

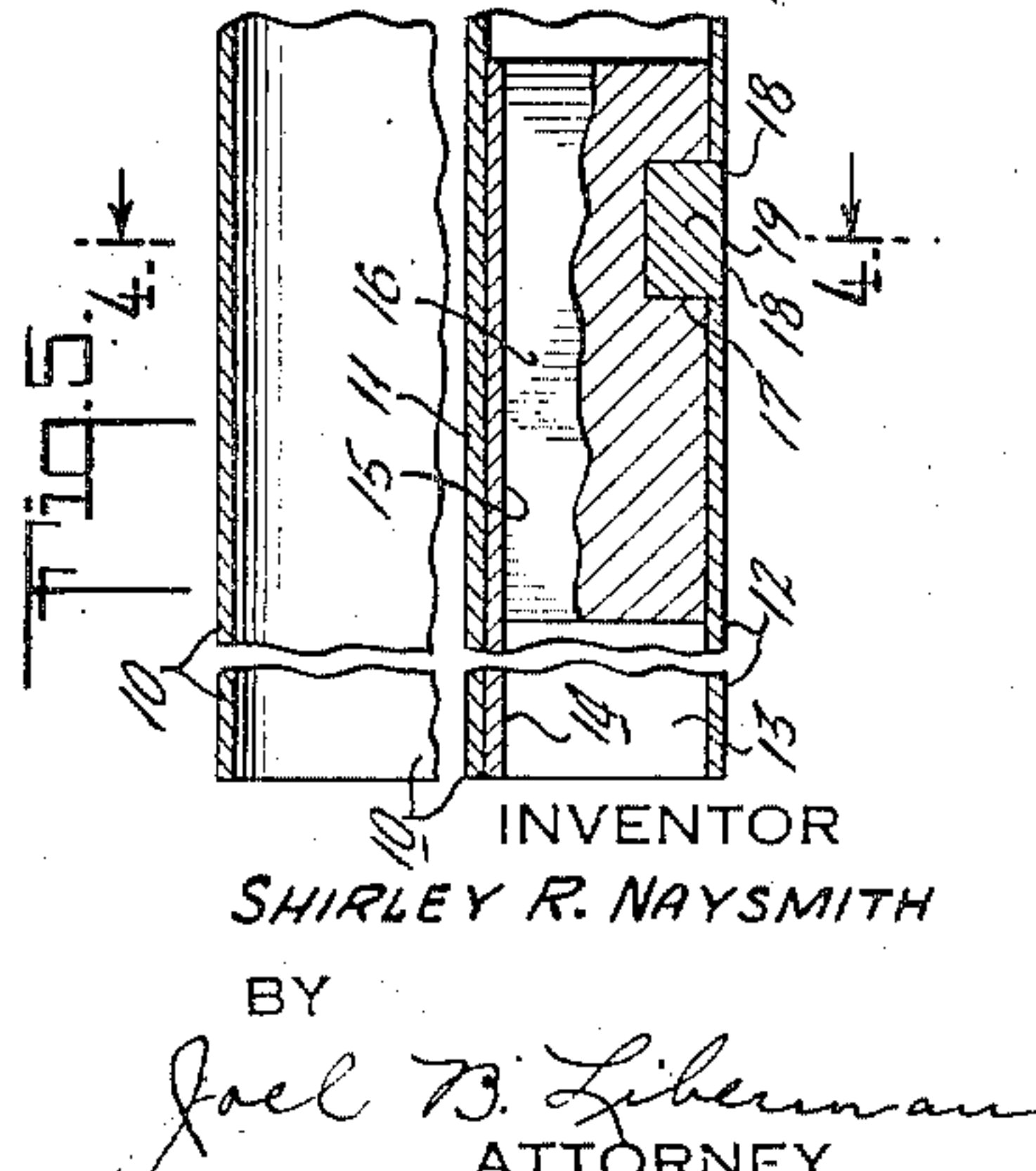
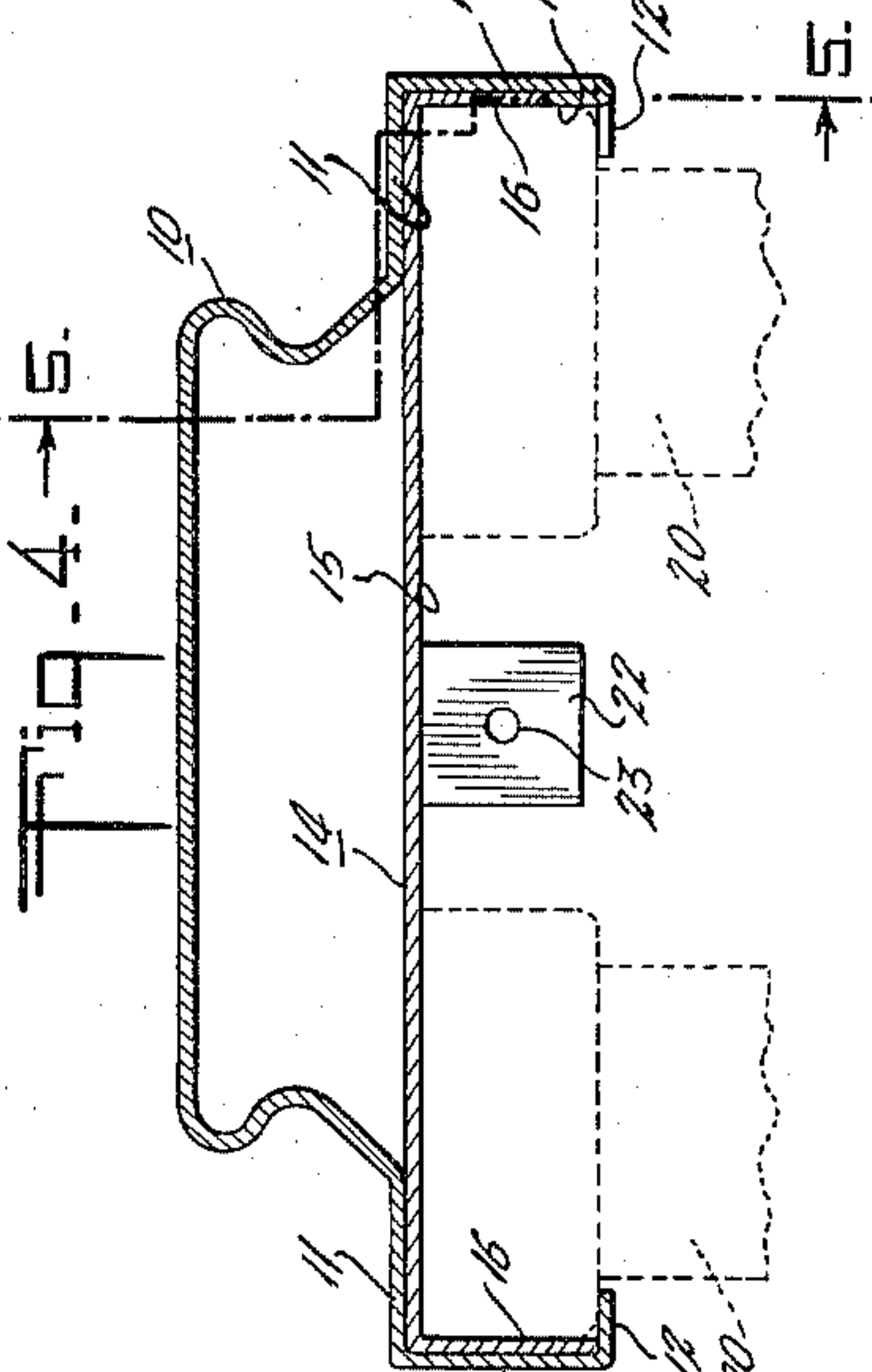
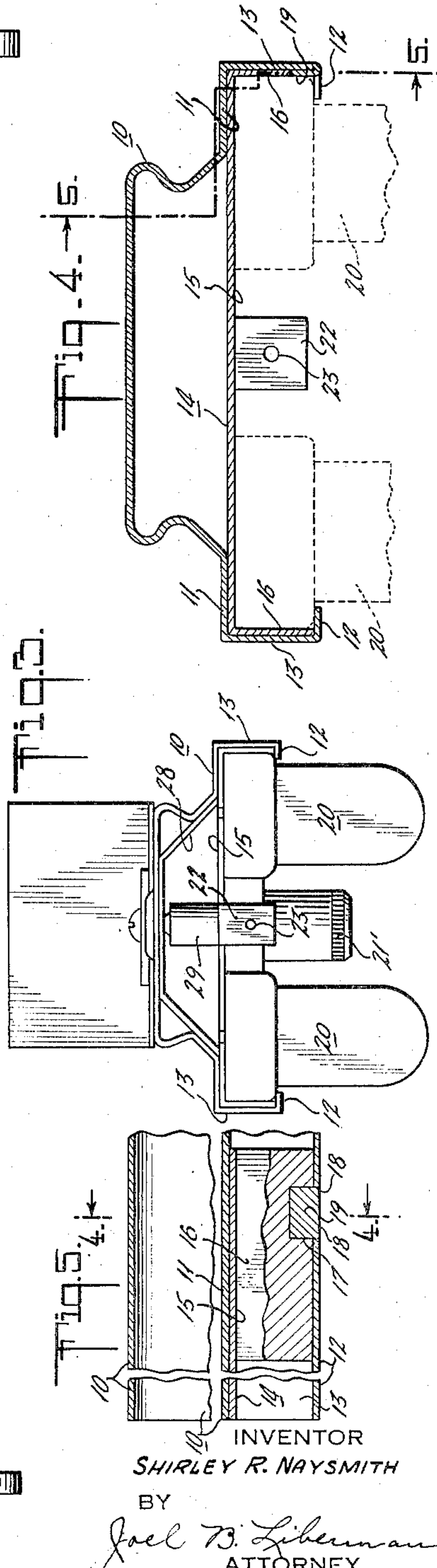
