Jan. 14, 1930. M. A. DEFIBAUGH 1,743,438

METHOD OF MAKING METAL LEGS

Original Filed Jan. 6, 1928

FIG. 1.

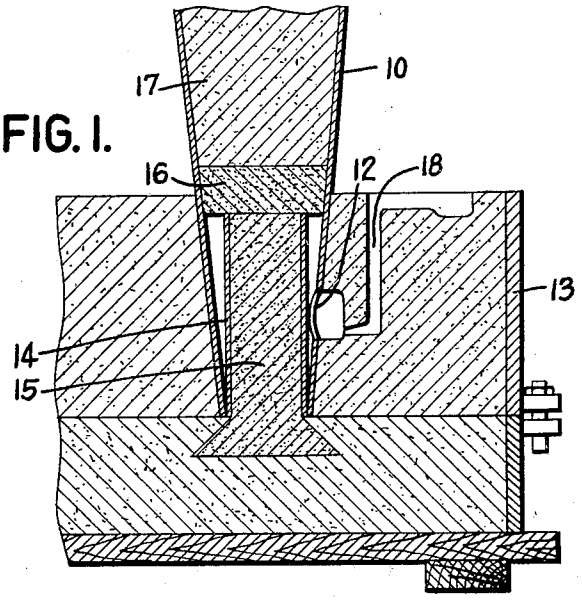


FIG. 2.

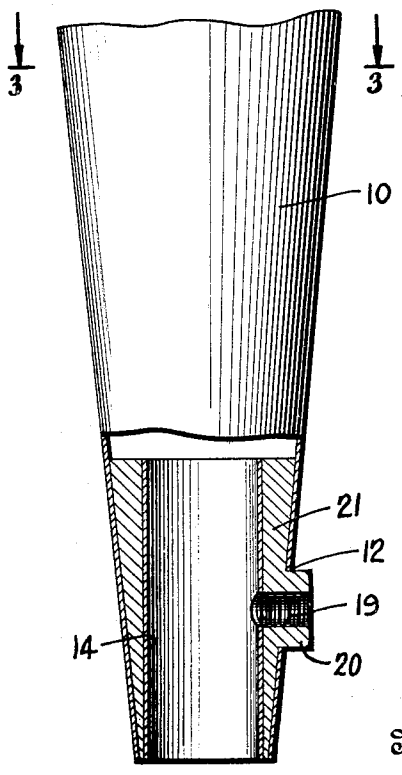
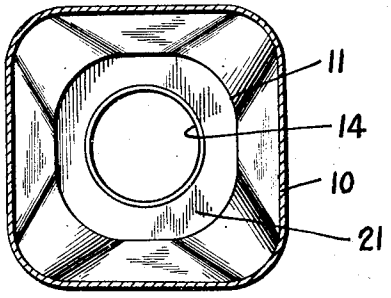


FIG. 3.



Mark A. Defibaugh
Inventor

By his Attorneys
Cooper, Kerr & Dunham

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UNITED STATES PATENT OFFICE

MARK A. DEFIBAUGH, OF SCHENECTADY, NEW YORK, ASSIGNOR TO L. E. CASS, INC., OF SCHENECTADY, NEW YORK, A CORPORATION OF NEW YORK

METHOD OF MAKING METAL LEGS

Original application filed January 6, 1928, Serial No. 244,820. Divided and this application filed October 25, 1928. Serial No. 314,991.

The invention relates to improvements in methods of making metal legs. Heretofore, constructions and particularly those embodying hollow tubular members have required cumbersome and unsightly fittings in the form of castings secured externally thereon. Such fittings have been necessary to receive set screws, casters and bracing members. The fittings heretofore used have required expensive machine operations to form the same and their use not only made the resulting structure cumbersome but their use also increased the weight of the leg itself to an objectionable extent.

It is one of the objects of the present invention to provide a method of making legs which will permit the use of a light sheet metal body portion and to provide the attachment fitting internally of the leg and integrally secured thereto by casting the same in position. In this way the multiplicity of machining operations with their attendant expense is obviated and the complete leg is lighter and more sightly than heretofore.

