

**Nov. 3, 1931.**

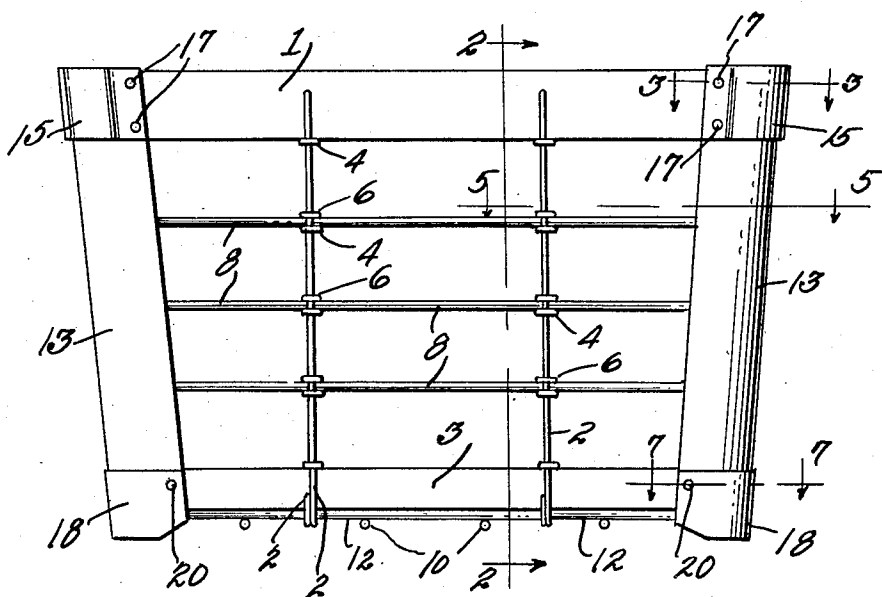
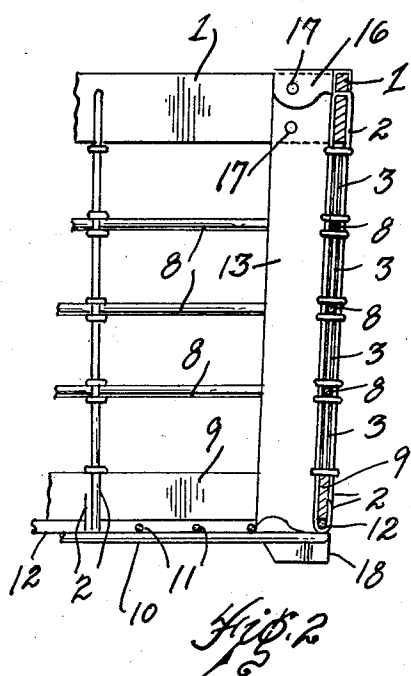
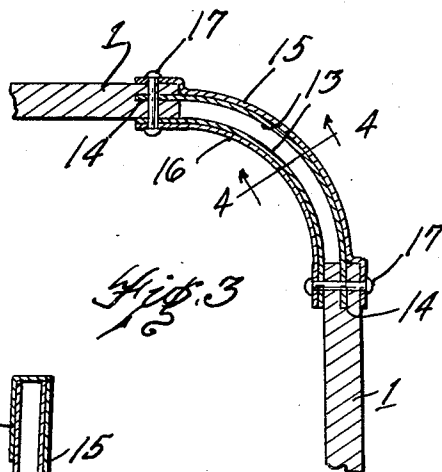
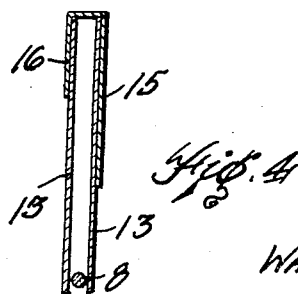
W. O. BROWN

**1,830,346**

WIRE BOX

Filed Aug. 18, 1930

2 Sheets-Sheet 1



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Nov. 3, 1931.