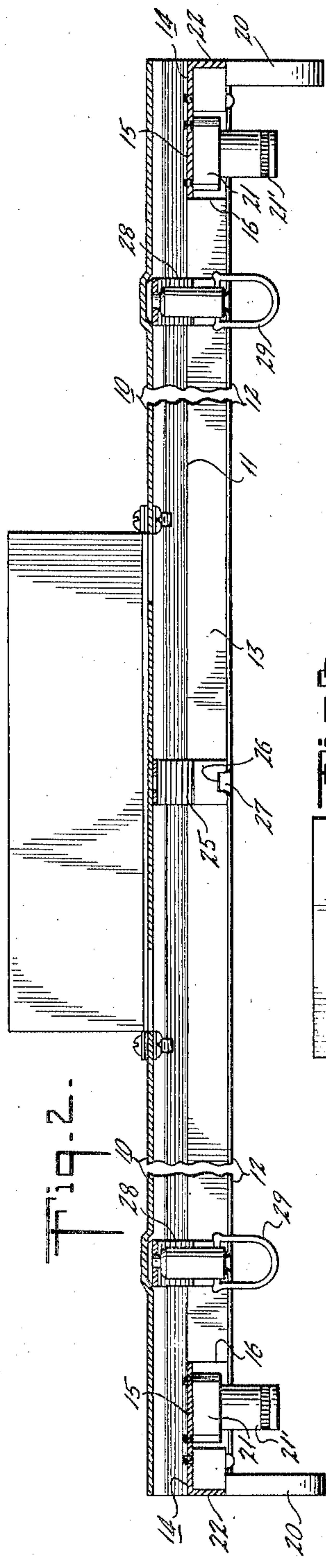
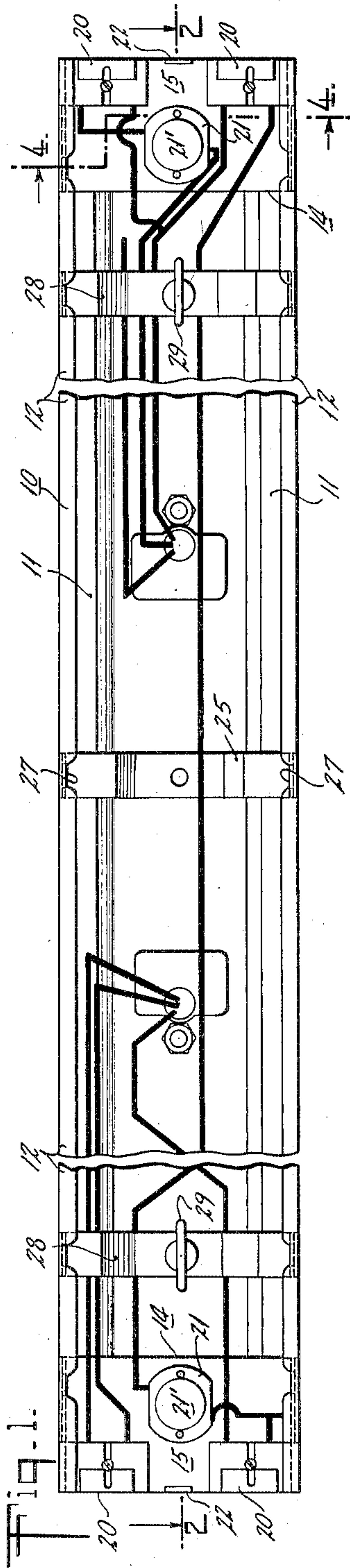
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FLUORESCENT LIGHTING FIXTURE WITH REINFORCING STRAPS

