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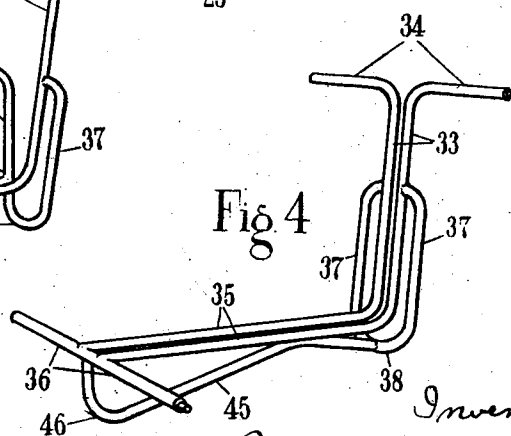
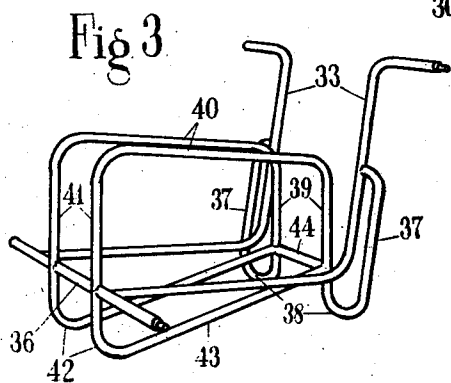
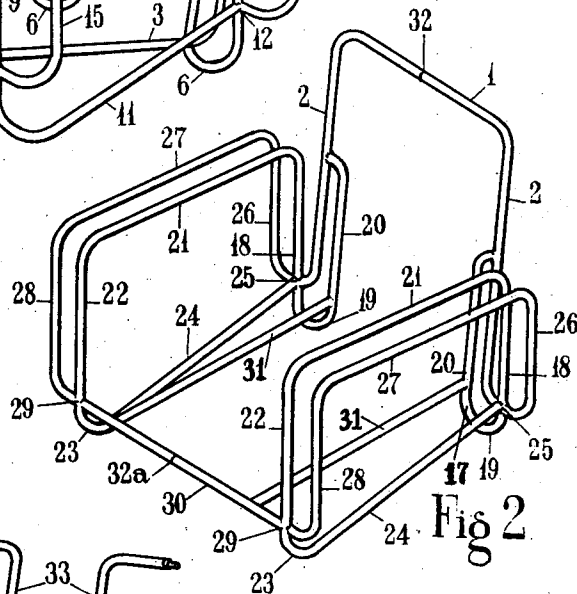
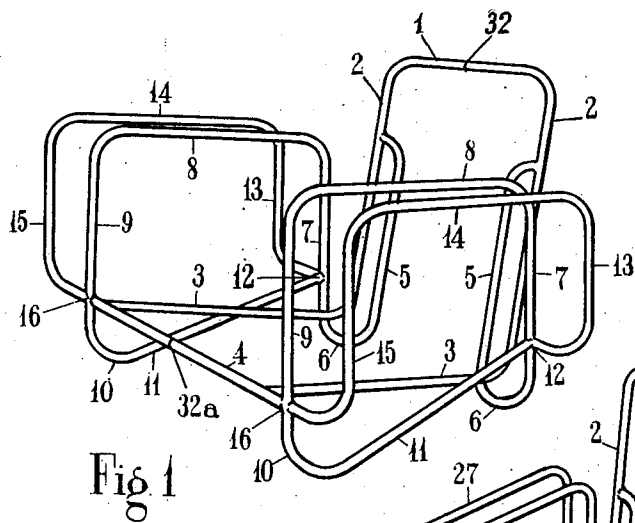
P. L. WAY

