Nov. 15, 1966 K. A. BEVINGTON 3,285,555

CHAIR CONSTRUCTION

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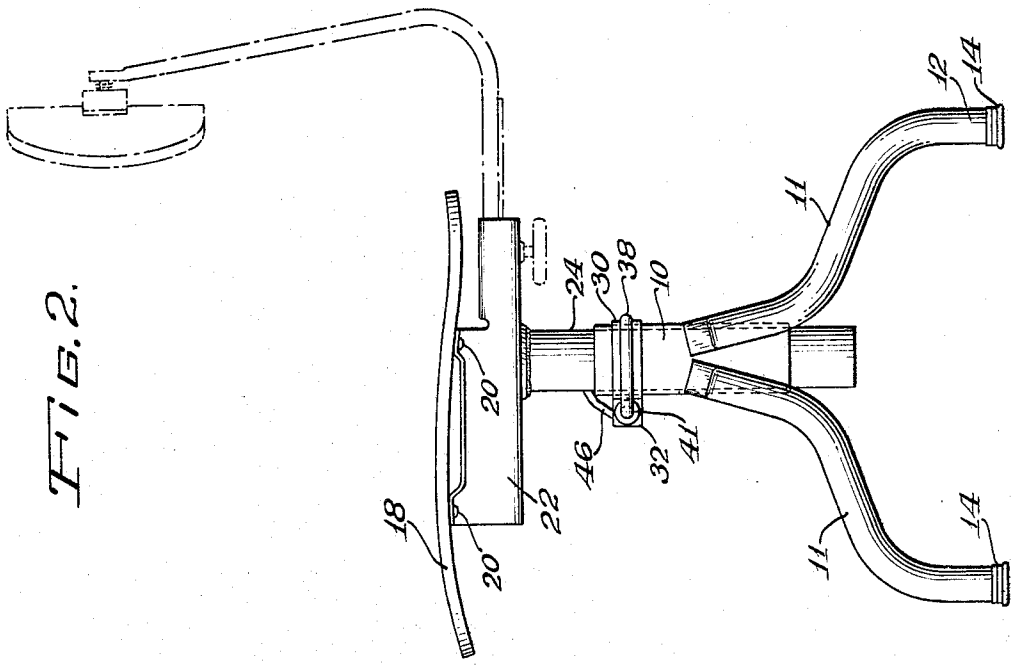


FIG. 2.

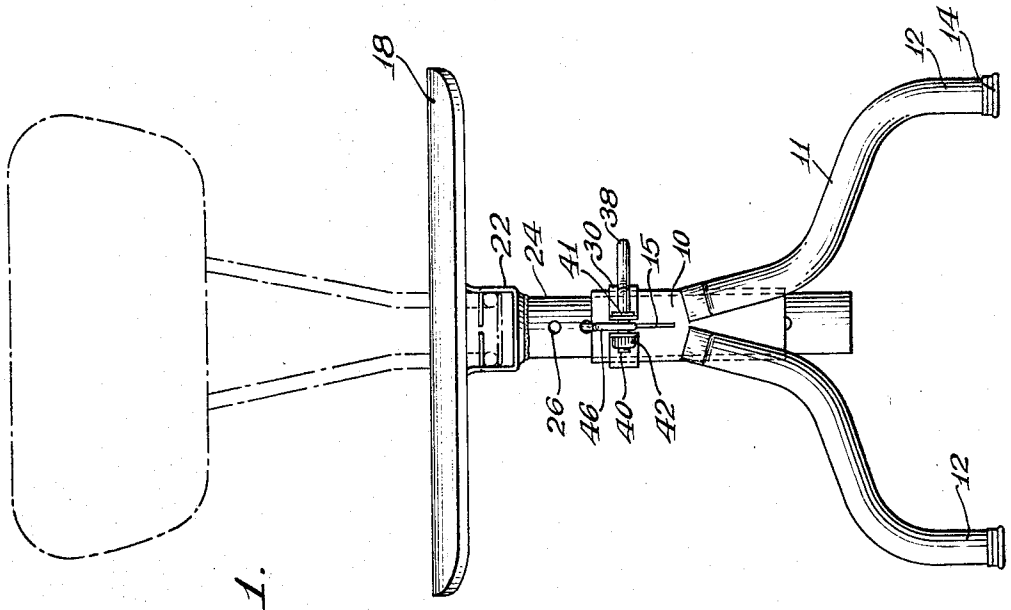


FIG. 1.

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FIG. 3.

