Aug. 19, 1969 K. H. FUHRMANN 3,462,166

TRANSPORT DEVICE FOR FURNITURE

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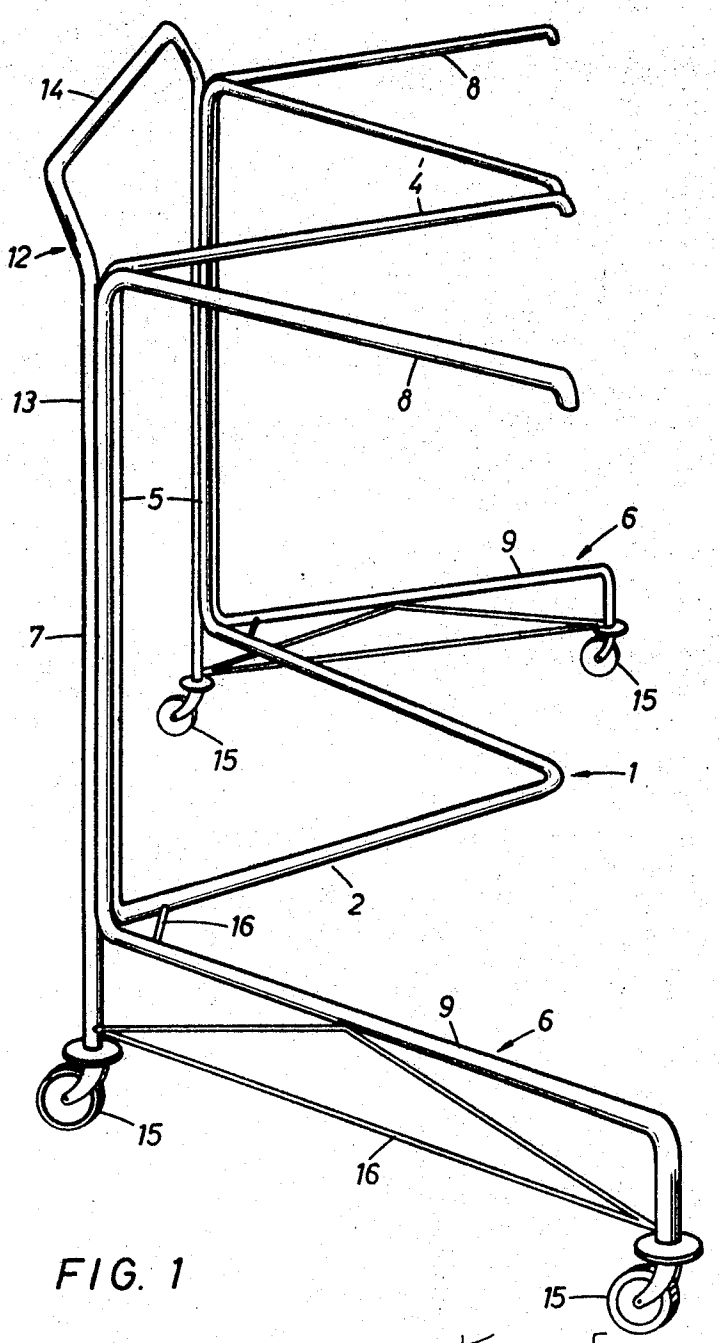