2,618,316

FURNITURE FRAME CONSTRUCTION

Filed Feb. 1, 1949

2 SHEETS—SHEET 1



Inventor
Percival Lawrence Way
By
Henninger and Pillars
Attorneys

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P. L. WAY

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2 SHEETS—SHEET 2

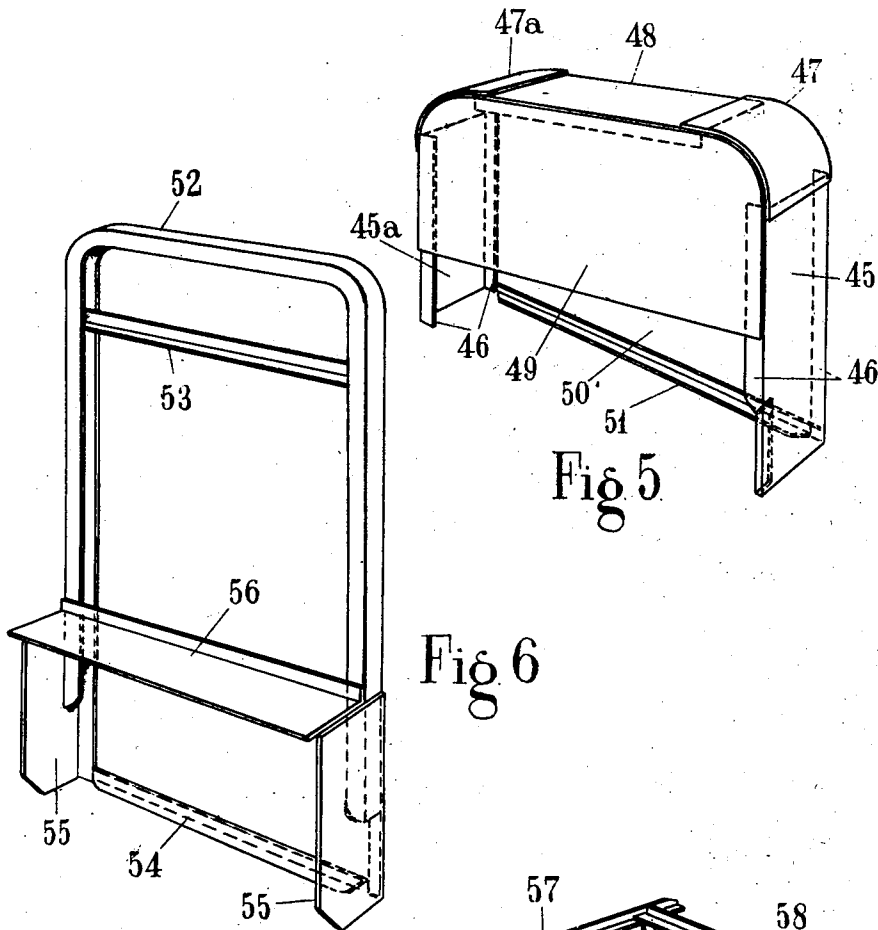


Fig 5

Fig 6

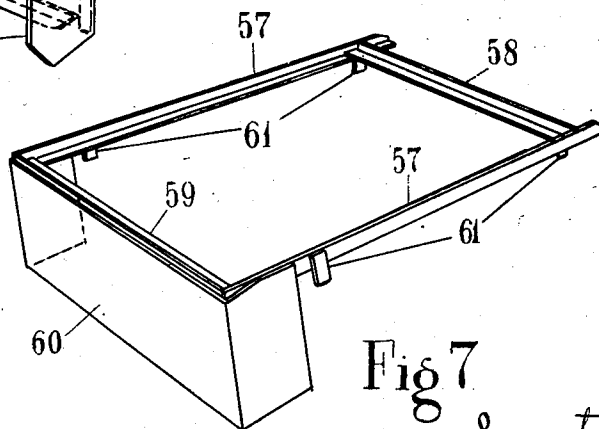


Fig 7

Inventor
Percival Lawrence Way
By
Henninger and Pillars
Attorneys

UNITED STATES PATENT OFFICE

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FURNITURE FRAME CONSTRUCTION

Percival Lawrence Way, Tipton, England, assignor to Vono Limited, Tipton, England, a British company

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This invention relates to metal furniture and particularly metal furniture formed of tubing.

