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(54) **Piece of furniture comprising a retractable worktop, particularly for kitchens or other furnishings**

Eine herausziehbare Arbeitsplatte enthaltendes Möbelstück, insbesondere für Küchen oder andere Wohnungseinrichtungen

Meuble comprenant un plan de travail escamotable, notamment pour des cuisines ou d'autres ameublements

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Description

[0001] The present invention relates to a piece of furniture comprising a retractable worktop particularly for kitchens or other furnishings.

[0002] Currently, as the comforts and the applications available to a person in the most disparate disciplines increase, the spaces that a piece of furniture must offer are gradually increasing.

[0003] The furniture industry has therefore increasingly refined already-known solutions which use for example drawers, shelves or compartments, in an attempt to utilize in the best possible way the greatest number of spaces present in a given room.

[0004] In particular, in the field of kitchen furniture, it can be noted that the entire space has been utilized, from the floor to the ceiling, with a whole range of solutions which are suitable to provide the user with greater space availability.

[0005] As regards space usable for work, it is noted that the spaces and surfaces that are commonly added are mostly suitable to store and collect material, while the so-called working surface has remained mostly unchanged and is substantially constituted by a table and by the fixed worktop of the cooking-range.

[0006] The present situation is a great limitation, especially in view of the increasingly frequent use of recent technologies and electric household appliances, such as for example in the field of cooking: microwave ovens, food processors, coffee machines, juice extractors and others, in addition to conventional cooking implements. By analyzing the typical preparation of a meal, it can be seen that several pans and pots, at least one for each course, are necessary; that objects at different temperatures must be spaced from each other; and that some surfaces, for example the table, are assigned to other uses (eating the meal, if a dining room is not present) at the very time when they are most needed.

[0007] US-A-5 947 035 discloses a device for connecting an auxiliary desk to a main desk having a combination of features as set forth in the precharacterizing portion of the appended claim 1.

[0008] The aim of the present invention is to solve the cited problems, eliminating the drawbacks of the prior art, by providing a piece of furniture which allows to increase at will the available working surface without thereby permanently occupying spaces which are otherwise required.

[0009] Within the scope of this aim, an object of the present invention is to provide a piece of furniture which allows the user to use this additional supporting surface where it is needed most, of course in the room in which the piece of furniture has been placed.

[0010] Another object of the invention is to relieve the user of part of the burden of manual work required by his duties by utilizing the piece of furniture to move heavy or otherwise delicate material from one place to another of the room being considered.

[0011] Another object of the present invention is to provide a piece of furniture which is structurally simple and has low manufacturing costs.

[0012] These and other objects which will become better apparent hereinafter are achieved by a piece of furniture comprising a retractable worktop, as defined in the appended claims.

[0013] Further characteristics and advantages of the present invention will become better apparent from the following detailed description of a particular embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figures 1 and 2 are respectively a perspective view and a top view of the retractable worktop and of the fixed horizontal surface of the piece of furniture according to the present invention;

Figure 3 is a front view of the retractable worktop and of the piece of furniture along which it slides; Figures 4 and 5 are respectively a side view and a front view of the retractable worktop;

Figure 6 is a sectional view, taken along a transverse plane, of the system for the sliding and anchoring of the retractable worktop along the horizontal guide which is rigidly coupled to the piece of furniture;

Figure 7 is a transverse sectional view of the sliding and anchoring system of the retractable worktop, according to a second embodiment.

[0014] With reference to Figure 1, the reference numeral 1 designates a fixed horizontal surface which protrudes at right angles with respect to a piece of furniture 2.

[0015] The fixed horizontal surface rests on the ground at one end by means of a lateral panel 3 and is rigidly coupled to the piece of furniture 2 at the opposite end.

[0016] The reference numeral 4 designates a retractable worktop whose height from the ground is lower than the height of the fixed horizontal surface 1; the worktop is associated with a sliding and anchoring mechanism 20 (see Figure 6) so that it can slide parallel to, and below, the fixed horizontal surface thanks to the presence of a horizontal guide 5 which is rigidly coupled inside the piece of furniture 2, below the fixed horizontal surface 1, and has a substantially C-shaped cross-section.

[0017] The retractable worktop 4 rests on the ground, on the opposite side with respect to the guide 5, by means of a support, designated by the reference numeral 6, which is substantially shaped like a parallelepiped and is provided with fixed wheels 7 in its lower part.

