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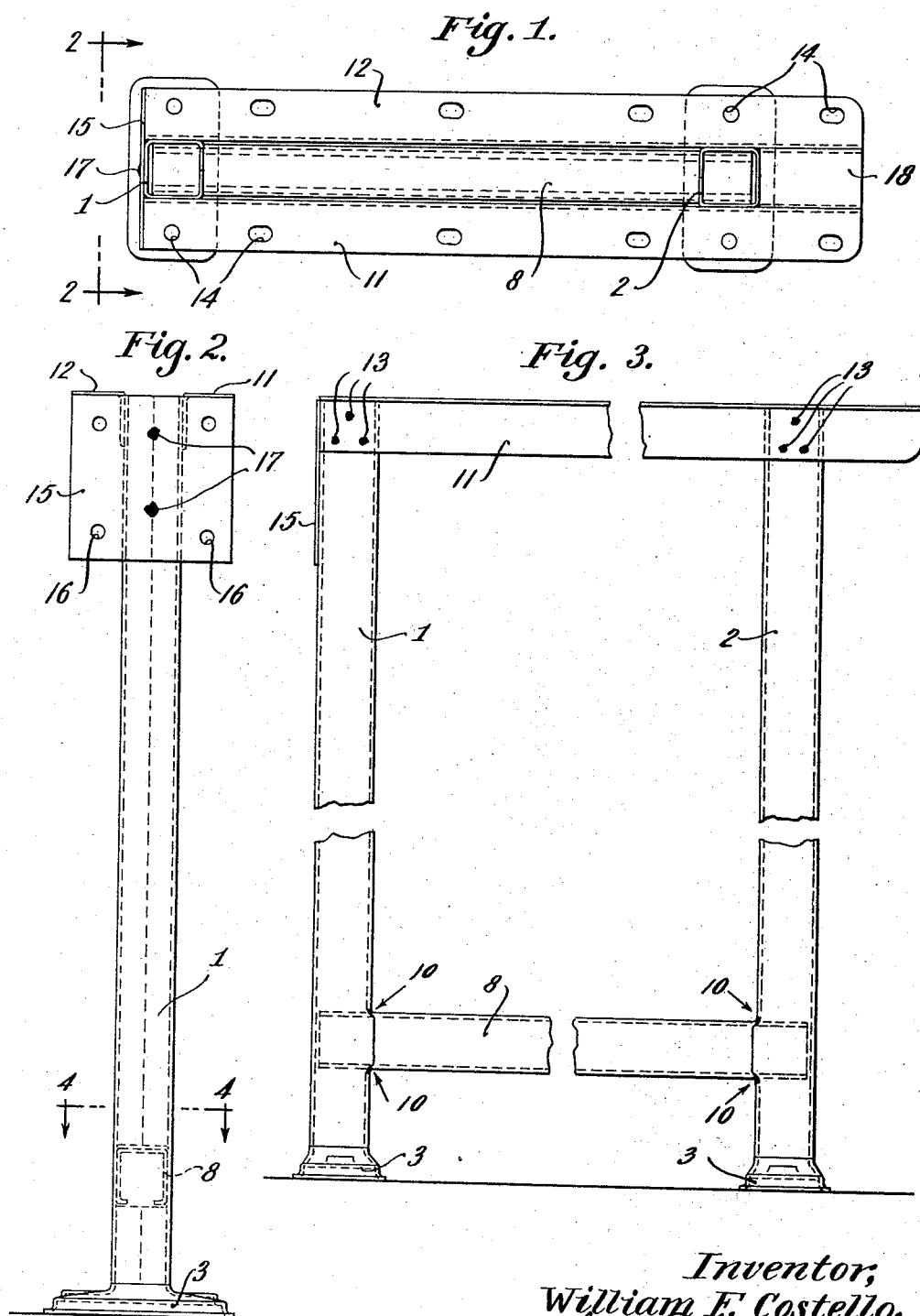
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1,887,399

SUPPORT FOR BENCHES AND THE LIKE

Filed May 4, 1931

2 Sheets-Sheet 1



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Fig. 4.