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FLUORESCENT LIGHTING FIXTURE WITH  
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5 Claims. (Cl. 240—51.11)

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The present invention relates to fluorescent lighting fixtures.

Fluorescent lighting fixtures customarily employ steel wiring channels and steel reinforcement straps welded in place. As these straps frequently support the sockets and various numbers and style of sockets may be used with the same or substantially the same wiring channel member, it is necessary to anticipate the particular use of the channel before the straps are welded in place. As such welding must precede the painting and finishing operations, the warehousing and stocking of the equipment presents problems which the present invention aims to avoid.

The present invention contemplates the manufacture of reinforced wireways wherein the reinforcing straps are mechanically interlocked with the wireway blank so that welding is unnecessary. This makes it possible to make the wireways complete so far as manufacture is concerned and provide them with the desired finishes, so that they may be stocked for use in any of the various types of fixture to be produced. Also the various cross straps may be made up, finished, shipped and stocked ready for securement to the wireways, and the only tool equipment necessary is a suitable press. By avoiding welding it is possible to employ extruded or sheet aluminum wireways and gain the advantages of aluminum over steel with respect to resistance to corrosion and lightness.

Other and further objects will hereinafter appear as the description proceeds.

The accompanying drawings show, for purposes of illustrating the present invention, an embodiment in which the invention may take form, it being understood that the drawings are illustrative of the invention rather than limiting the same.

In these drawings:

Figure 1 is an inverted plan view of the completed wiring channel with sockets and wiring for a fluorescent lighting fixture;

Figure 2 is a longitudinal sectional view on the line 2—2 of Figure 1;

Figure 3 is an end view of the structure of Figure 1;

Figure 4 is a transverse sectional view on the line 4—4 of Figures 1 and 5, the lamp sockets being indicated in dotted lines only; and

Figure 5 is a fragmentary sectional view taken on the line 5—5 of Figure 4.

The lighting fixture employs an inverted channel-shaped wireway 10 made of 20 gage steel

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or 18 gage aluminum, or of somewhat thicker extruded aluminum. The wireway may be the nominal lamp length of the fluorescent lamp to be used or twice such length where modularly related to the lamp length, or longer where the lamps are to be spaced lengthwise. A single length unit is illustrated. The cross-section of the wireway may be of various forms. It is here illustrated in a form heretofore in common use so as to be interchangeable so far as mounting is concerned. It has longitudinal extending downwardly facing shoulders 11 and inwardly extending flanges 12 with vertical side walls 13 interconnecting the shoulders and flanges. Similar wireways have heretofore been used with welded steel reinforcing straps. Socket-carrying cross-straps or plates 14—14 are provided at the ends of the wireway. These plates have flat central portions 15 adapted to span the inside of the wiring channel or the wireway and be received under the shoulders 11 and downwardly extending sides 16—16 notched at their lower ends as indicated at 17, Figure 5 and resting on the upper surfaces of the flanges 12. When the plates are properly positioned, the portions of the flanges 12 opposite the notches are bent upwardly and outwardly to form locking elements which enter the notches. To facilitate these operations, the flanges 12 may be slitted as indicated at 18—18, Figure 5, and the prong 19 between these slits is bent up to enter the notch 17. Where slitting is not done, a press may force the material of the wireway to the desired position. The plates 14 are thus mechanically interlocked with the wireway so that they can neither move up nor down, nor laterally nor longitudinally of the wireway. These plates or straps 14 are made of stiff steel. Lamp sockets 20—20 and a starter socket 21 for starter 21' may be secured to the plate 14. To facilitate connecting the wireways to one another for continuous lighting equipment, the plates 14 have downwardly bent members 22 apertured at 23 for a bolt, not shown.

The wireway is provided with a centrally located reinforcing strap 25 narrower than the strap 14. It is shaped to fit against the upper part of the wireway so as to support this part of the wireway and has bifurcated lower ends as indicated at 26 adapted to receive inwardly folded prongs 27 similar to the prongs 19. The wireway also carries a pair of straps 28—28 similar to the strap 25. The straps 28—28 are spaced the same as the spacing of the holes in the reflector used to cover the wireway and these straps



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28—28 carry reflector supporting hangers 29 whereby the reflector may be held in place.

It will be noted that the wireway may be made up complete, and painted or otherwise finished and shipped to the warehouse or other destination, also that the straps may be made up complete and similarly sent to the destination. The complete wireway unit may readily be assembled, the only important tool necessary being a suitable press for folding the prongs 19 and 27 into place to secure the straps to the wireway. The sockets and ballast may readily be secured to the wireway and the wiring installed.