[0018] Figure 6 is a sectional view of the sliding and anchoring mechanism 20 by means of which the retractable worktop 4 is rigidly coupled to the piece of furniture 2.

[0019] It can be noted that the guide 5, which is part of the mechanism, lies within the peripheral edge 8 of

the piece of furniture 2, the edge being rigidly coupled below the horizontal supporting surface 9 of the piece of furniture 2.

[0020] Two or more pairs of wheels 11 slide inside the guide 5, which is rigidly coupled, in an upward region, to a suitable spacer 10 which is in turn rigidly coupled below the horizontal supporting surface 9.

[0021] The two wheels 11 are fixed, at their corresponding hub 21 provided with a threaded radial stem 22, to an underlying wing of a substantially S-shaped metallic profiled element 12 by means of a connection which is advantageously obtained by means of one or more nuts 13.

[0022] At its other end, the metallic profiled element 12 is rigidly coupled to the retractable worktop 4 laterally and in a downward region.

[0023] Operation is as follows: the retractable worktop 4 can slide in both directions along the axis of the horizontal guide 5, thus moving along one side of the piece of furniture 2.

[0024] The possibility to perform a translatory motion is allowed by the combined presence of the wheels 7, which are fixed below the support 6, and of the pairs of wheels 11, which slide within the guide 5 on the opposite side of said retractable worktop.

[0025] This allows multiple use of the retractable worktop 4, depending on the requirements of the user: said retractable worktop can be stored below the fixed horizontal surface 1 if, for example, there is the need for more space in the room or there is the need for a room which is as uncluttered as possible for cleaning purpose; it can also be moved to any chosen point along the piece of furniture 2 in order to obtain an additional supporting surface wherever it seems or becomes more useful.

[0026] It can also be noted that the guide 5 is furthermore effectively protected against impacts and dirt with respect to the peripheral edge 8, which also has an advantageous aesthetic function.

[0027] It has thus been found that the intended aim and objects have been achieved, an invention having been provided which is capable of advantageously increasing the working surface of a kitchen or of another type of furnishing without permanently occupying considerable spaces of the room being considered.

[0028] Figure 7 illustrates an embodiment in which the reference numeral 101 designates a fixed horizontal surface which protrudes at right angles to a piece of furniture and again rests on the ground at one end by virtue of a lateral panel and is rigidly coupled to said piece of furniture at the opposite end.

[0029] The reference numeral 104 designates a retractable worktop whose height from the ground is lower than the height of the fixed horizontal surface 101; the worktop is associated with a sliding and anchoring mechanism 120 so that it can slide parallel to, and below, the fixed horizontal surface thanks to the presence of a horizontal guide 105, which is rigidly coupled inside said piece of furniture below the supporting surface 109

of the piece of furniture 2; the horizontal guide has an essentially inverted C-shaped cross-section, from the base of which a first S-shaped wing 130 protrudes for better anchoring to the remaining part of the piece of furniture, which can comprise a base module 131 provided with an openable door 132, shown schematically in the open position in Figure 7.

[0030] A second T-shaped wing 133, with its stem 134 directed toward the supporting surface 109, protrudes from the base of the horizontal guide, on the opposite side with respect to said first wing 130.

[0031] A third wing 135 protrudes from the wing of the horizontal guide that is directed toward the retractable worktop 104, on the same plane and on the opposite side with respect to said second wing 133, and arranges itself laterally to said supporting surface 109; the second and third wings form, together with the adjacent lateral wing of the flat guide 105, the peripheral edge of the piece of furniture.

[0032] Two or more pairs of wheels 111 slide inside the guide 105 and are slidingly associated, at the corresponding hub, to a metallic profiled element 112, which is substantially L-shaped and one end 136 of which is in turn L-shaped, so as to lie laterally adjacent to, and below, the adjacent end of the retractable worktop 104 associated therewith.

[0033] The materials used and the dimensions that constitute the individual components of the invention may of course be the most pertinent according to specific requirements.

[0034] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

40 Claims

1. A piece of furniture (2;131,132) comprising a retractable worktop (4;104) located at a region which lies below a fixed horizontal surface (1;101) of said piece of furniture, said retractable worktop comprising, on one side, a wheeled support (6) and, on the other side, means (20; 120) for sliding and anchoring to said piece of furniture or to a wall, **characterized in that** said fixed horizontal surface (1;101) is arranged at right angles to a horizontal supporting surface (9;109) which is also fixed, and said sliding and anchoring means (20;120) being arranged inside the peripheral edge (8;133,135) of said horizontal supporting surface (9;109) of said piece of furniture thereby said retractable worktop (4;104) is slidably movable to a chosen point along the peripheral edge (8;133,135) of said horizontal supporting surface (9;109).