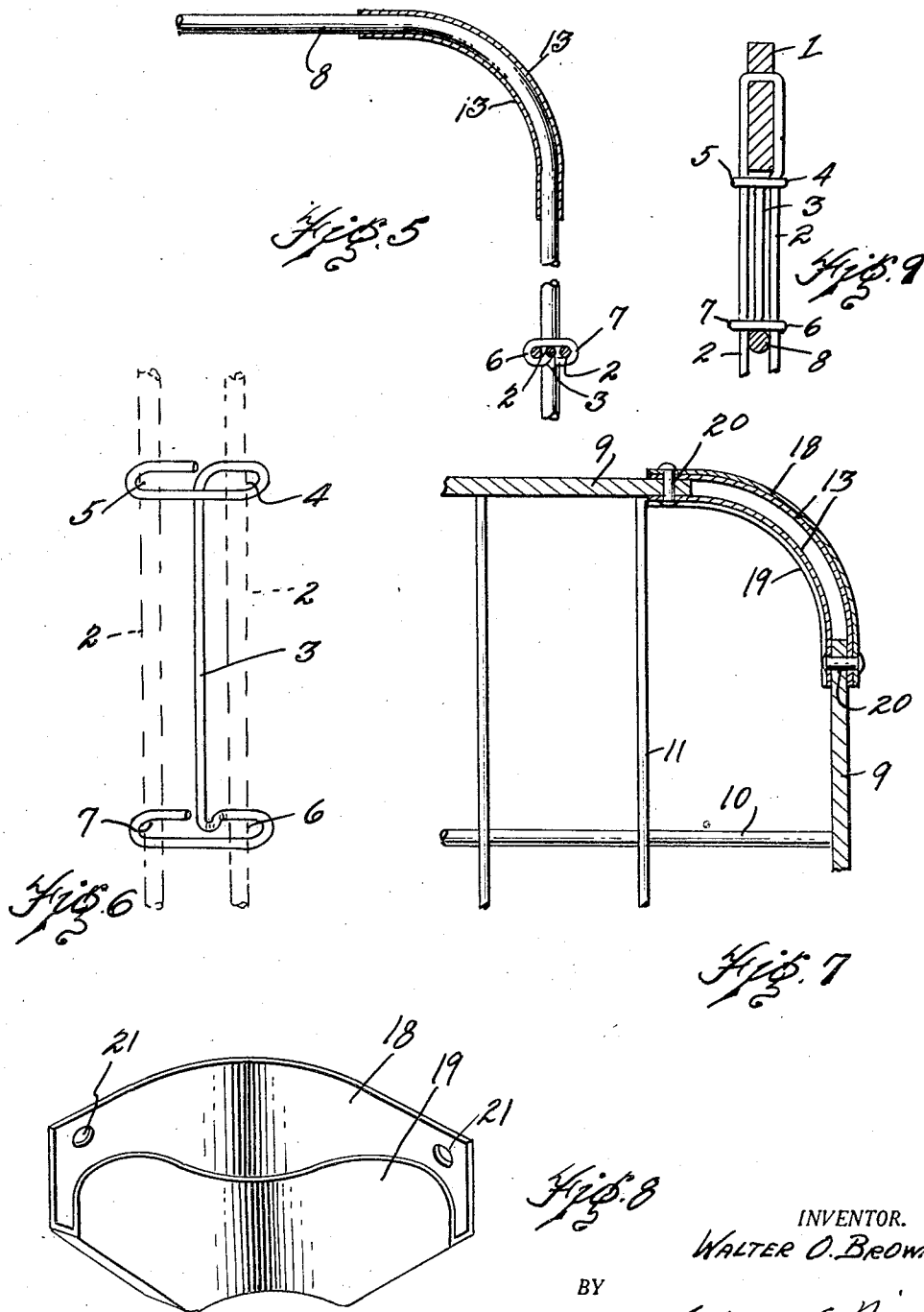
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2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

WALTER O. BROWN, OF DETROIT, MICHIGAN

## WIRE BOX

Application filed August 18, 1930. Serial No. 475,884.

This invention relates to wire boxes and the object of the invention is to provide a wire box having vertical and horizontal wires in the sides, the vertical wires being provided with spacers slidable thereon and arranged to space and hold the horizontal wires firmly in position in relation to the vertical wires.

Another object of the invention is to provide a wire box in which the vertical wires are arranged in pairs and the horizontal wires extend between the pairs of vertical wires, a series of wire spacers being slidably mounted on each pair of vertical wires and being arranged to space the horizontal wires and hold them in fixed relation with the vertical wires.

Another object of the invention is to provide a wire box in which the horizontal wires are secured in proper relation with the vertical wires without the necessity of soldering or welding the wires together and the horizontal wires being so supported in the vertical wires that they cannot break away at the points where connected together.