In as much as the improved mode of securing of the reinforcing straps and channel member together does not contemplate welding, it is possible to employ this construction with wireways made of aluminum, and secure the advantages of aluminum so far as weight and appearance are concerned. Aluminum wireways for such purposes have not heretofore been used because of the difficulties in reinforcing the aluminum wireways on account of the difficulty of welding such aluminum parts.

Since it is obvious that the invention may be embodied in other forms and constructions within the scope of the claims, I wish it to be understood that the particular form shown is but one of these forms, and various modifications and changes being possible, I do not otherwise limit myself in any way with respect thereto.

What is claimed is:

1. A weldless, reinforced article of manufacture for use as the wireway and reflector and lamp supporting body of an elongated, horizontally extending, fluorescent, lighting fixture, comprising an elongated body having a top portion provided at its sides with downwardly facing shoulders, depending side walls below the shoulders and inwardly facing flanges at the bottom of the side walls to form an elongated downwardly opening mouth of a width determined by the spacing of the flanges, and two pairs of transversely extending, inverted, U-shaped reinforcing straps near each end, the straps having upper portions in engagement with the downwardly facing shoulders, side portions in engagement with the side walls of the body and ends resting on the top of the flanges whereby the straps are by such engagement confined against movement upwardly, downwardly or crosswise of the body, the lower portions of the sides of the cross-straps adjacent the flanges having opposed surfaces facing toward the opposite ends of the body, the flanges having upwardly bent portions which engage said opposed surfaces and form stops to prevent movement of the straps lengthwise of the body, a pair of fluorescent lamp sockets secured to each of the outermost straps and projecting below the flanges, and a reflector supporting clamp secured to the other strap of each pair and extending below the flanges.

2. A weldless, reinforced article of manufacture for use as the wireway and lamp supporting body of an elongated horizontally extending, fluorescent, lighting fixture, comprising an elongated body having a top portion provided at its sides with downwardly facing shoulders, depending side walls below the shoulders and inwardly facing flanges at the bottom of the side walls to form an elongated downwardly opening mouth of a width determined by the spacing of the flanges, and two transversely extending inverted U-shaped reinforcing straps at each end, the strap having upper portions in engagement

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with the downwardly facing shoulders, side portions in engagement with the side walls of the body and ends resting on the top of the flanges whereby the straps are by such engagement confined against movement upwardly, downwardly or crosswise of the body, the lower portions of the sides of the cross-straps adjacent the flanges having opposed surfaces facing toward the opposite ends of the body, the flanges having upwardly bent portions which engage said opposed surfaces and form stops to prevent movement of the straps lengthwise of the body, and a pair of fluorescent lamp sockets secured to each of the outermost straps and projecting below the flanges.

3. A weldless, reinforced article of manufacture for use as the wireway and reflector supporting body of an elongated horizontally extending, fluorescent, lighting fixture, comprising an elongated body having a top portion provided at its sides with downwardly facing shoulders, depending side walls below the shoulders and inwardly facing flanges at the bottom of the side walls to form an elongated downwardly opening mouth of a width determined by the spacing of the flanges, and two transversely extending inverted U-shaped reinforcing straps spaced from the ends of the body, the strap having upper portions in engagement with the downwardly facing shoulders, side portions in engagement with the side walls of the body and ends resting on the top of the flanges whereby the straps are by such engagement confined against movement upwardly, downwardly or crosswise of the body, the lower portions of the sides of the cross-straps adjacent the flanges having opposed surfaces facing toward the opposite ends of the body, the flanges having upwardly bent portions which engage said opposed surfaces and form stops to prevent movement of the straps lengthwise of the body, and reflector supporting clamps secured to the straps and extending below the flanges.

4. A weldless, reinforced article of manufacture for use as the wireway and supporting body of an elongated horizontally extending, fluorescent, lighting fixture, comprising an elongated body having a top portion provided at its sides with downwardly facing shoulders, depending side walls below the shoulders and inwardly facing flanges at the bottom of the side walls to form an elongated downwardly opening mouth of a width determined by the spacing of the flanges, and transversely extending inverted, U-shaped reinforcing straps having upper portions in engagement with the downwardly facing shoulders, side portions in engagement with the side walls of the body and ends resting on the top of the flanges whereby the straps are by such engagement confined against movement upwardly, downwardly or crosswise of the body, the lower portions of the sides of the cross-straps adjacent the flanges having opposed surfaces facing toward the opposite ends of the body, the flanges having upwardly bent portions which engage said opposed surfaces and form stops to prevent movement of the straps lengthwise of the body.

5. A weldless, reinforced article of manufacture as claimed in claim 4, wherein the opposed surfaces are the sides of a downwardly opening notch in the strap sides, and bent portions are in the form of prongs entering the notches.

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