2. The piece of furniture according to claim 1, **characterized in that** said sliding and anchoring means (20;120) are constituted by a guide (5; 105) which has a C-shaped cross-section.
3. The piece of furniture according to claim 2, **characterized in that** said guide (5) is advantageously rigidly coupled, in an upward region, to a spacer (10) which is in turn rigidly coupled below said horizontal supporting surface (9) of said piece of furniture (2).
4. The piece of furniture according to claim 3, **characterized in that** at least two pairs of wheels (11) are associated with said retractable worktop (4), each wheel being fitted on a hub (21), said wheels sliding within said guide (5).
5. The piece of furniture according to claim 4, **characterized in that** said hub has a threaded radial stem (22) passing through an underlying first wing of a metallic profiled element (12) which is S-shaped so as to allow mutual fixing of the at least two pairs of wheels (11) and said metallic profiled element by means of a connection which is advantageously obtained by means of a complementarily threaded nut (13).
6. The piece of furniture according to claim 5, **characterized in that** said metallic profiled element (12) is rigidly coupled at a second wing, laterally and in a downward region, with respect to said retractable worktop (4).
7. The piece of furniture according to claim 1, **characterized in that** said means (120) for sliding and anchoring comprise a horizontal guide (105) which is rigidly coupled inside said piece of furniture below said horizontal supporting surface (109); said horizontal guide having an inverted C-shaped cross-section, from the base of which a first S-shaped wing (130) protrudes for anchoring to the remaining part of said piece of furniture, which is provided with a base module (131,132) with an openable door.
8. The piece of furniture according to claim 7, **characterized in that** a second T-shaped wing (133) protrudes from the base of said horizontal guide (105) in the opposite direction with respect to said first wing (130) and has a stem (134) which is directed toward said horizontal supporting surface (109), a third wing (135) protruding, on the same plane and on the opposite side with respect to said second wing, from the wing of said horizontal guide that is directed toward said retractable worktop (104), said third wing arranging itself laterally to said horizontal supporting surface, said second and third wings (133,135) forming, together with said adjacent lateral wing of said horizontal guide, the peripheral

edge of said piece of furniture.

9. The piece of furniture according to claim 8, **characterized in that** said two or more pairs of wheels (111) are slidingly associated, at the corresponding hub, with a metallic profiled element which is L-shaped, one end (136) of which is in turn L-shaped so as to be laterally adjacent to, and lie below, the adjacent end of said retractable worktop (104) associated therewith.

Patentansprüche

1. Möbelstück (2; 131, 132) mit einer ausziehbaren Arbeitsplatte (4; 104), die sich in einem Bereich unterhalb einer festen Horizontalfäche (1; 101) des Möbelstückes befindet, bei dem die ausziehbare Arbeitsplatte auf deren einer Seite einen mit Rädern versehenen Träger (6) und auf ihrer anderen Seite Mittel (20; 120) zum Verfahren und zum Befestigen an dem Möbelstück oder an einer Wand aufweist, **dadurch gekennzeichnet, dass** die feste Horizontalfäche (1; 101) unter einem rechten Winkel zu einer horizontalen und ebenfalls festliegenden Tragfläche (9; 109) verläuft, und dass die Verfah- und Halterungsmittel (20; 120) innerhalb einer Umlaufblende (8; 133, 135) der horizontalen Tragfläche (9; 109) des Möbelstückes angeordnet sind, wodurch die ausziehbare Arbeitsplatte (4; 104) zu einer gewählten Stelle entlang der Umlaufblende (8; 133, 135) der horizontalen Tragfläche (9; 109) bewegbar ist.
2. Möbelstück nach Anspruch 1, **dadurch gekennzeichnet, dass** die Verfah- und Halterungsmittel (20; 120) von einer Führung (5; 105) gebildet sind, welche eine C-förmigen Querschnitt hat.
3. Möbelstück nach Anspruch 2, **dadurch gekennzeichnet, dass** die Führung (5) mit Vorteil in einem oberen Bereich fest an einen Distanzhalter (10) angeschlossen ist, welcher seinerseits fest unter der horizontalen Tragfläche (9) des Möbelstückes (2) sitzt.
4. Möbelstück nach Anspruch 3, **dadurch gekennzeichnet, dass** der ausziehbaren Arbeitsplatte (4) mindestens zwei Paar Rollen (11) zugeordnet sind und jede Rolle an einer Nabe (21) angeschlossen ist, wodurch die Rollen innerhalb der Führung (5) verfahrbar sind.
5. Möbelstück nach Anspruch 4, **dadurch gekennzeichnet, dass** die Nabe mit einem Gewindestutzen (22) versehen ist, der durch einen darunter liegenden ersten Flügel eines S-förmigen Metallprofils (12) hindurchgeführt ist, um das Befestigen von

