

(19)



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(11) Publication number:

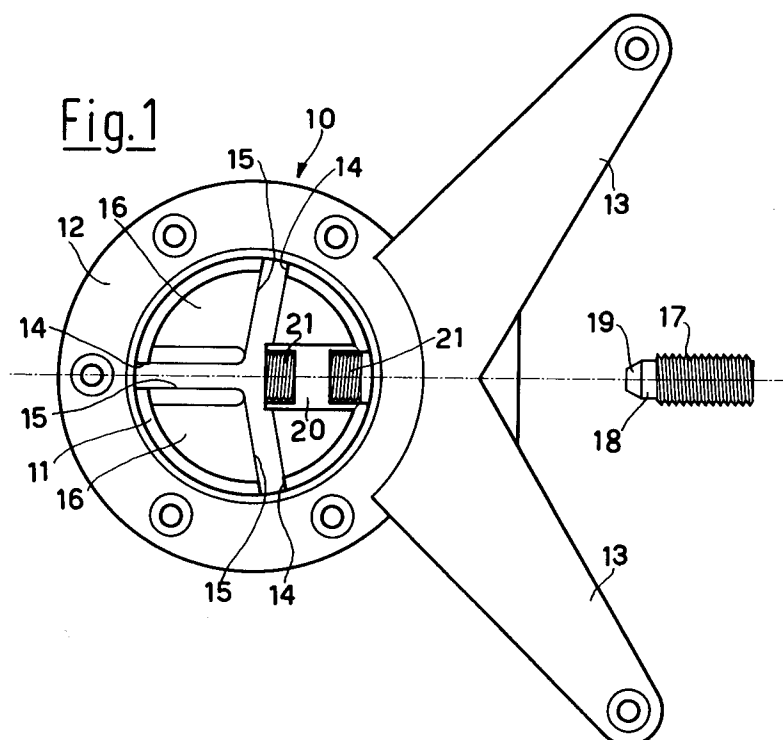
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EUROPEAN PATENT APPLICATION(21) Application number: **91201808.2**(51) Int. Cl.⁵: **F16B 12/44**(22) Date of filing: **11.07.91**(30) Priority: **16.07.90 IT 2148890 U****I-22060 Figino Serenza (Como)(IT)**(43) Date of publication of application:
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I-20099 Sesto San Giovanni (Milano)(IT)(54) **Improved joint for securely connecting a leg to a table top.**

(57) A joint for securely connecting a leg to a table top comprises an expandable member insertable into the complementary hollow top of said leg, an expansion setscrew screwed into a threaded seat in said member and operable from the outside of the leg, and fixing means at the top of the expandable

member for fixing the table top to it. Characteristically, the seat for the setscrew consists of a plurality of internally threaded arcuate sections which are positioned mutually opposing and offset so as to define, within said tubular seat, apertures adjacent to each of said arcuate sections.

**EP 0 467 460 A2**

This invention relates to an improved metal joint, commonly known as a plate, for fixing cylindrical metal legs to a table top.

More specifically, the invention relates to a joint of the type described in Italian patent 1,028,018, to which reference should be made for further clarification.

As is well known to the expert of the art, in order to securely fix a tubular metal leg to a table top it is necessary to provide an intermediate connection means between the leg and table top able to effect a fixing between the two parts which is solid and stable with time.

In addition, considering current market requirements, such a connection means should have a structure which besides being of relatively simple and economical manufacture does not require any complicated additional machining either at the top of the leg or within the table top, but which at the same time allows quick assembly of the table even by non-specialized personnel, hence enabling it to be despatched broken down into its separate parts in packages of minimum overall size, leading to great cost saving.

The joint of the said patent 1,028,018 solves the aforesaid problems and consists of a single metal piece incorporating an expandable-wall boss (over which a tubular metal leg can be easily mounted), with the boss there being associated a circumferential flange with radial arms for fixing the joint to the table top by screws.