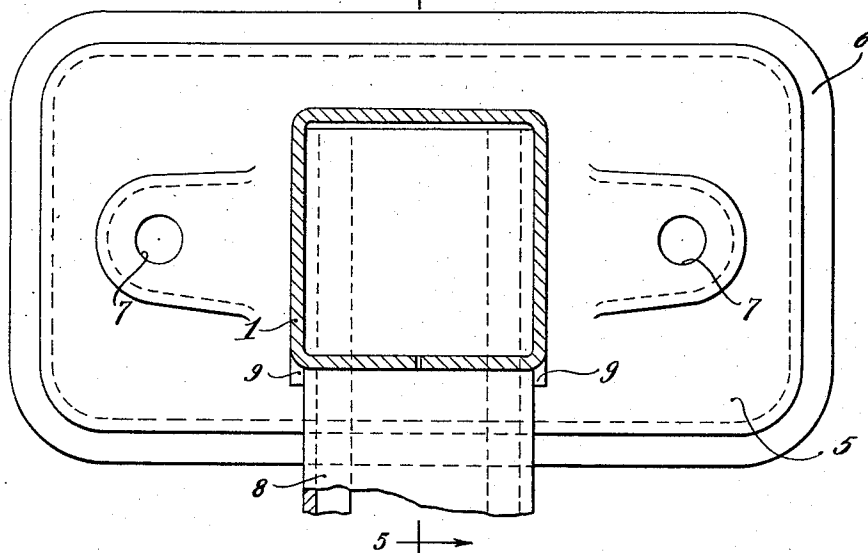
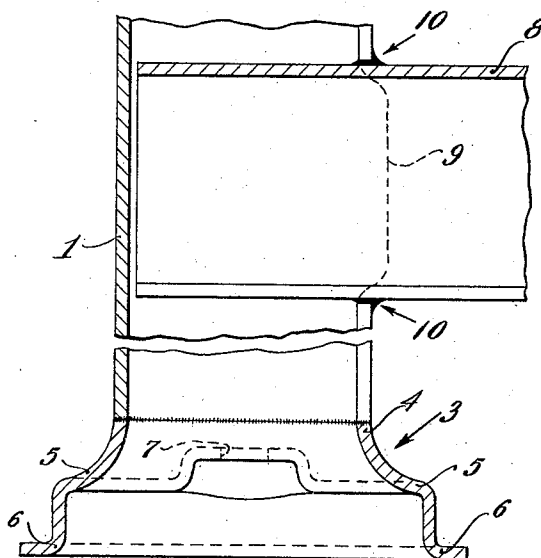


Fig. 5.



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UNITED STATES PATENT OFFICE

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SUPPORT FOR BENCHES AND THE LIKE

Application filed May 4, 1931. Serial No. 534,909.

This invention relates to upright supports such as legs for various types of shop furniture, for example, benches, workstands, tool and stock racks, etc., and more particularly to an improvement over the types heretofore used, such for example, as the type shown in the patent to Robert S. Brown, No. 1,097,164, granted May 19, 1914.

It is the object of this invention to provide a leg or upright support of comparatively light construction which is strong, rigid and serviceable, and which may be easily and economically manufactured. Another object is to provide an integral structure of simple design and pleasing appearance having smooth and continuous outer surfaces free from projecting parts, recesses and other dirt collecting irregularities which interfere with sweeping and washing around the upright.

Further objects and advantages will be apparent from a consideration of the following description and the accompanying drawings which exemplify one embodiment of the invention chosen for the purpose of illustration.

In the drawings:

Fig. 1 is a top plan view of a bench leg and adjuncts providing connections for the top of the bench;

Fig. 2 is an end elevation of the bench leg viewed from the line 2—2 of Fig. 1;

Fig. 3 is a side elevation of the same;

Fig. 4 is an enlarged section on the line 4—4 of Fig. 2; and

Fig. 5 is a section on the line 5—5 of Fig. 4.

In the illustrated embodiment, the bench leg comprises spaced parallel uprights 1 and 2 which are made of sheet metal of the requisite thickness and shaped, by means of suitable dies or otherwise, to define a hollow or tubular column of square or rectangular cross-section, the vertical edges of each of the uprights being contiguous to each other, as shown in Fig. 4, to provide a substantially continuous outer surface.

The lower end of each upright is integral with a hollow flaring base or foot 3. Each foot comprises a piece of sheet metal expanded or drawn to a desired shape or con-

figuration, by means of dies or in other suitable manner, to provide a projecting hub 4 having a cross section conforming to that at the lower end of the uprights, a flared intermediate web portion 5, and a peripheral flange 6 defining the bearing surface of the foot. Either simultaneously with, or subsequent to, the shaping operation, the web portion 5 is provided with embossed portions having openings 7 for the reception of screws, bolts or other fastening means for anchoring the foot to a floor. The hub portion 4 of the foot is butt-welded to the end of the upright, as shown in Fig. 5, thus providing an integral structure of relatively light weight and of pleasing and artistic appearance.