mindestens zwei Paaren von Rollen (11) an dem Metallprofil zu ermöglichen, und zwar mittels einer Verbindung, die vorteilhaft von komplementären Gewindemuttern (13) gebildet wird.

6. Möbelstück nach Anspruch 5, **dadurch gekennzeichnet, dass** das Metallprofil (12) mittels eines zweiten Flügels quer verlaufend und unten fest an die ausziehbare Arbeitsplatte (4) angekoppelt ist.
7. Möbelstück nach Anspruch 1; **dadurch gekennzeichnet, dass** die Verfahr- und Haltemittel (120) eine Horizontalführung (105) aufweisen, welche unterhalb der horizontalen Tragfläche (109) innen fest mit dem Möbelstück verbunden ist; und dass die Horizontalführung einen umgekehrt C-förmigen Querschnitt hat, von deren Basis ein erster S-förmiger Flügel (130) zur Befestigung an dem verbleibenden Teil des Möbelstückes vorsteht, welches seinerseits ein unteres Modul (131, 132) mit einer zu öffnenden Tür aufweist.
8. Möbelstück nach Anspruch 7, **dadurch gekennzeichnet, dass** ein zweiter T-förmiger Flügel (133) von der Basis der Horizontalführung (105) entgegen der Richtung des ersten Flügels (130) absteht und einen Schenkel (134) aufweist, der in der Richtung der horizontalen Tragfläche (109) verläuft, und dass in derselben Ebene und auf der dem zweiten Flügel gegenüberliegenden Seite ein dritter Flügel (135) von dem Flügel der Horizontalführung absteht, welcher in Richtung auf die ausziehbare Arbeitsplatte (104) verläuft und von denen der dritte Flügel senkrecht zu der horizontalen Tragfläche ausgerichtet ist, wodurch der zweite und der dritte Flügel (133, 135) gemeinsam mit dem angrenzenden senkrechtverlaufenden Flügel der Horizontalführung eine umlaufende Kante des Möbelstückes bilden.
9. Möbelstück nach Anspruch 8, **dadurch gekennzeichnet, dass** die beiden oder mehr Paare von Rollen (111) mittels ihrer jeweiligen Nabe drehbar einem L-förmig ausgebildeten Metallprofil zugeordnet sind, dessen eines Ende (136) seinerseits L-förmig gestaltet ist, so dass es senkrecht zu und unterhalb des angrenzenden Endes der zugeordneten ausziehbaren Arbeitsplatte (104) verläuft.