After being mounted over the expandable boss the tubular leg is securely fixed in position by expanding the said walls, this expansion being achieved by tightening a radial setscrew incorporated into the joint and accessible through a hole provided in the leg. In this respect, the point of the setscrew acts during its tightening on the opposing walls of the boss to expand them radially outwards so that they clamp the inner surface of the metal leg by friction.

By loosening the setscrew the joint can be separated from the leg because of the elasticity of the walls of the boss.

A joint system between tubular metal legs and a table top is hence obtained which requires no additional machining of the various parts during assembly, which can be achieved with no problem even by non-specialized personnel.

The aforescribed joint constructed in accordance with the said patent 1,028,018 has given perfectly satisfactory results.

The general object of the present invention is however to further improve this joint, particularly with regard to its manufacturing time and cost.

In this respect, the threaded seat which receives the wall expansion setscrew is formed by a separate operation involving drilling and tapping the

body of the boss, which itself is produced in one piece together with the circumferential flange and radial arms by a die-casting operation.

The drilling and tapping of the boss of the joint after its die-casting involves further handling and machining of the joint, so affecting its final cost.

Consequently the specific object of the invention is to provide a joint of the aforescribed type which is structured in such a manner as to be able to eliminate the said operation involving the drilling and tapping of the seat for the expansion setscrew for the boss walls.

This object is attained according to the present invention by a joint for securely connecting a leg to a table top of the type comprising an expandable member insertable into the complementary hollow top of said leg, an expansion setscrew screwed into a threaded seat in said member and operable from the outside of the leg, and fixing means at the top of the expandable member for fixing the table top to it, characterised in that the seat for the setscrew consists of a plurality of internally threaded arcuate sections which are positioned mutually opposing and offset so as to define, within said tubular seat, apertures adjacent to each of said arcuate sections.

The structural and operational characteristics of the invention and its advantages compared with the known art will be more apparent from the ensuing description given with reference to the accompanying drawings, which show a joint incorporating the inventive principles.

In the drawings:

Figure 1 is a top plan view showing the joint of the invention with the setscrew separate;

Figure 2 is an elevational view of the joint of Figure 1;

Figure 3 is a plan view from below; and

Figure 4 is a section on the line IV-IV of Figure 3.

In the drawings, the reference numeral 10 indicates overall the joint of the invention, consisting preferably of an aluminium metal casting comprising an expandable member in the form of a cylindrical boss 11, from the base of which there extends a circumferential flange 12 provided with two arms 13. The flange 12 together with the arms 13 is intended to be fixed by screws to a table top (not shown).

The cylindrical lateral wall of said boss 11 comprises along generating lines a plurality of slits 14, they being three in number in the illustrated example, which extend into respective radial slits 15 through the base 16 on the opposite side to that from which said circumferential flange 12 extends.

The slits 14, 15 are spaced equiangularly apart by 120°, their purpose being to make the boss 11 relatively yieldable in an elastic manner.

In the base 16, between two successive slits 15, there is a radial tubular seat into which there is screwed a polygonally headed setscrew 17 which terminates in an expansion point 18 with a tapered lead-in part 19.

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Characteristically, according to the present invention, said tubular seat is formed of three arcuate sections 20, internally threaded as at 21, and positioned mutually opposing and offset to define an aperture 22. in this manner, said tubular seat, which is partially threaded internally, can be directly formed during the casting of the joint without the need for subsequent costly drilling and tapping of a solid part, as instead is required in the case of the joint of said patent No. 1,028,018.

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For the method of using the joint of the invention, reference should be made to the text and drawings of patent No. 1,028,018.

Claims

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1. A joint for securely connecting a leg to a table top, of the type comprising an expandable member insertable into the complementary hollow top of said leg, an expansion setscrew screwed into a threaded seat in said member and operable from the outside of the leg, and fixing means at the top of the expandable member for fixing the table top to it, characterised in that the seat for the setscrew consists of a plurality of internally threaded arcuate sections which are positioned mutually opposing and offset so as to define, within said tubular seat, apertures adjacent to each of said arcuate sections.

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