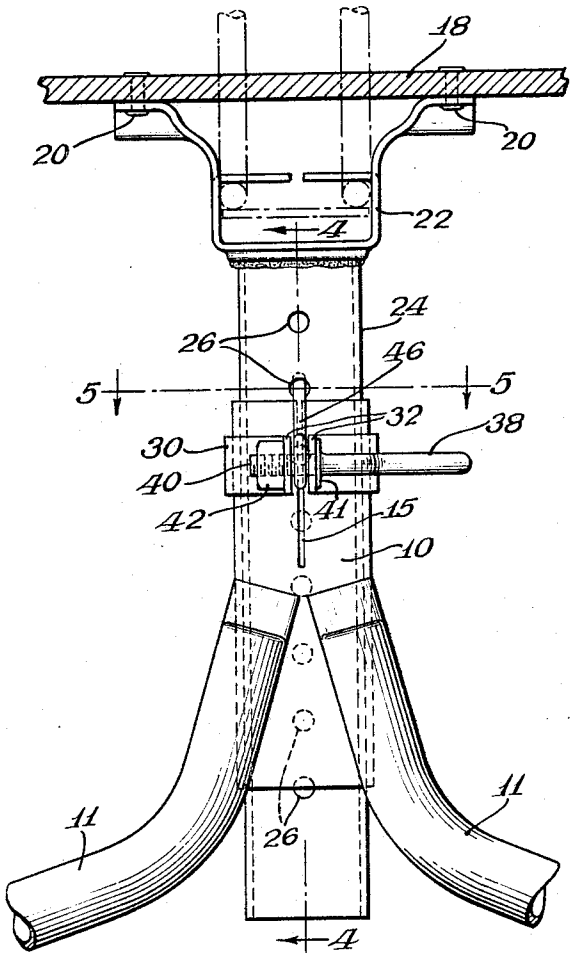


FIG. 4.

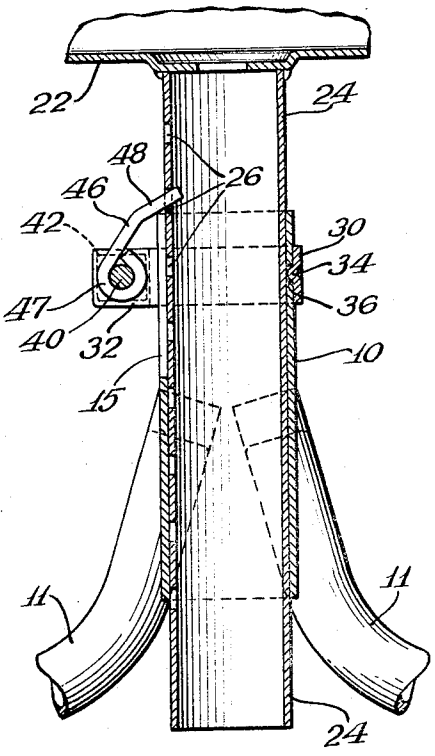
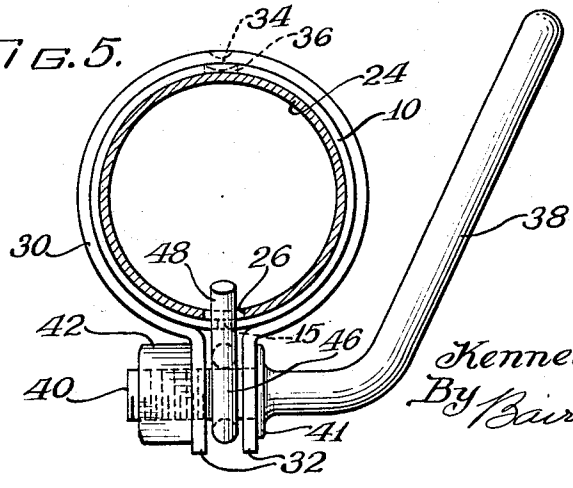


FIG. 5.



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CHAIR CONSTRUCTION

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2 Claims. (Cl. 248—188.7)

This invention relates to a chair construction, and more specifically to chair structures of the type wherein the seat is adjustable in height relative to the supporting base. More particularly, this invention is directed to chair constructions of the general class intended for use in offices, schools, laboratories and factories, as well as for various miscellaneous purposes.

One of the objects of this invention is to provide a novel chair construction of the character indicated which is of simplified design, composed of relatively few parts, and which requires a relatively small amount of labor, and hence is extremely economical to manufacture and assemble.

Another object is to provide a noved chair construction of the character indicated wherein various of its components are formed from commercial sizes of preformed metallic tubing.