Revendications

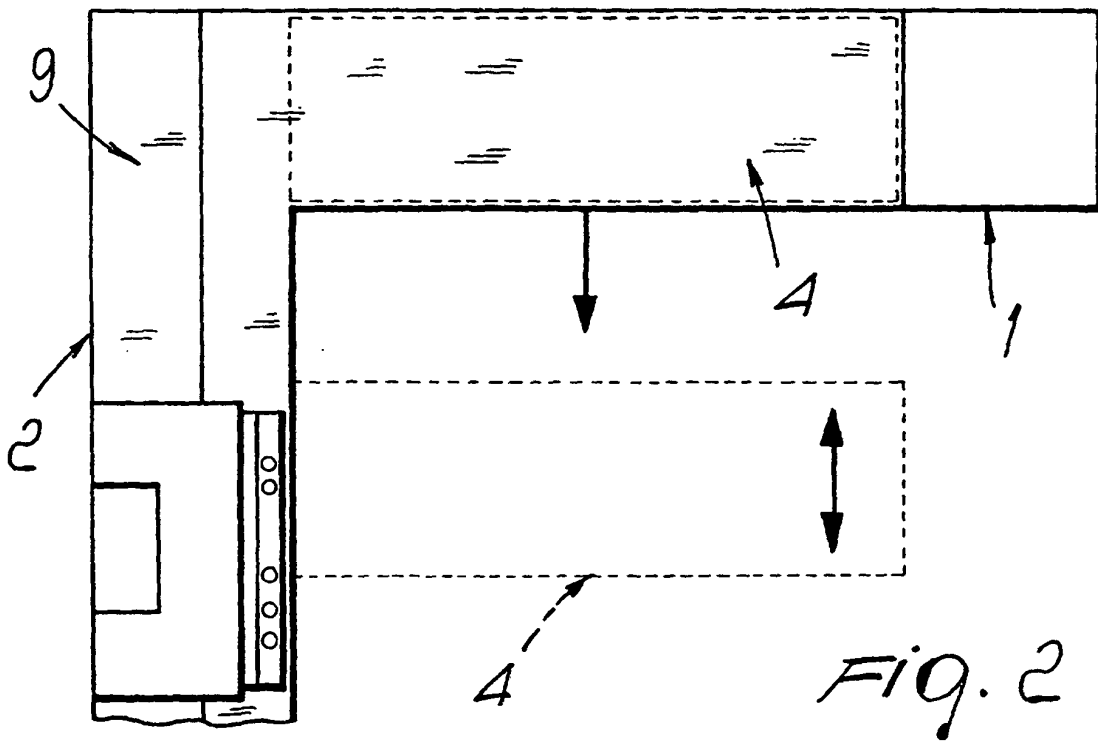
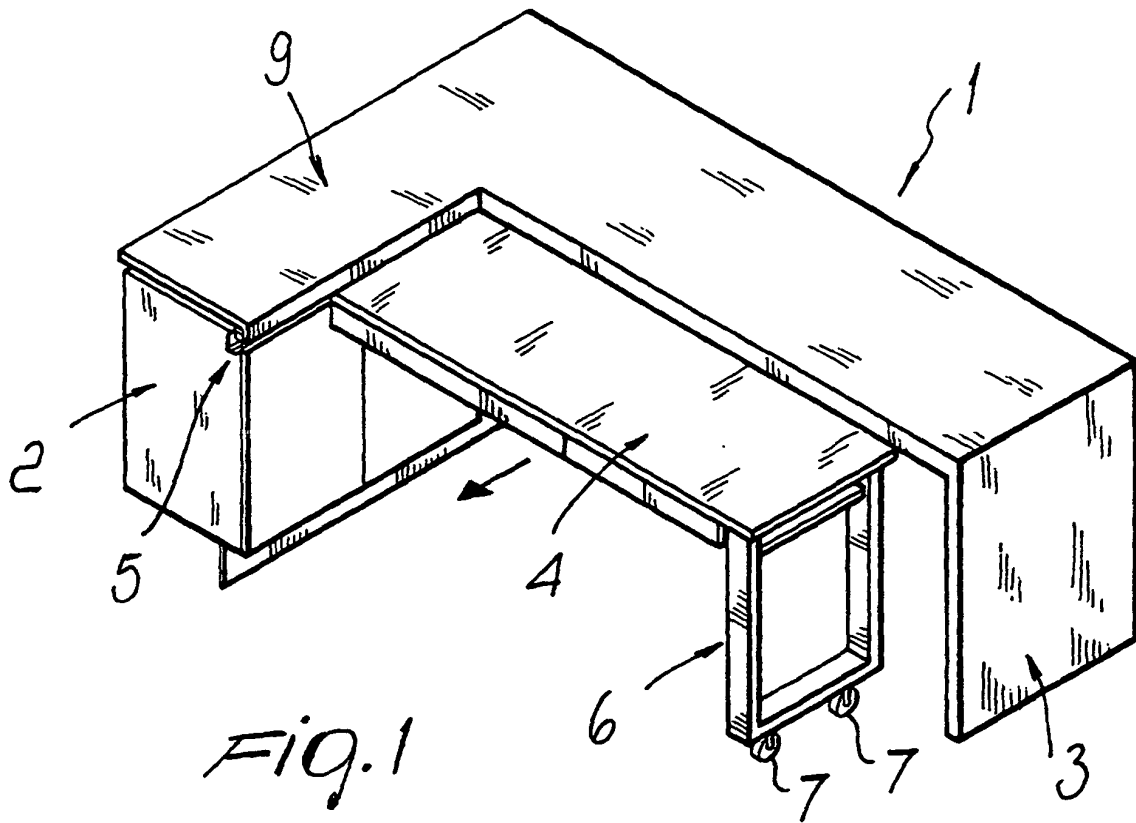
1. Meuble (2 ; 131, 132) comportant un plan de travail rétractable (4 ; 104) situé dans une région qui se trouve en dessous d'une surface horizontale fixe (1 ; 101) dudit meuble, ledit plan de travail rétractable comprenant, sur un côté, un support à roues (6), et, sur l'autre côté, des moyens (20 ; 120) pour le