FIG. 1

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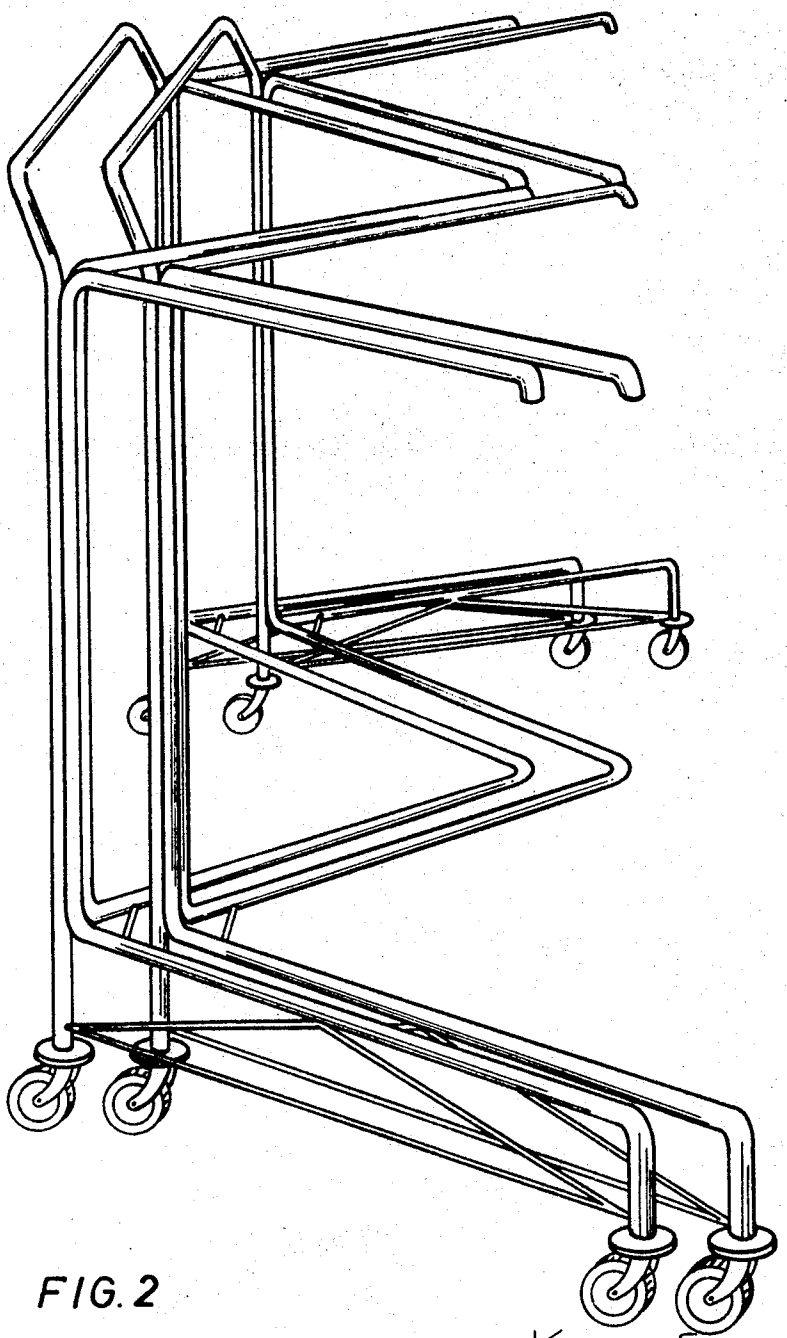

FIG. 2

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TRANSPORT DEVICE FOR FURNITURE

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Int. Cl. B62d 39/00
U.S. Cl. 280—33.99 2 Claims

ABSTRACT OF THE DISCLOSURE

A device for transporting articles of furniture is in the form of a tubular skeleton having a base for supporting an article of furniture. The base has horizontal members set at an angle to each other to permit nesting of the devices and is supported by casters. A vertical which does not obstruct loading of the base serves to support the furniture on the base and provide a handle for an operator.

Description

The invention concerns a mobile transport device for furniture which is particularly intended and suited for upholstered furniture. Sets of upholstered furniture can be transported and stored in store houses with transport devices of this type.

A very wide variety of transport devices of this type is already known. They generally have the common disadvantages that they are relatively awkward because of their construction and above all require the same storage space when empty as when loaded.

An object of the invention is to provide a transport device of the type specified which is free from the above defects and in addition has further advantageous features.

With the transport device proposed herein, according to the invention this problem is mainly solved by a tubular construction which is open on three vertical sides and wherein the horizontal tubular frame members which support the furniture to be transported are arranged at an angle relative to each other in such a way that any number of devices of the same construction may be fitted into each other and are provided in their outside end regions with legs running on caster wheels.

This gives above all the substantial advantage that when these devices are empty they can be pushed together endlessly in practically any number and thus require very little storage space when empty. If for example a depth of 950 mm. is chosen for a transport device of this type, the second device which is pushed into a first device only adds 110 mm. to the first device, so that for this second and any further device which is pushed therein, there results a space saving of 86% with respect to the overall depth of one device. Because the devices may be fitted into each other in this way and because of the total space they require when empty, up to 20 devices of the above mentioned size may be simultaneously transported when empty by one assistant. The proposed frame construction also permits the device loaded with a piece of furniture to be transported by one person. It is sufficient for loading and unloading the device to have two people available. Owing to the fact that the tubular construction is open on three sides, it is also possible for other larger pieces of upholstered furniture such as couches to be easily loaded onto the device. As there are no lateral restrictions on the tubular construction, the different number of seating places and the width of such pieces of upholstered furniture is of no importance. The tubular construction chosen also prevents the upholstered furniture which is loaded on the device sliding down, even when the surface over which the device is moved is uneven. In this respect the device may be used for all types of upholstered furniture with straight legs, swivelling spider bases, skids or with a full bottom with rollers; they can all be equally well mounted on the transport device according to the invention. Due to the caster wheels provided, it is possible for the device to be transported easily and above all to be easily moved into its position or storage places. Obviously the tubular construction of the transport device according to the invention is such that it offers no sharp edges, angles or the like which could lead to the delicate piece of upholstered furniture being damaged. The simplicity of the proposed tubular construction also leads to a reduction in manufacturing costs of at least 20% with respect to all transport devices on the market and this reduction is even greater than 50% with respect to the majority of these devices.