A further object is to provide a novel chair construction of the character indicated wherein the seat may be quickly and easily adjusted vertically to a desired height relative to its supporting base.

Other objects and advantages of this invention will be apparent from the following description, taken in connection with the accompanying drawings, in which:

FIGURES 1 and 2 are front and side elevational views of the chair embodying the present invention, with the back being shown in dot-and-dash outline, as it forms no part of the present invention.

FIGURE 3 is an enlarged, fragmentary view in front elevation of the main supporting structure of the chair embodying this invention.

FIGURE 4 is a vertical sectional view taken as indicated at line 4—4 on FIGURE 3.

FIGURE 5 is a further enlarged transverse sectional view taken as indicated at line 5—5 on FIGURE 3.

Referring now in detail to the drawings, the chair embodying the present invention comprises a base, including an upstanding supporting tube **10**, and a plurality of tubular legs **11**, the tubes comprising the legs being rigidly secured at their upper ends, such as by brazing, to the lower portion of said upstanding tube **10**, and the supporting legs being suitably bent and formed to constitute feet, as indicated at **12**, for resting upon the floor. The lower ends of the feet are each provided with a metallic cap member **14** for closing the lower end of the tubular legs, and to serve as a sliding support for the chair upon the floor. The upper end portion of the upstanding tube **10** is formed with an upwardly open, longitudinally or vertically extending slot, as indicated at **15**.

Cooperating with the base structure is a seat assembly, including a seat indicated at **18** which may be formed of any suitable material, such as wood, metal or plastic, and to the underside of the seat is secured, as by means of rivets **20**, a seat bracket support **22**. The seat bracket support may be formed as a sheet metal stamping or as a casting. The seat assembly also includes a depending guide tube **24** suitably attached to a seat bracket **22**. As shown, the upper end of the depending guide tube **24** is rigidly attached, as by welding or brazing, to the seat bracket support **22**. If it is desired, however, that the seat assembly be such as to provide an arrangement for swivelling of the seat with respect to the base, then, in that event, the depending guide tube **24** may be suitably formed for a swivel support with respect to said seat bracket **22**. The depending guide tube is formed with a

series of vertically spaced apart openings, as indicated at **26**, and said guide tube is dimensioned for a snug, telescopic fit within the upstanding supporting tube **10** of the base.

Surrounding the upper portion of the upstanding tube **10**, in registration with the slot **15**, is a friction clamping band **30**, with the free ends terminating in a pair of spaced apart ears **32**. The portion of the band opposite said ears is formed with an inwardly projecting nubbin **34** for seating in an opening **36** formed in the upstanding base tube **10**, as seen in FIGURES 4 and 5 of the drawings. By virtue of this arrangement the clamping band many be quickly and easily indexed in proper relation to the upper end of the upstanding tube **10**, and will thus position the ears **32** on opposite sides of the elongated slot **15**. Cooperating with the clamping band is a handle member **38**, having a threaded stem portion **40** adapted to extend through the aligned apertures in the ears **32**, said stem portion having a flange or shoulder **41** adapted to seat against the outer surface of one of the ears **32**. A nut **42** is positioned in threaded engagement on the outer end of said stem portion **40**, and adapted to seat against the outer surface of the opposite ear **32**, as may be seen in FIGURES 3 and 5 of the drawings. Preferably, the nut **42** is of the multi-sided type, such as square, so that one of its faces may be positioned in close proximity to the friction band **30** to preclude rotation of the nut. Thus, when the handle **38** is turned so that the threaded stem portion is threaded through said nut **42**, clamping pressure will be applied against the pair of spaced ears **32**, and which in turn will squeeze the upper portion of the upstanding tube **10**, tending to close the slot **15** and thereby exert a firm frictional grasp around the depending tube **24** of the seat assembly. By virtue of this arrangement it is possible to frictionally secure the seat assembly at a predetermined height with respect to the base structure.

To insure against the seat structure moving downwardly relative to the supporting base, such as when a person's weight is imposed upon the seat, I provide an auxiliary locking member, as may be clearly seen in the drawings, in the nature of a rod **46**, bent to provide a loop or eyelet portion **47** for positioning between the pair of spaced ears **32** on the friction band in surrounding relation to the threaded stem portion **40**, and having a free end portion **48** which, when the locking member is rotated about the threaded stem **40**, may then be inserted into one of the openings **26** in the depending tube **24**, as clearly seen in FIGURES 4 and 5 of the drawings.