Other objects and advantages will be more fully set forth in the appended specification and the claims and shown in the accompanying drawings, which by way of illustration show preferred embodiments of the invention.

In the drawings:

Figure 1 is a sectional view showing the method of casting the fitting casting within the leg.

Fig. 2 shows the lower portion of the complete leg before the telescopic parts are inserted therein.

Fig. 3 is a cross-sectional view taken on line 3—3 of Fig. 2 and looking in the direction of the arrow.

In more detail, the main body portion 10 of the leg is formed of sheet metal. This portion may be drawn from one piece or if desired, may be provided with a welded longitudinal joint or seam. Preferably the upper part of the leg is of substantially rectangular cross-section with large curved fillets at the corners as shown in Fig. 3. In its lower portions the cross-section of this outer body portion becomes substantially circular as shown at 11 in Fig. 3.

After forming the sheet metal body portion it is provided with an aperture, as shown at 12 in Fig. 1. After the shell-like body portion has been shaped and apertured, it is placed in a foundry flask generally designated 13 and a casting operation is carried out. Preferably a tinned tube 14 is centrally placed in the leg at the bottom and retained in position by dry sand cores 15 and 16. The upper core 16 may be kept in place by ordinary foundry sand rammed in over it as shown at 17. Molten metal is then poured through the opening 12 in the side of the leg. The sprue hole in the sand designated 18 leads adjacent thereto as shown. After cooling, the leg is removed from the sand, the sprue is cut off and a tapped hole 19 is made in the projecting part 20 of the casting. The cast metal part 21 integrally unites with the inner tube 14 and with the sheet metal body portion. By thus providing a casting-like shell 21 which is cast within the leg, the machine operations heretofore necessary with fittings which are to be externally applied are obviated. The casting provides increased strength and also provides a structure which is adapted to have attached thereto the braces or set screws or other cooperating parts. The inner sleeve or tube 14 provides a smooth tubular bearing for the reception of any members which are to be applied to the leg.

In conclusion it may be stated that the inner casting 21 affords means for readily providing an attaching fitting to a metal leg having sheet metal body portions of tapering contour. The extended part 20 provides additional material adaptable for tapping to receive a set screw or other part. This extension cooperating with the aperture in the sheet metal provides means for retaining the casting in place in the leg as well as affording a convenient means for carrying out the casting operation. The part 20 is in reality a cut off section of the sprue part of the casting.

The present application constitutes a division of my copending application Serial No. 244,820, filed January 6, 1928.

What I claim is:

1. The method of making a metal leg which comprises the step of providing an attachment fitting therefor by casting said fitting internally within the sheet metal body portion of the leg and in thereafter tapping said casting to provide a side attachment point.

2. The method of making a metal leg which comprises the provision of an attachment fitting for a sheet metal body portion by introducing molten metal through an opening in the side of the leg and forming therefrom a casting mainly within the leg and in part without the leg, and in thereafter providing an attachment point by tapping the casting without the leg.

3. The method of making a metal leg which comprises the provision of an attachment fitting for a hollow sheet metal leg by forming a casting within the leg by introducing the molten metal through an aperture in the side of the leg, then cutting off the sprue and tapping the projecting sprue portion.

4. The method of stiffening a hollow sheet metal leg at the bottom and providing additional metal for the side attachment to the leg of other parts which comprises providing a hollow body portion, providing a side aperture in the hollow body portion, fitting a tubular sleeve in the body portion at the bottom, and in casting metal intermediate the sleeve and body portion through the side aperture which metal both stiffens the leg and also provides additional material at the side aperture and forms an attachment point to which other parts can be attached.

5. The method of providing a sheet metal leg with an attachment point for parts exterior of the leg and for reinforcing the leg interiorly adjacent the attachment point which comprises providing an aperture in the body portion of the leg at the desired attachment point, then introducing molten metal through the aperture and forming therefrom a casting which interiorly reinforces the leg and which also projects through the aperture to provide an attaching point for the exterior parts which are to be exteriorly attached to the leg.

In testimony whereof I hereto affix my signature.

MARK A. DEFIBAUGH.