According to a further feature of the invention, upper tubular frame members extend parallel to the horizontal tubular frame members which support the furniture to be transported, these upper tubular frame members eliminating any possibility of the upholstered furniture loaded on the device tipping and thus offering further safety in transport. In this respect, according to a particularly advantageous embodiment of the transport device according to the invention it is of particular advantage if the tubular construction comprises single substantially U-shaped tubular bent frame members which are secured together with their vertical frame members and the central bent members of which are joined together in unity of material at least with their horizontal frame members which support the furniture to be transported. In this way the tubular construction of the transport device according to the invention may be assembled from single substantially identical parts, whereby the cost of the construction is still further reduced without the strength of the tubular construction suffering thereby. The strength of the construction may also be increased by the tubular bent frame members being united at the top end of their vertical frame members by means of a cross-tie which serves at the same time as a handle for the person using the transport device when this latter is pushed, particularly when empty.

Finally it is always possible to provide on the bottom and/or top horizontal tubular frame members support plates preferably comprised of plywood or pressboard which are conveniently only laid loosely on the respective tubular frame members and serve for transporting smaller articles which would otherwise fall between the tubular frame members.

A preferred embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which:

FIG. 1 is a perspective view of a single transport device according to the invention,

FIG. 2 shows two transport devices of the type shown in FIG. 1 which, being empty, are pushed together and nested for the purposes of saving space.

The device shown in FIG. 1 comprises a central tubular metal portion **1** of generally U-shaped form but having its base part **2** displaced horizontally to give a V-shape when viewed in plan. The upper ends of the arms of the portion **1** have horizontal extensions **4** extending parallel to the base part **2**. The vertical parts **5** of the portion **1** are each secured to tubular metal side portions **6** by welding, bolting or the like. The side portions **6** are of generally C-shaped form, with a vertical part **7** secured to the vertical part **5** of the central portion **1** and upper and lower horizontal parts **8** and **9**

respectively. An inverted V-shaped portion **12** has its vertical parts **13** secured to the vertical parts **5** and **7** and has a horizontal portion **14** which acts both as a cross-tie and a handle. Caster wheels **15** are mounted at the extremities of the horizontal parts **9** and at the lower ends of the parts **13**. Separate legs to support the caster wheels **15** could be used. Reinforcement struts **16** may be secured in position e.g. by welding.

The parts **4** and **8** have turned-down extremities which may be used to help retain the furniture.

The parts **13** are disposed at an acute angle to each other so that the transport device can be nested as shown in FIG. 2.

I claim:

1. A mobile transport device for furniture comprising a horizontal base frame formed by horizontal tubular members in a W-shaped arrangement such that a plurality of the devices can be nested together, ground-engaging caster wheels carried by legs depending from the frame at both extremities of each outside member of the W, tubular uprights extending vertically from each of the two base points of the W, horizontal upper platform frame vertically above, substantially coextensive with, and spaced from the horizontal base frame, the upper platform frame being formed by horizontal tubular members extending parallel to the horizontal tubular members of the base frame in a similar W-shaped arrangement and being carried by the uprights as cantilevers to permit access to the space between the frames from three sides, and a horizontal tubular handle joining the upper portions of the uprights and displaced rearwardly relatively thereto.

2. A device according to claim **1** which consists essentially of four parts secured together along their upright portions to form said uprights, the first part being an inverted U-shaped tubular part providing the handle, part of the uprights and two legs and two caster wheels, the second part being a U-shaped tubular part displaced laterally at the top and the bottom to provide the central portions of the W-shaped arrangements and providing parts of the uprights, and the third and fourth parts being substantially C-shaped tubular parts each carrying a leg and a caster wheel at its lower extremity, the vertical portions forming parts of the respective uprights and the horizontal portions forming the outside portions of the W-shaped arrangements.

References Cited

UNITED STATES PATENTS

1,966,751	7/1934	Brefeld	211—71
2,738,201	3/1956	Spears.	
2,764,419	9/1956	Enders.	
2,992,010	7/1961	Sides.	

FOREIGN PATENTS

1,163,199	4/1958	France.
1,306,754	9/1962	France.

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