coulissement et l'ancrage audit meuble ou à une paroi, **caractérisé en ce que** ladite surface horizontale fixe (1 ; 101) est agencée à angle droit par rapport à une surface de support horizontale (9 ; 109) qui est également fixe, lesdits moyens de coulissement et d'ancrage (20 ; 120) étant agencés à l'intérieur du bord périphérique (8 ; 133, 135) de ladite surface de support horizontale (9 ; 109) dudit meuble, grâce à quoi ladite table de travail rétractable (4 ; 104) peut se déplacer par coulissement vers un point choisi le long du bord périphérique (8 ; 133, 135) de ladite surface de support horizontale (9 ; 109).

2. Meuble selon la revendication 1, **caractérisé en ce que** lesdits moyens de coulissement et d'ancrage (20 ; 120) sont constitués par un guide (5 ; 105) qui a une section transversale en forme de C.
3. Meuble selon la revendication 2, **caractérisé en ce que** ledit guide (5) est, de façon avantageuse, rigidement couplé, dans une région supérieure, à un élément d'espacement (10) qui est lui-même rigidement couplé en dessous de ladite surface de support horizontale (9) dudit meuble (2).
4. Meuble selon la revendication 3, **caractérisé en ce qu'**au moins deux paires de roues (11) sont associées audit plan de travail rétractable (4), chaque roue étant disposée sur un moyeu (21), lesdites roues coulissant à l'intérieur dudit guide (5).
5. Meuble selon la revendication 4, **caractérisé en ce que** ledit moyeu comporte une tige radiale filetée (22) traversant une première ailette sous-jacente d'un élément profilé métallique (12) qui est en forme de S, de façon à permettre la fixation mutuelle des paires de roues au nombre d'au moins deux (11) et dudit élément profilé métallique à l'aide d'un raccordement qui est obtenu, de façon avantageuse, à l'aide d'un écrou fileté de façon complémentaire (13).
6. Meuble selon la revendication 5, **caractérisé en ce que** ledit élément profilé métallique (12) est rigidement couplé à une deuxième ailette, latéralement et dans une région inférieure, vis-à-vis dudit plan de travail rétractable (4).
7. Meuble selon la revendication 1, **caractérisé en ce que** lesdits moyens (120) pour le coulissement et l'ancrage comprennent un guide horizontal (105) qui est rigidement couplé à l'intérieur dudit meuble en dessous de ladite surface de support horizontale (109); ledit guide horizontal ayant une section transversale en forme de C inversé, à partir de la base de laquelle fait saillie une première ailette en forme de S (130) pour l'ancrage à la partie restante

dudit meuble, qui est munie d'un module de base (131, 132) avec une porte pouvant s'ouvrir.

8. Meuble selon la revendication 7, **caractérisé en ce qu'une** deuxième ailette en forme de T (133) fait saillie à partir de la base dudit guide horizontal (105) dans la direction opposée vis-à-vis de ladite première ailette (130), et comporte une tige (134) qui est dirigée vers ladite surface de support horizontale (109), une troisième ailette (135), faisant saillie, sur le même plan et sur le côté opposé par rapport à ladite deuxième ailette, à partir de l'ailette dudit guide horizontal qui est dirigée vers ledit plan de travail rétractable (104), ladite troisième ailette s'agençant elle-même latéralement par rapport à ladite surface de support horizontale, lesdites deuxième et troisième ailettes (133, 135) formant, avec ladite ailette latérale adjacente dudit guide horizontal, le bord périphérique dudit meuble.
9. Meuble selon la revendication 8, **caractérisé en ce que** lesdites deux ou plusieurs paires de roues (111) sont associées de façon coulissante, au niveau du moyeu correspondant, avec un élément profilé métallique qui est en forme de L, dont une extrémité (136) est elle-même en forme de L de façon à être latéralement adjacente à l'extrémité adjacente dudit plan de travail rétractable (104) associé à celle-ci, et à se trouver en dessous de celle-ci.



