May 9, 1939. D. H. CHASON 2,157,648

WORK TABLE

Filed April 25, 1936 3 Sheets-Sheet 1

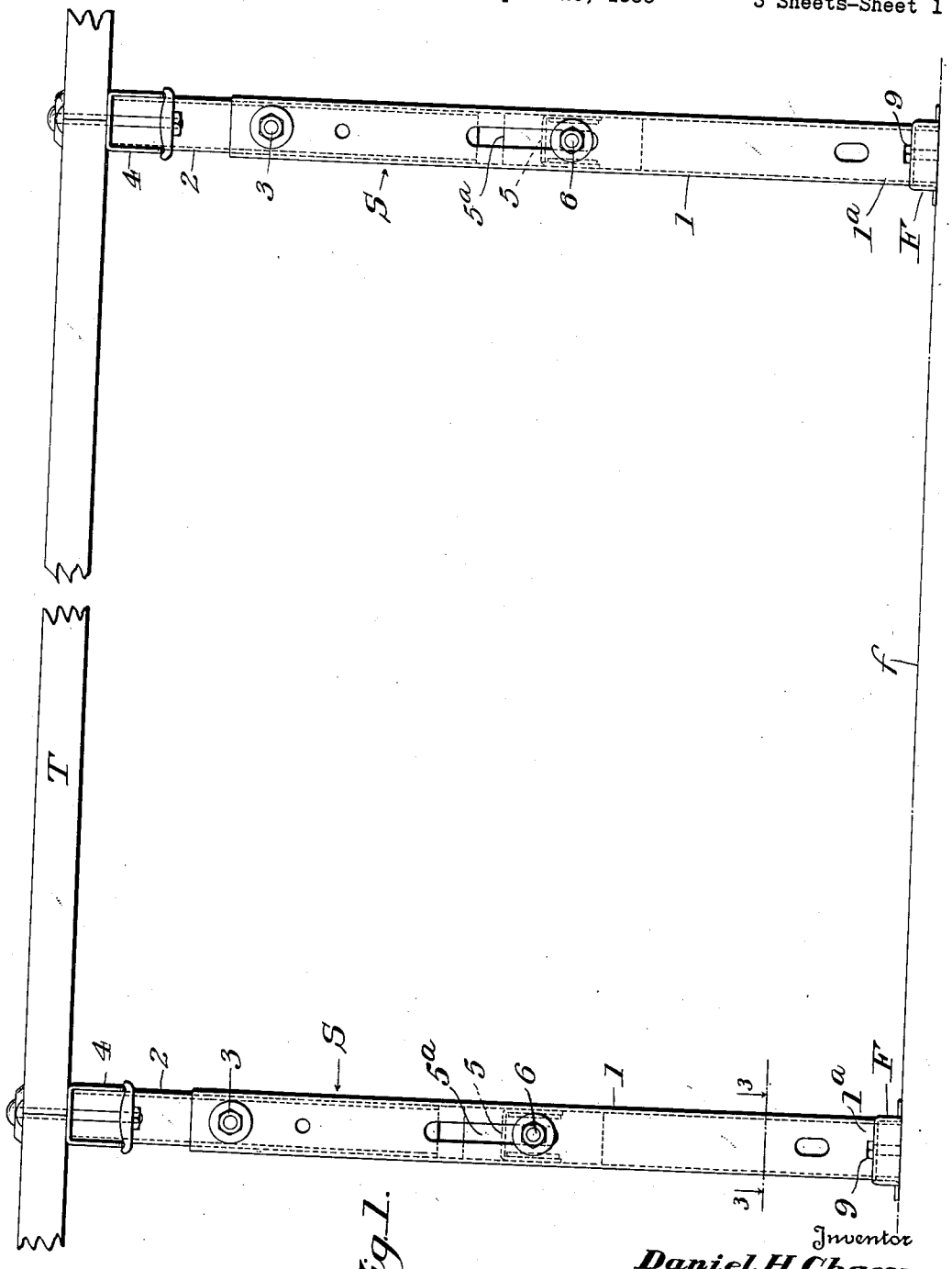
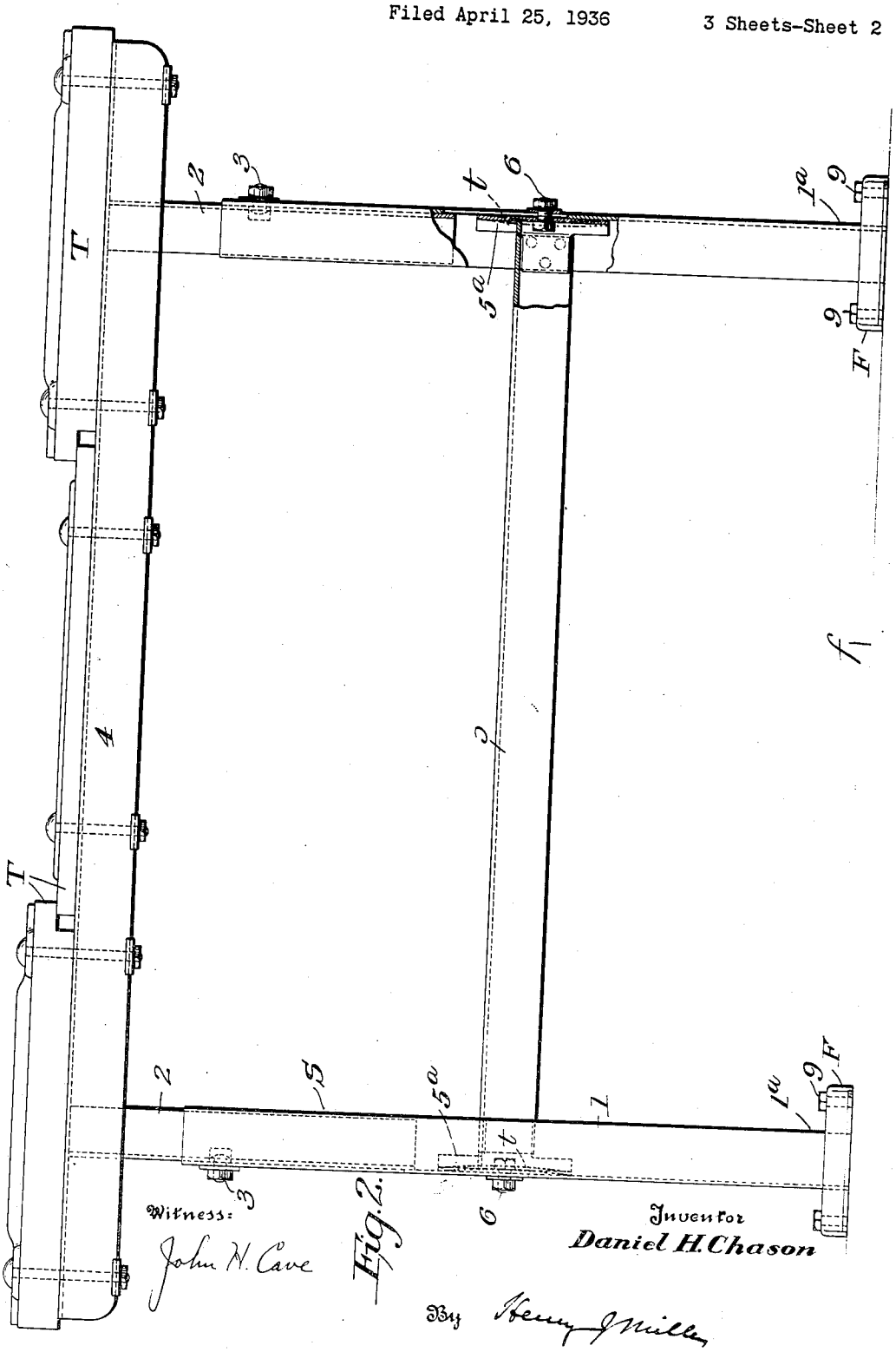