In the use of an auxiliary locking member, it is preferable that the seat structure be adjusted to approximately the desired vertical height with respect to the supporting base, and the auxiliary locking member then moved into registration with the nearest aligned aperture **26**. At this time preferably the friction band **30** should be slightly loose so as to permit the seat structure to telescope downwardly until the guide tube **24** with the auxiliary locking member **48** is in one of the apertures **26**, and until said terminal portion **48** of the auxiliary locking member abuts against the upper end of the upstanding tube **10**, as clearly seen in FIGURE 4. At that time the friction band may be firmly tightened so as to insure that the seat structure is firmly supported in a desired height with respect to the base structure or floor.

It will be apparent that the seat may be quickly and easily adjusted vertically with respect to the base structure. Such adjustment is attained merely by turning the handle **38** associated with the clamping band so as to relieve the friction grip or clamping relation between the tubes **10** and **24**; and then by removing the auxiliary locking member **46** from operative position with respect to tube **24**, the seat assembly may then be forced up or down

with respect to the base structure. After the seat is adjusted at the proper or desired position, the auxiliary locking member is moved into operative relation to the nearest opening **26** in the depending tube **24**, and the seat is adjusted so that the terminal portion **48** of the locking member again rests upon the upper end of the upstanding tube **10**, after which the handle **38** is turned so as to cause the friction band to firmly compress the upper portion of the tube **10** into tight squeezing engagement with the depending tube **24**.

The tubular members comprising the legs **11**, the supporting tubes **10**, and the guide tube **24**, may be formed of standard, prefabricated metallic tubing for purposes of economy in manufacture. By virtue of the chain structure herein disclosed, it will be apparent that it is composed of relatively few parts, making it possible to manufacture and assemble the chair structure with a minimum amount of labor, and hence is extremely economical to produce.

Although I have herein disclosed and described a preferred embodiment of my invention, manifestly it is capable of modification and re-arrangement of the parts without departing from the spirit and scope thereof. For example, the supporting and guide tubes **10** and **24** may be utilized in a reverse relation, with the guide tube telescoped over the upstanding tube **10**, with the clamping means associated with a lower split end of the guide tube **24**, and with the reverse arrangement of the auxiliary locking member which will cooperate with apertures formed in the upstanding tube on the base. I do not, therefore, wish to be understood as limiting this invention to the precise embodiments herein disclosed, except as I may be so limited by the appended claims.

I claim:

1. A chair construction comprising a base having an upstanding supporting tube, a seat, a depending guide tube connected at its upper end to the underside of the seat, said tubes being dimensioned for and telescopically fitted one within the other, the free end portion of the outer tube being formed with an open ended longitudinally extending slot, a split friction band surrounding the slotted portion of the outer tube, and clamping means associated with the ends of the friction band for causing said band to squeeze said slotted portion of the outer tube into firm gripping relation to the inner tube with said tubes in a predetermined position of telescopic adjustment for firmly supporting said seat at a desired height relative to said base, the free ends of said friction band terminating in a pair of spaced ears, said clamping means comprising a handle having a threaded stem for extending through aligned apertures in said ears and a shoulder for abutting the outer surface of one of said ears and a nut threaded on the free end of said stem for abutting the outer surface of the other ear, said nut being formed with a surface adapted to impinge against said band to preclude turning of the nut incident to rotation of the handle and stem.

2. A chair construction including a supporting structure for a seat composed essentially of metal tubing comprising a base having an upstanding supporting tube, a plurality of tubular legs rigidly secured at their upper ends directly to the exterior of the lower portion of said supporting tube, a seat, a depending guide tube connected at its upper end to the underside of the seat, said tubes being dimensioned for and telescopically fitted one within the other, the free end portion of the outer tube being formed with an open ended longitudinally extending slot, a split friction band surrounding the slotted portion of the outer tube, and clamping means associated with the ends of the friction band for causing said band to squeeze said slotted portion of the outer tube into firm gripping relation to the inner tube with said tubes in a predetermined position of telescopic adjustment for firmly supporting said seat at a desired height relative to said base.

References Cited by the Examiner

UNITED STATES PATENTS

1,394,526	10/1921	Amsden	108—141 X
1,795,747	3/1931	Viken	248—411
2,560,109	7/1951	Hines	248—407
2,605,987	8/1952	Brown et al.	248—408
2,638,302	5/1953	Reed	248—354
2,710,207	6/1955	Mueller	248—411 X
2,716,440	8/1955	Silverman	297—172
3,086,741	4/1963	Cramer	248—188.7

FOREIGN PATENTS

1,644	1889	Great Britain.

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