A further object of the invention is to provide a wire spacer member having loops at each end through which the vertical wires extend and provided with a straight wire portion spacing the loops apart and positioned between the vertical wires and between the horizontal wires so that the wire spacers are protected from damage.

Another object of the invention is to provide a wire box of the character described in which the horizontal wires may extend completely about the box, metal corner members being provided at the corners of the box to protect the horizontal wires.

These objects and the several novel features of the invention are hereinafter more fully described and claimed and the preferred form of construction by which these objects are attained is shown in the accompanying drawings in which—

Fig. 1 is an end view of a wire box embodying my invention.

Fig. 2 is a section taken on line 2—2 of Fig. 1.

Fig. 3 is a section taken on line 3—3 of Fig. 1.

Fig. 4 is a section taken on line 4—4 of Fig. 3.

Fig. 5 is a section taken on line 5—5 of Fig. 1.

Fig. 6 is a perspective view of one of the wire spacer members.

Fig. 7 is a section taken on line 7—7 of Fig. 1.

Fig. 8 is a perspective view of one of the corner feet.

Fig. 9 is a section showing the assembly of the spacers and horizontal wires in the vertical wires.

At the upper edge the box is provided with wood strips 1 as shown in Figs. 1 and 2, and the vertical wires 2 are inserted through apertures provided in the wood strips 1 and the ends are bent downwardly in parallel relation. The spacer members are each composed of a piece of wire 3 which at the upper end is bent to form loops 4 and 5 and at the lower end is bent to form loops 6 and 7, as shown in Fig. 6.

To position the spacers on the vertical wire the two parallel wires are inserted through the loops 4, 5, 6 and 7 as shown in Fig. 6, and the spacer is moved up against the wood strip 1, as shown in Fig. 9. These spacers are inserted over each of the vertical wires and up against the wood strip 1 at which time the horizontal wires 8 are positioned between the two sides of each vertical wire as shown in Fig. 9. The horizontal wires are preferably rectangular in form so as to extend around the four sides of the box and the first spacers at the tops of the vertical wires space the first horizontal wire an exact distance from the wood strip 1. After the first horizontal wire has been properly positioned the next series of spacers are positioned on the vertical wires and the next horizontal wire is positioned up against the end of the respective spacers whereupon the succeeding spacers and horizontal wires are assembled on the vertical wires. After the spacers have been mounted on the vertical wires, a wood strip 9 is inserted between the open lower ends of the vertical wires. A grating is provided for the bottom of the box which consists of a series of longitudinal

wires 10 and a series of transverse wires 11 which are spot-welded together and to a rectangular wire 12 which is of substantially the same rectangular form as the horizontal wires 8. The rectangular wire member 12 to which the grating is secured is then positioned up against the edge of the wood strips 9 and the ends of the vertical wires 2 are bent about the wire 12 and up against the wood strip 9, as shown in Fig. 2, to secure the grating in place as shown in Figs. 1 and 2.

The bending of the ends of the wires 2 over the wire 12 and the wood strips 9 locks the parts in assembled relation with the horizontal wires properly spaced in the sides of the box. By the assembly of the spacers on the vertical wires, the wire 3 is positioned between the vertical wires 2 where it is protected from damage and the looped ends of the spacers fix the position of the horizontal wires 8 between the vertical wires. In order to protect the corners of the box, a pair of arcuate sheet metal corner members 13 are provided as shown in Figs. 3, 5 and 7 and these members are positioned outside and inside of the horizontal wires 8 and at the upper end the wood frame members 1 are provided with slots 14 in the ends to receive the edges of one member 13 while the other member 13 contacts the inner faces of the members 1, as shown in Figs. 3. A cap member 15 is provided for each corner and is provided with an intumed flange 16 shown in Figs. 2, 3 and 4, which extends over the inner corner member 13. Rivets 17 are then inserted through the edges of the members 15, 13 and return bent flange 16 and through the ends of the members 1 to secure these members together at the upper corners. At each lower corner a sheet metal foot 18 is provided, as shown in Fig. 8, which fits about the outer member 13 and has an up-turned flange 19 on the inside.

This member 18 is slipped up over the lower ends of the corner members 13 and a rivet 20 is inserted through each aperture 21 in the member 18 and through the members 13 and ends of the bottom wood strips 9, as shown in Fig. 7. This secures the corner members together at the bottom and provides a foot at each corner which extends below the wire grating forming the bottom of the box so that the wire bottom is protected by the foot members 18. If desired the corner members 13 may be spot-welded to the horizontal wires 8 to firmly hold the wires at the corners though this is not absolutely necessary. In fact, if spot-welding is used, the wires 8 may be straight wires extending between the corner members and do not necessarily have to be continuous or rectangular in form.