The object of the invention is to provide a frame formed of rolled or extruded metal section and particularly metal tubing for arm or easy chairs, settees and the like, and particularly arm or easy chairs in which the covering, panelling or upholstery thereof are slidably engaged in position on the frame.

In the construction of frames from metal and particularly metal tubing of relatively light section, difficulty arises in securing a suitable degree of rigidity of the back and arm elements, and the object of the present invention is to provide a construction of frame which shall not possess this defect.

The invention consists in a frame formed from metal, more particularly metal tubing, for arm or easy chairs, settees and the like in which each arm is formed of two lengths of metal appropriately bent and arranged to provide two members side by side, said arms being spaced apart to form two similar elements, in combination with a back connected to the arms by at least two members extending downward from the back and connected with an arm element.

To secure an appropriately rigid connection between the arms and the back, each of the side members of the back is connected with its associated arm by at least two members extending downward from the back and connected with an arm element, and optionally also with a member extending from the back to the front element of the frame of the chair, settee or the like to provide a support for the seat.

The frame of the chair in accordance with the invention may be arranged to be divided adjacent to its median plane so that the two half frames thus obtained may be connected with an intermediate portion to form a settee.

The covering or upholstery may be engaged with the arm and back elements, that is to say it may be arranged to form units adapted to be slid over and to envelop substantially each of the arms and the back element while the seat may be removably associated with the frame, being made for instance of one piece, and arranged to drop in position and be supported by the element of the frame extending from the front element of the frame towards the back of the chair or settee.

Where the frame is arranged to be divided for convenience in storage and to facilitate the use of each half-frame in association with an intermediate member to form a seat, the connection

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between these portions may be effected in any suitable manner.

For instance, one of such portions may have the top bar of the back and the front element of the frame each furnished with a socket adapted to engage a corresponding spigot element on the other half-frame, or on the intermediate portion which is located between two such half-elements in forming a settee.

In one construction in accordance with the invention, the front lower member of the frame is constituted by a tube which at one end at least is bent upward, backward and then downward to provide a portion of one element of an arm, and generally parallel with this element there is arranged a member formed of tubing comprising a portion extending from the back to the front of the arm, slightly inclined, and bent so that the bend may constitute a foot and thence in an upward direction, thereafter being bent and continued in a rearward direction, and again bent and continued in a downward direction, to a point where it is welded to a lateral extension of the rearward portion of the first-mentioned arm element which is curved or bent to meet it, and then continued in an upward direction to form one side member of the back element of the frame.

Further, adjacent to this point, there may be secured by welding the end of a length of tubing which is bent to provide a rear foot, the bend extending into a portion which is continued upward and is again bent to provide an extremity which is welded to the side member of the back element of the frame above referred to.

The portion so bent and continued upward is preferably connected by a length of tubing or metal of other section by, for instance, welding one end thereof to such portion, the opposite end of the length of tubing being connected by welding with the front element of the frame, to provide a side support for the seat.

In this way, stated broadly, the arm will comprise two elements generally of inverted U-shape arranged side by side but spaced apart, one of such frame elements being continued to provide a portion at least of the front lower element of the frame of a chair or the like, which portion is connected in turn to the back portion of the frame by a member providing a support for the seat, while the other inverted U-shaped element is bent at its lower extremity to provide a foot, and is welded to the front element of the frame, the extremity of the bent portion being taken towards the back and welded to the first-men-

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tioned arm element which in turn is welded to the side portion of the element forming the back of the chair or the like.

The side element of the back will therefore be provided adjacent to its lower portion at least with two limbs both of which are connected solidly with the adjacent two elements forming each arm.