The opposed faces of the uprights, intermediate their ends, are provided with horizontally aligned openings for the reception of the crossbar 8. These openings are preferably punched out previous to shaping the uprights and are such as to provide lateral tabs 9 integral with the opposite faces of the upright adjacent to the opening therein. Preferably the size and shape of these openings conform to that of the inner cross-sectional area of the uprights. The crossbar is preferably constructed and shaped similar to that of the uprights but has a longitudinal opening in its bottom face, as shown in Figs. 2 and 4, to provide access to the interior of the structure for connecting brackets or the like thereto if for any reason such might be required. The opposite end portions of the crossbar fit snugly within the openings in the uprights with its vertical or opposite faces engaging interiorly those of the uprights as shown in Figs. 3 and 5. The crossbar is integrally joined to each of the uprights by welding the horizontal contiguous portions of each of the members, indicated by numeral 10 (Figs. 3 and 5), and thus provides a rigid structure free from gussets or other reinforcing members. In the present embodiment but one crossbar is shown although, if desired, others could be assembled with the uprights in the same manner.

At the top of each of the uprights are horizontally disposed stringers 11 and 12 prefer-

ably comprising angles having their depending wings spot welded at a plurality of points 13 to each of the uprights 1 and 2, three such points being here indicated, the points 13 being spaced apart so as to afford a maximum resistance to separation of the stringer from the upright. The horizontal wings of the stringers are provided with a plurality of openings 14 for the reception of suitable fastening elements by means of which the top of the bench may be fastened to the uprights.

In this particular embodiment one end of each of the stringers 11 and 12 projects beyond the upright 2, as shown in Figs. 1 and 3, while the opposite ends are substantially flush with the outer surface of the upright 1, thus permitting the latter end of the bench to be juxtaposed to a wall. The plate 15 is secured to the rear of the structure by spot welding it at a plurality of points 17 to the upright 1 as shown in Fig. 2. The plate 15 is provided with a plurality of openings 16 for the reception of fastening elements by means of which a stringer may be secured to a pair of rear uprights. In order to provide a suitable reinforcement and increase the rigidity of the structure, a channel iron 18 may be interposed between the overhanging ends of the stringers 11 and 12 and firmly secured thereto by welding their contiguous depending wings, thus providing a firm integral structure which will effectively resist the thrusts and strains incidental in the use of an article of this character.

It will be noted that the leg or upright thus provided is an integral structure of simple design possessing great strength and rigidity and yet of comparatively light construction. It will be further noted that the base of the upright presents a smooth and continuous surface free from recesses and other dirt collecting irregularities, and thus offers no impediment to sanitation and cleanliness.

Although the specific embodiment herein shown and described is primarily intended for use in conjunction with shop furniture, the broader aspects of the invention are not limited to any particular type, and I wish it understood that various changes in shape, proportion of parts, as well as the substitution of equivalent elements for those herein disclosed may be made without departing from the spirit and scope of this invention as set forth in the appended claims.

I claim:

1. A bench leg entirely of sheet metal construction comprising a sheet metal upright of tubular cross section, and a hollow flaring foot comprising a piece of expanded sheet metal having a hub with a cross section conforming to that of the lower end of said upright, a flaring web circumjacent to said hub, and a peripheral flange surrounding said web and defining the bearing surface of said foot, said hub and lower end of said upright being

welded together to provide an integral structure having a smooth continuous surface free from recesses and dirt-collecting irregularities.

2. An upright support for a bench or the like article comprising a pair of sheet metal tubular uprights each having a hollow flaring sheet metal foot integral with one end of the upright and defining therewith a unitary structure having a smooth continuous surface free from recesses and dirt-collecting irregularities, said uprights having horizontally aligned openings, and a substantially tubular sheet metal crossbar having a cross section conforming to the size of said openings and disposed with its opposite ends snugly fitting therein, said uprights and crossbar being integrally joined together to provide a unitary rigid structure.