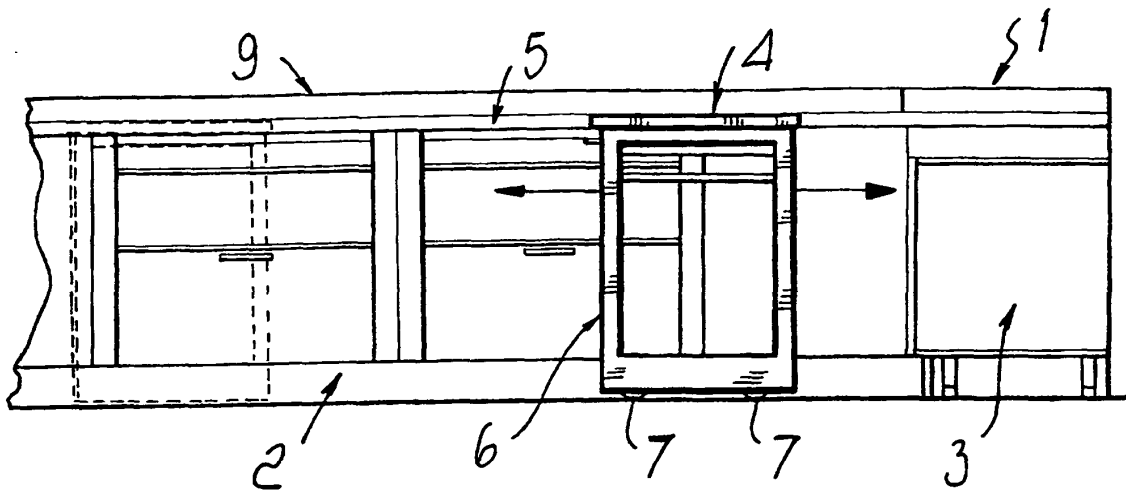


FIG. 3

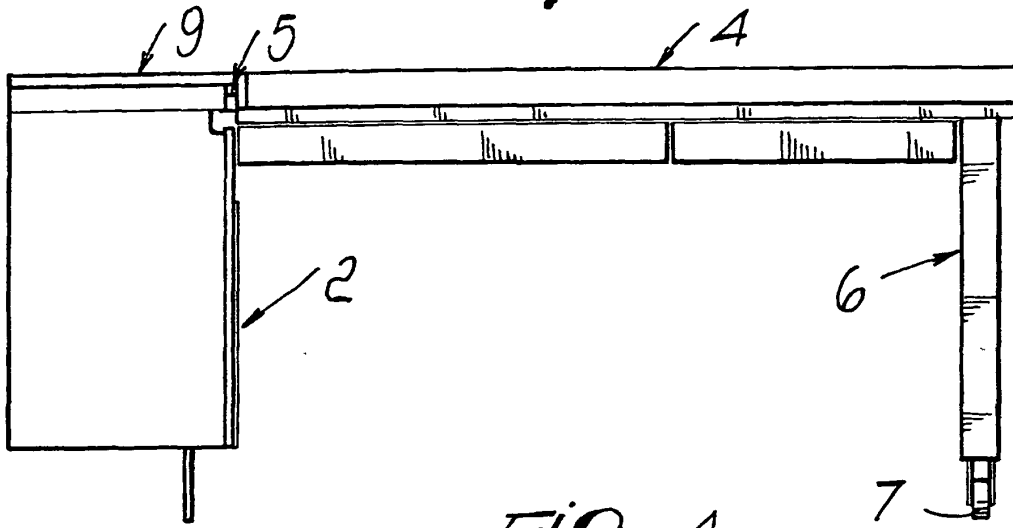


FIG. 4