The invention will be described further in detail and by way of example with reference to the accompanying drawings, in which:

Figure 1 is a view in perspective of one from of chair frame in accordance with the invention,

Figure 2 is a like view of a second form,

Figures 3 and 4 are views of alternative constructions of an element adapted to be introduced between two halves of a chair frame to form a settee,

Figures 5, 6 and 7 are perspective views respectively of a cover member adapted to be applied to the arm, a cover member for the back and a member to form a support for the upholstery applied to the seat.

In both of the constructions illustrated in Figures 1 and 2, the back is formed of a length of tubing bent to provide a laterally extending portion 1, a downward extending portion 2 which in the case of the construction illustrated in Figure 1 is bent to provide a member 3 extending in a forward direction from it and in welded connection with the front lower member 4 of the frame.

From the portion 2 of the back extends downward a length of tubing 5, one end of which is in welded connection with the portion 2 of the back and this downward extending portion is bent at 6 to provide a rear foot and is continued to provide an upward extending portion 7 which continues into a forward extending portion 8 which in turn continues into a downward extending portion 9 to form one of the two elements forming one of the arms, this portion being bent at 10 to provide a front foot from which continues in an inclined direction a portion 11, the end of which is in welded connection with the portion 7.

To this portion 7 there is also connected at the point 12 a further length of tubing which is bent outward and then upward to provide the portion 13 which continues into a forward extending portion 14 continuing into a downward extending portion 15 to provide a second arm element which is connected with the first-mentioned arm element at the position indicated by 16.

In the case of the construction shown in Figure 2, the laterally extending portion 1 of the back is continued into a downward extending portion 2 which is provided adjacent to its lower end with a bend 17 the end of which is in welded connection with one of the arm elements, namely the arm element including the downward extending portion 18 which is bent to provide a foot 19 and is continued in an upward direction to provide a portion 20, the end of which is in welded connection with the portion 2 of the back.

The portion 18 of the arm element extends into a forward directed portion 21 continuing into a downward directed portion 22 in turn continuing into a portion 23 which continues into an upwardly inclined portion 24 in welded connection at 25 with the portion 18 of the arm element and adjacent to this weld there is provided a length of tubing which is bent to provide an upward extending portion 26 continuing into a forward

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ward extending portion 27 and a downward extending portion 28 which is in welded connection at 29 with the member 22 with which the front element of the frame 30 is in welded connection. From the front element 30 extends in a rearward direction a length of tubing 31 in welded connection with the portion 20 of the back.

In both of the constructions illustrated the front and back members are divided at positions indicated by the references 32 and 32a, the two half-sections being connected together by a spigot which may be in the form of a plug partly inserted into the lengths of tubing forming respectively the half of the back element of the frame and half of the front element and secured therein for instance by pinching the tube and leaving a spigot portion extending and adapted to enter the front and back elements of the other half of the chair frame.

When divided, between the two halves there may be introduced elements as shown in Figures 3 and 4, both of which comprise downward extending portions 33 and laterally extending portions 34, the downward extending portions being continued into forward extending portions 35 which are rigidly connected with the front element 36.

In both of the constructions shown in Figures 3 and 4, to the downward extending portions are connected two additional downward extending portions 37 which provide a rear foot or rear feet 38.

In the case of the construction shown in Figure 3, the portions 37 are continued into upward extending portions 39 continuing into forward extending portions 40 and then into downward extending portions 41 bent to provide front feet 42 and continuing into upward inclined portions 43 which are connected to the portions 39 between which extends a length of tubing 44.

In the case of the construction shown in Figure 4, to the foot portion 38 there is connected a length of tubing comprising a forward extending portion 45 bent to provide a front foot 46 and continued upwards and joined to the front frame element 36.

Referring to Figure 5, which illustrates a member adapted to be applied to the tubular arms of the chair comprising two elements 45 and 45a formed of sheet material to provide a channel section, the side members of which are indicated by the reference 46.