3. An upright support for a bench or the like article comprising a pair of sheet metal tubular uprights each having a hollow foot comprising a single piece of sheet metal shaped to provide a hub portion having a cross section conforming to that of the lower end of the upright and a flanged portion circumjacent to said hub and defining the bearing surface of the foot, said hub and lower end of said foot being integrally joined to provide a unitary structure having a smooth continuous surface free from recesses and dirt-collecting irregularities, said uprights having horizontally aligned openings, and a substantially tubular sheet metal crossbar having a cross section conforming to the size of said openings and disposed with its opposite ends snugly fitting therein, said uprights and crossbar being integrally joined together to provide a unitary rigid structure.

4. An upright support for a bench or the like article comprising a pair of sheet metal tubular uprights each having a hollow foot comprising a single piece of expanded sheet metal having a hub portion with a cross section conforming to that of the lower end of said upright, a flaring web circumjacent to said hub, and a peripheral flange surrounding said web and defining the bearing surface of said foot, said hub and lower end of the upright being welded to provide an integral structure having a smooth continuous surface free from recesses and dirt-collecting irregularities, said uprights having horizontally aligned openings, and a substantially tubular sheet metal crossbar having a cross section conforming to the size of said openings and disposed with its opposite ends snugly fitting therein, said uprights and crossbar being integrally joined together to provide a unitary rigid structure.

5. An upright support for a bench or the like article, comprising a pair of sheet metal tubular uprights of polygonal cross section, each having a hollow flaring sheet metal foot terminating in a peripheral defin-

ing the bearing surface of said foot, the upper end of said foot having a cross section conforming to that of the lower end of the upright and being integrally joined thereto to provide a unitary structure having a smooth continuous surface free from recesses and dirt-collecting irregularities, said uprights having horizontally aligned openings, and a substantially tubular sheet metal crossbar having a cross section conforming to the size of the openings and disposed with its opposite ends fitting within and engaging the inner faces of said uprights, said crossbar and uprights being welded together to provide a rigid structure.

6. An upright support for a bench or the like article, comprising a pair of sheet metal tubular uprights each having opposite vertical faces and a hollow flaring sheet metal foot terminating in a peripheral flange defining the bearing surface of said foot, the upper end of said foot having a cross section conforming to that of the lower end of the upright and being integrally joined thereto to provide a unitary structure having a smooth continuous surface free from recesses and dirt-collecting irregularities, said uprights having horizontally aligned openings of a width equal to the distance between its opposite vertical faces, and a substantially tubular sheet metal crossbar having opposite vertical faces and a cross section conforming to the size of said openings, the ends of said crossbar fitting snugly within said openings so that its opposite vertical faces engage those of said uprights, said crossbar and uprights being welded to provide an integral rigid structure.

7. An upright support for a bench or the like article, comprising a pair of sheet metal tubular uprights of rectangular cross section, each having a hollow flaring sheet metal foot terminating in a peripheral flange defining the bearing surface of said foot, the upper end of the foot having a cross section conforming to that of the lower end of the upright and being integrally joined thereto to provide a unitary structure having a smooth continuous surface free from recesses and dirt-collecting irregularities, said uprights having horizontally aligned rectangular openings, and a substantially tubular sheet metal crossbar having a cross section conforming to the size of said openings, the ends of said crossbar fitting within said openings so that its opposite vertical faces engage those of the uprights, said crossbar and uprights being welded to provide an integral rigid structure.

8. A support for a bench or the like article comprising a sheet metal tubular upright rectangular in cross section, having a hollow flared rectangular foot with rounded corners, embossed metal parallel to the bottom of the foot and perforated for bolts, and a

downwardly extending wall near its periphery, the upper end of the foot having a cross section conforming to that of the lower end of the upright and being integrally joined thereto to provide a unitary structure having a smooth continuous surface.

9. A support for a bench or the like article comprising a sheet metal tubular upright having a hollow flared foot, embossed metal parallel to the bottom of the foot and perforated for bolts, and a downwardly extending wall near its periphery, the upper end of the foot having a cross section conforming to that of the lower end of the upright and being integrally joined thereto to provide a unitary structure having a substantially smooth continuous surface.

Signed by me at Boston, Massachusetts this 27th day of April, 1931.

WILLIAM F. COSTELLO.

CERTIFICATE OF CORRECTION.

Patent No. 1,887,399.

November 8, 1932.

WILLIAM F. COSTELLO.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 2, line 130, claim 5, after "peripheral" insert the word "flange"; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 20th day of December, A. D. 1932.

(Seal)

M. J. Moore,
Acting Commissioner of Patents.