Fig. 1.

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WORK TABLE

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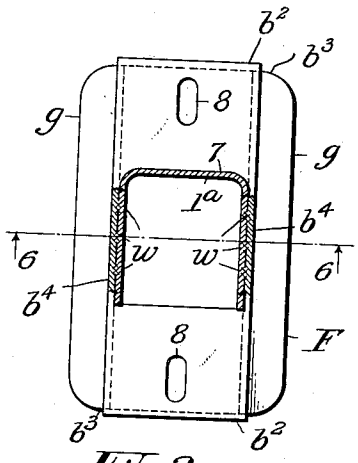


Fig. 3.

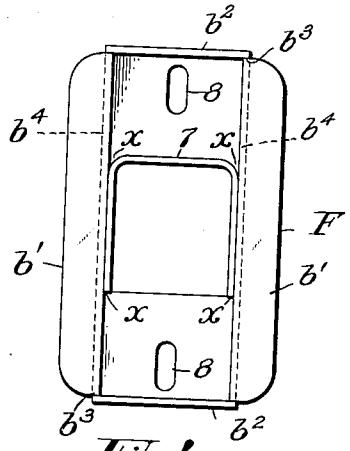


Fig. 4.

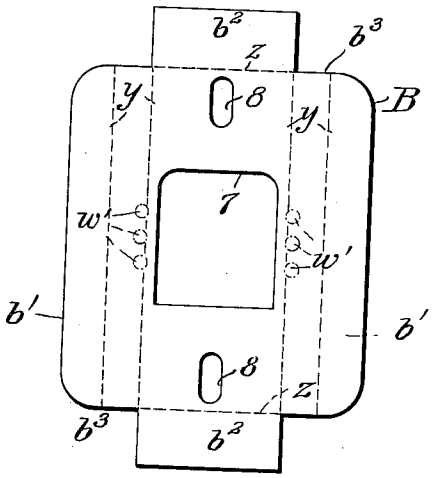


Fig. 5.

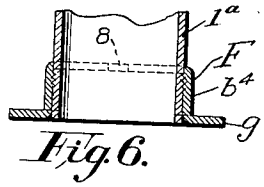


Fig. 6.

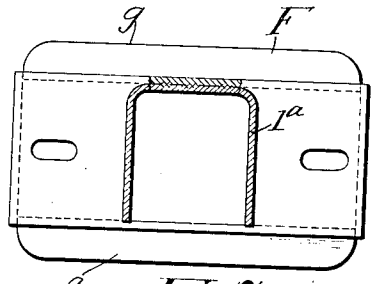


Fig. 7.

Witness:

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Patented May 9, 1939 2,157,648

UNITED STATES PATENT OFFICE

2,157,648

WORK TABLE

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Application April 25, 1936, Serial No. 76,362

4 Claims. (Cl. 189—36)

This invention relates to work-tables, such for example as cutting tables and tables adapted to support power-driven sewing machines.

The invention has as a primary object to provide improved supporting means for the table which will be stronger and more rigid than prior constructions and which will more effectively resist and withstand the vibrations normally set up by operations performed thereon.

Another object is to provide a leg construction for such tables which readily may be made of a plurality of pieces of sheet metal by simple and inexpensive manufacturing operations and which, when completed, will constitute a unitary construction having greater strength and rigidity than conventional structures.

Stated more specifically, the invention has as an object to improve the leg construction of tables such as disclosed in United States patent to G. M. Eames, No. 1,695,419, Dec. 18, 1928.

With the above and other objects in view, as hereinafter will appear, the invention comprises the devices, combinations and arrangement of parts hereinafter set forth and illustrated in the accompanying drawings of a preferred embodiment of the invention from which the several features of the invention and the advantages attained thereby will be readily understood by those skilled in the art.

In the accompanying drawings,

Figure 1 is a side elevation of a work-table embodying the present invention.

Fig. 2 is a right end view of Fig. 1, partly in section.

Fig. 3 is a horizontal section on the line 3—3 of Fig. 1.

Fig. 4 is a bottom view of the leg and its supporting foot.

Fig. 5 is a plan view of the blank from which the leg-supporting foot is formed.

Fig. 6 is a vertical section substantially on the line 6—6 of Fig. 3.

Fig. 7 is a view similar to Fig. 3, but showing the foot secured to the leg member in a different angular position.

Referring more specifically to the drawings the invention is disclosed as embodied in a work-table comprising a top T secured upon supporting members, designated generally as S, arranged at spaced intervals lengthwise of the table, as shown by Fig. 1. Each supporting member preferably includes a vertically disposed primary leg member 1 of sheet metal, U-shape in cross-section, secondary leg members 2, of similar construction but slightly smaller in cross-section, telescopically arranged within the primary member and adapted to be secured thereto in various vertical positions, by clamping bolts 3 extending through aligned apertures in the two sections. To the upper ends of the leg members 2 are secured, as by welding, cross rails 4, of inverted U-shape, in cross-section, upon which the table top T is secured by any suitable or preferred means.

Intermediate the ends of the leg members 1 there is secured a cross-bar or brace 5. This cross-bar has secured to its opposite ends, as by welding, substantially U-shaped foot-members 5^a of a length materially greater than the depth of said cross-bar. These feet fit within the leg members 1, and are rigidly secured thereto, for example, as by welding or by bolts 6, shown in the drawings. When securely fastened together, the elements above described form a unitary structure having great strength, and which is well adapted to withstand the stresses and strains to which such devices are commonly subjected. It therefore follows that if such supporting members are connected to a base or floor by means which are equally strong and rigid, the entire table will withstand the loads placed thereon and will effectively resist forces tending to move or vibrate the table.

This invention therefore proposes an improved foot for the primary leg members 1 which is stronger and more rigid than feet hitherto provided and which readily may be manufactured and secured to the leg members by simple and inexpensive manufacturing operations.