The two members 45 and 45a are connected respectively by curved pieces of sheet material 47, 47a with a top member 48 which is also of channel section and to the elements of channel section there is connected an inner side member 49 and an outer side member 50 the base of which is shown strengthened by an angle section element 51.

Referring to Figure 6, which illustrates the means for securing covering to the back, it will be seen that it comprises a bent member of channel section 52 strengthened by a transverse angle member 53 and a lower member 54 and to the side at the lower portion of the channel member there are connected plates 55 and a transverse flanged plate 56 which latter will form the rear support for the seat.

The main support for the seat comprises side members of angle section 57 connected by two transverse members 58 and 59 and a member 60 which forms the front of the lower portion of the chair.

On the side members there are provided lugs

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61 which engage over the lower elements of the side members of the frame of the chair, namely, the elements 3 in the case of the construction shown in Figure 1, and the elements 31 in the case of the construction shown in Figure 2.

I claim:

1. A frame for articles of furniture such as arm-equipped chairs, settees and the like, said frame comprising in combination, two complemental frame units formed of metal tubing, each of said complemental frame units comprising an arm section having front and rear portions and formed of two juxtapositioned generally inverted U-shaped elements positioned side by side and spaced apart by inwardly directed extensions on the outer inverted U-shaped element, and a back portion comprising a plurality of downwardly extending elements rigidly connected to said arm section, each of said complemental frame units further comprising a plurality of tubular members extending laterally in the same direction with respect to the arm section, at least one of said tubular members forming part of the back portion and another of said tubular members being supported at one end thereof on the front portion of said arm section, and securing means detachably connecting adjacent ends of said laterally extending members in end-to-end relation to form a unitary frame.

2. A frame for articles of furniture such as arm-equipped chairs, settees and the like, said frame comprising in combination two complemental frame units formed of metal tubing, each of said complemental units comprising an arm section having front and rear portions and formed of two juxtapositioned generally inverted U-shaped elements positioned side by side in spaced apart relationship, each of said complemental frame units further comprising a plurality of tubular members extending laterally with respect to said arm section and in the same direction, at least one of said tubular members forming part of the back section of the unit and another of said members being supported at one end thereof on the front side of said arm section, the back section of each unit having a plurality of downwardly extending elements, one of which is connected to said arm section and another of which is connected to the tubular member supported on the front side of the arm section, and cooperative spigot and socket elements carried by said laterally extending members and connecting the ends thereof in end-to-end relationship to form a unitary frame.

3. A frame for articles of furniture such as arm-equipped chairs, settees and the like, said frame comprising in combination two complemental frame units formed of metal tubing, each of said complemental frame units comprising an arm section having front and rear portions and formed of two juxtapositioned generally inverted U-shaped elements positioned side by side and in spaced apart relationship, each of said complemental frame units comprising a plurality of tubular members extending laterally with respect to said arm section and in the same direction, at least one of said members forming part of the back section of the unit and another of said laterally extending members being supported at one end thereof on the front side of said arm section, the back section of each of said frame units further comprising a plurality of downwardly extending elements, one of said elements being connected to the laterally extending member supported on the front side of the arm section

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and another of said downwardly extending elements being connected to the rear portion of the arm section, and detachable securing means positioned at the outer ends of the laterally extending members detachably connecting the frame units in side by side relationship to form a unitary frame.

4. A frame unit for articles of furniture such as arm-equipped chairs, settees and the like, said unit comprising in combination an arm section having front and rear portions and formed of two juxtapositioned generally inverted U-shaped elements located side by side and in spaced apart relationship, said frame unit further comprising a back section having a plurality of downwardly extending elements, one of said elements being connected to the rear portion of the arm section, and a plurality of members extending laterally with respect to the arm section, at least one of said members forming part of the back section and another being supported at one end thereof on the front side of the arm section.

