottom portion.
5. In a support for a resistance unit, a supporting member and a bracket, one of which has an aperture and the other a lug passing through said aperture and bent over to secure the parts together, said bracket consisting of a piece of sheet metal bent in such manner as to form two side walls, a top portion and a bottom portion, the bottom portion being formed by being bent inwardly from one of said side walls.
6. In a support for a resistance unit, a supporting member and a bracket, one of which has an aperture and the other a lug passing through said aperture and bent over to secure the parts together, said bracket consisting of a piece of sheet metal bent in such manner as to form two side walls, a top portion and a bottom portion, the top portion being formed by being bent inwardly from one of said side walls.
7. In a support for resistance units, a supporting member having apertures therein, and a bracket adapted to support a resistance unit, said bracket having lugs passing through said apertures and bent over to secure the parts together.
8. In a support for a resistance unit, two parallel supporting members, and brackets for supporting a resistance unit, said brackets having lugs thereon and said supporting members having apertures for receiving said lugs and said lugs being bent over on the outside of said supporting members for holding the parts in position.

9. In a support for a resistance unit, two parallel supporting members consisting of sheet metal and having an integral flange formed at one edge thereof for stiffening the same, said support being apertured, and brackets adapted to support resistance units, said brackets having lugs passing through the apertures in said supporting members and bent over for securing the parts together.

10. In a support for a resistance unit, two parallel supporting members consisting of sheet metal and having an integral flange formed at one edge thereof for stiffening the same, said support being apertured, a base whereon said supports are mounted, and brackets adapted to support resistance units, said brackets having lugs passing through the apertures in said supporting members and bent over for securing the parts together.

11. As an article of manufacture, a support for resistance units comprising parallel upright supporting members made of stamped metal, said supporting members having flanges on their upper and lower edges for stiffening them and having apertures punched therein; a base whereon said supporting members are mounted; and brackets formed of sheet metal and adapted to hold the ends of the resistance units, said brackets having lugs formed thereon passing through the said apertures in said supporting members and bent over to hold the parts together.

12. As an article of manufacture, the combination of a plurality of resistance units having bases which are rectangular at their ends, brackets adapted to hold the ends of said bases and prevent both lateral and vertical displacement thereof; and supporting members whereon said brackets are mounted, said supporting members and brackets being made of sheet metal and being secured together by means of lugs on one part passing through apertures in the other part and the lugs being bent over for engagement with the part to which it is to be secured.

13. The combination with a resistance unit having a suitable base, of a bracket adapted to receive the end of said base, said bracket being made of sheet metal which is stamped to form side pieces, and also top and bottom pieces, and a supporting member having said bracket attached thereto by means of lugs formed upon one of said parts and passing through suitable apertures in the other of said parts.

14. In combination with a resistance unit having a suitable supporting base of a bracket adapted to receive the end of said base and made of sheet metal stamped in a suitable form, said bracket being provided with side walls, each wall having a top and bottom piece, and a supporting member having said bracket fastened thereto by means of lugs formed upon said bracket and passing through apertures in said member.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

FREDERICK JOHANNMEYER.

Witnesses:

W. E. BARNUM,

HENRY J. WIEGAND.