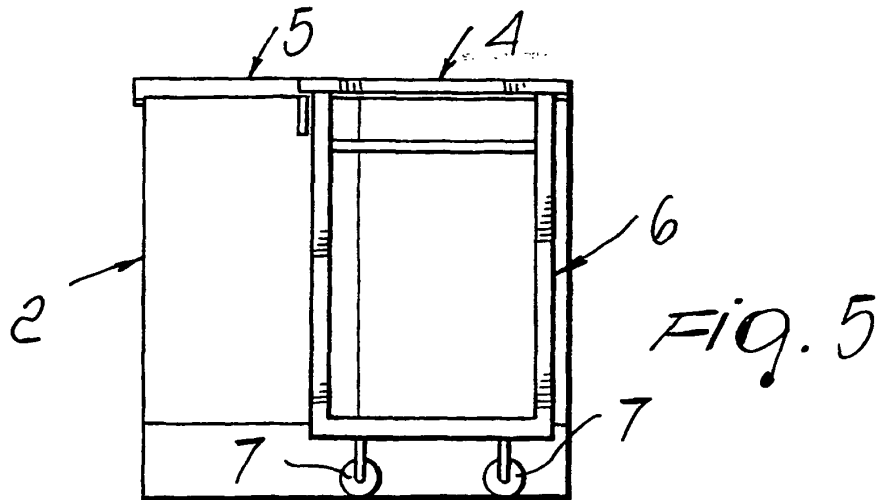


FIG. 5

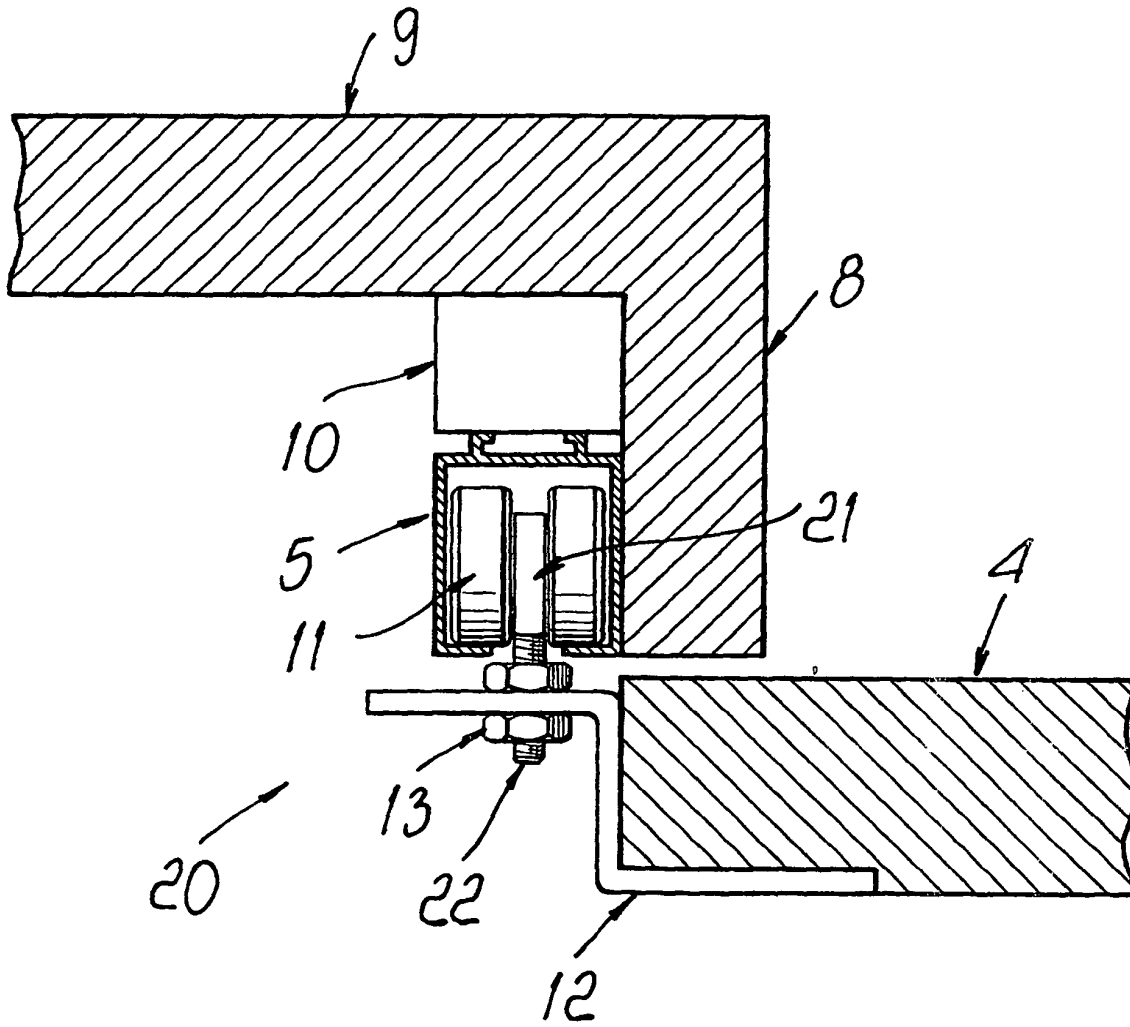


Fig. 6