5. A frame unit for articles of furniture such as arm-equipped chairs, settees and the like, comprising in combination an arm section having front and rear portions and formed of two juxtapositioned generally inverted U-shaped elements located side by side and spaced apart by inwardly directed transverse extensions on the outer U-shaped element, a back section comprising a plurality of downwardly extending elements rigidly connected to the rear of said arm section, and a plurality of members extending laterally with respect to said arm section, at least one of the members forming part of the back section and another of said members being supported at one end thereof on the front side of the arm section.

6. A frame for articles of furniture such as arm-equipped chairs, settees and the like, comprising in combination two complemental frame units formed of metal tubing, each of said complemental frame units comprising an arm section having front and rear portions and formed of two juxtapositioned generally inverted U-shaped elements positioned side by side and in spaced apart relationship, each of said complemental frame units further comprising a plurality of tubular members extending laterally with respect to the arm section and in the same direction, at least one of said laterally extending members forming part of the pack section of the unit and another of said laterally extending members being supported at one end thereof on the front portion of said arm section, the back section of each of said units comprising a plurality of downwardly extending elements one of which is rigidly connected to the arm section and another of which is connected to the laterally extending member supported on the front portion of the arm section, and an intermediate unit comprising a back portion having a plurality of downwardly extending elements and a front portion, each of said portions provided with a plurality of oppositely directed laterally disposed tubular extensions, and means detachably securing the oppositely directed laterally disposed tubular extensions of said intermediate unit to and between the adjacent ends of said laterally extending members of each of said complemental frame units to form a unitary frame.

7. A frame for articles of furniture such as arm-equipped chairs, settees and the like, said frame comprising in combination two complemental frame units formed of metal tubing, each

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of said complementary frame units comprising an arm section having front and rear portions and formed of two juxtapositioned generally inverted U-shaped elements positioned side by side and in spaced apart relationship, each of said complementary frame units further comprising a plurality of tubular members extending laterally with respect to the arm section and in the same direction, at least one of said members forming part of the back section of the unit and another of said members being supported at one end thereof on the front portion of the arm section, the back section of each of said frame units having a plurality of downwardly extending elements, one of which is rigidly connected to the arm section and another of which is rigidly connected to the laterally extending member supported on the front portion of the arm section, an intermediate unit comprising a back portion having a plurality of downwardly extending elements, a front portion and an arm rest section positioned intermediate said back and front portions of said intermediate unit, each of said intermediate element portions provided with a plurality of oppositely directed laterally disposed tubular extensions, and securing means detachably connecting the oppositely directed laterally disposed tubular extensions of said intermediate unit to and between the adjacent ends of said laterally extending members of each of said complementary frame units to form a unitary frame.

8. A frame for articles of furniture such as arm-equipped chairs, settees and the like, said frame comprising in combination two complementary frame units formed of metal tubing, each of said complementary frame units comprising an arm section having front and rear portions and formed of two juxtapositioned generally inverted U-shaped elements positioned side by side and in spaced apart relationship, each of said complementary frame units further comprising a plurality of tubular members extending laterally with respect to said arm section and in the same

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direction, at least one of said tubular members forming part of the back section and another of said members being supported at one end thereof on the front portion of said arm section, the back portion of each unit comprising a plurality of downwardly disposed elements rigidly connected to said arm section, an intermediate unit comprising a back portion having a plurality of downwardly extending elements, a front portion and an arm rest section positioned intermediate said back and front portions of said intermediate unit, each of said intermediate unit portions provided with a plurality of oppositely directed laterally disposed tubular extensions, securing means detachably connecting the oppositely directed laterally disposed tubular extensions of said intermediate unit to and between the adjacent ends of said laterally extending members of each of said complementary frame units to form a unitary frame, and separate covering members removably positioned over said arm sections of said complementary frame units, said back portion and said arm rest section of said intermediate unit.

PERCIVAL LAWRENCE WAY.

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