From the foregoing description it becomes evident that the device is very simple and efficient in construction, will hold the hori-

zontal wires in proper spaced relation in the vertical wires, provides a box which is strong and firm in construction and provides a device which accomplishes the objects described.

Having thus fully described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is—

1. In a box, a series of wood top strips arranged in rectangular form, a series of vertical wires arranged in pairs and secured to the top strips and extending downwardly therefrom in parallel spaced relation, a series of wire spacers slidably mounted on each pair of vertical wires, a series of horizontal wires bent to rectangular form and extending between the parallel vertical wires and between the wire spacers thereon, a series of wood bottom strips positioned between the lower ends of the parallel wires, a grating positioned against the bottom strips and the lower ends of the vertical wires being bent about the grating and bottom strips, and a series of metal corner brackets extending between the top and bottom wood strips and connecting the wood strips together at the corners.

2. In a box, a series of wooden top strips, a series of vertical wires secured to the top strips and having parallel portions extending downwardly therefrom, a series of wire spacers positioned on the vertical wires and a series of horizontal wires extending between the parallel sides of the vertical wires and spaced apart by the wire spacers, a series of wood bottom strips extending between the lower ends of the vertical wires, and a grating for the bottom of the box positioned against the bottom strips and the lower ends of the vertical wires being bent about the grating and bottom strip to secure the grating to the sides.

3. In a box, a series of corner members, a series of wood strips connecting the corner members at the top, a series of vertical wires secured in each wood strip and having downwardly extending parallel portions, a series of spacer members positioned on the vertical wires, and a series of horizontal wires positioned between the spacer members on the vertical wires and a bottom for the box secured in position between the lower ends of the vertical wires.

4. In a box, a series of horizontal top and bottom frame members, a series of vertical wires secured in the top frame members and having depending parallel ends, a series of wire spacers mounted on the vertical wires, a series of horizontal wires extending between the parallel portions of the vertical wires and between the ends of the spacers thereon, a grating for the bottom of the box having a wire edge extending beneath the bottom frame members and the lower ends of the vertical wires being looped about the

bottom frame members and wire edge of the grating to secure the bottom frame members and grating thereto.

5 5. In a box, a series of horizontal top and bottom frame members, a series of vertical wires connecting the top and bottom frame members, a series of wire spacers mounted on the vertical wires, a series of horizontal wires extending between and supported by  
10 the wire spacers, the horizontal wires being bent to rectangular form, and a series of corner members extending between and secured to the top and bottom frame members and enclosing the horizontal wires at the  
15 corners.

6. In a box, a top strip, a pair of vertical wires secured to the top strip and extending downwardly therefrom in parallel relation, a wire spacer having loops at each end fitting  
20 over the parallel vertical wires and slidable thereon, and a series of horizontal wires extending between the parallel vertical wires and positioned between the ends of the wire spacers.

25 7. In a box, a top strip, a pair of vertical wires secured to the top strip and extending in parallel relation, a series of wire spacers each comprising a length of wire bent to form a pair of loops at each end to receive  
30 the two parallel vertical wires, a series of horizontal wires extending between the parallel vertical wires and between the ends of the wire spacers, the wire spacers supporting the horizontal wires in spaced relation  
35 in the vertical wires.

8. In a box, a top strip, a vertical wire secured to the top strip and having two depending parallel portions, a wire spacer having loops at each end fitting over the parallel  
40 portions of the vertical wires and slidable thereon, and a series of horizontal wires extending between the parallel vertical wires and positioned between the ends of the wire spacers thereon, and means for securing the  
45 ends of the vertical wires to the bottom of the box to hold the spacers and horizontal wires in assembled relation thereon.

9. In a box, a wood top strip, a vertical wire secured to the wood top strip and having  
50 parallel portions extending downwardly therefrom, a series of wire spacers positioned on the vertical wires, and a series of horizontal wires extending between the parallel portions of the vertical wires and supported  
55 in position between the wire spacers.

10. In a box, a series of horizontal top and bottom frame members, a series of vertical wires connecting the top and bottom frame members, a series of wire spacers mounted  
60 on the vertical wires, and a series of horizontal wires extending between and supported by the wire spacers.

In testimony whereof I sign this specification.