The improved foot F is made of sheet metal and initially comprises a blank B, shown in Fig. 5, having a central aperture 7, adapted to receive the lower end of the leg member 1, and other apertures 8 designed to accommodate bolts 9 for ultimately securing the supporting members to the floor *f*.

In forming the foot F the side portions b' of the blank B are first folded substantially along the lines *y*, indicated in Fig. 5 to form a substantially rectangular box-like structure having side floor engaging flanges *g*. The end portions b^2 are then similarly depressed along lines *z* to overlie the ends b^3 of the side portions. If desired, the end portions b^2 may be welded or otherwise secured to the ends of the side portions. With the foot thus formed it is placed upon the lower end 1^a of the leg member 1, which snugly fits within the aperture 7, with one or more walls of the leg section in contact with the vertical side walls b^4 of the foot. The foot and leg member

are then permanently secured together, preferably by spot welding as indicated at *w* in Figs. 3 and 6. The approximate spots at which the welding is ultimately effected are indicated by *w'* in Fig. 5. If desired, however, the foot may be attached to the leg member by arc- or acetylene welding at the points indicated by *x* in Fig. 4.

As heretofore constructed, such tables usually have had their foot portions arranged in the direction of the length of the table, as shown for example in the above mentioned Eames patent. It has been found, however, that the major vibrations set up in tables of this nature, especially when used to support conventional power driven sewing machines, are usually transverse to the length of the table. Therefore, in order more effectively to counteract these vibrations, this invention proposes so to secure the feet on the leg members 1 that they will extend transversely to the length of the table, as shown in Figs. 1, 2 and 3, thereby more securely bracing the table against vibration. This arrangement also is advantageous in that, as shown in Fig. 3, it places two side walls of the leg member 1 in contact with the side walls b^4 of the feet, whereby, when the two are welded together an extremely strong and rigid construction is attained.

In some installations, however, as for example where certain special types of sewing machines are secured to the table top the major vibrations may be in the direction of the length of the table. For such installations the foot members F may be secured to the leg members in the position illustrated in Fig. 7, i. e., in the direction of the length of the table, or, in other words, at right angle to the position shown in Fig. 3.

From the foregoing it will be perceived that this invention has provided an improved table structure which is decidedly strong and rigid and of which the parts may be manufactured and assembled by simple operations at a minimum of expense.

It will also be apparent that this invention provides a new and inexpensive method of making feet elements for table legs and for permanently and rigidly securing them thereto.

As shown by dotted lines *t*, in Fig. 2, the face of the foot member 5^a is preferably made slightly concave so that when the bolts 6 are tightened the face will form a continuous and tight fit with the inner wall of the leg member 1.

Having thus set forth the nature of the invention, what I claim herein is:

1. A joint for transversely arranged substantially U-shaped metallic members comprising a foot-portion secured to the opposed walls of one of said members and projecting materially beyond the upper and lower sides thereof, said foot-portion having an initially concave face arranged adjacent a flat face of the other member, and means located substantially centrally of said foot-portion serving to draw said concave face into contact with the flat face of the other member and for holding the two faces together throughout the entire length of said foot-portion.

2. A joint for transversely arranged channel irons each of which is substantially U-shape in cross section, comprising a substantially T-shape foot-member having its stem-portion rigidly secured in one of said channel irons and its head-portion projecting materially therebeyond, said head-portion being initially formed with a slightly concave face, the ends of which are adapted to abut the inner surface of the central wall of the other channel iron, and a draw bolt passed through said central wall and through said head substantially midway between its ends and serving to draw said concave face into continuous contact with said central wall.

3. In a table-supporting structure having spaced vertically disposed leg-members and a horizontally disposed brace, substantially U-shaped in cross-section, connecting said leg-members, means for rigidly securing said brace to said leg-members comprising elongated foot-members rigidly secured to the opposed walls of the opposite ends of said brace and arranged transversely thereof, said foot-members being initially formed with slightly concave surfaces adapted to be brought into engagement with said leg members, and bolts, located substantially centrally within the walls of said brace, connecting said foot-members and said leg-members and serving to draw said concave surfaces of the foot-members into contact with said leg-members to form a continuous tight joint between the two.

4. A table-supporting structure comprising a pair of upright metal leg members, substantially U-shape in horizontal cross-section arranged with their open sides facing each other, a horizontally disposed brace member connecting said legs and comprising a metal bar of substantially inverted U-shape in cross-section, vertically arranged feet rigidly secured to the opposed walls of the opposite ends of said bar, said feet projecting materially above and below said bar and being adapted to fit within said legs and to engage the intermediate walls thereof at substantial distances above and below said bar, and bolts extending through said feet and leg members substantially in alignment with the longitudinal axis of said brace for rigidly securing said feet within said leg-members.

DANIEL H. CHASON.