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(54) Adjustable stop for setting the doors of metal cabinets and the like

(57) The stop can be connected to the internal face of the cabinet door, determining a tangential edge with a structural element of the cabinet body to determine the closing position, bringing about setting of the door with respect to the cabinet body and characterised in that it is formed by two parts which are mutually connectable in an adjustable manner such that one of them is capable of being fixed to a point of the internal structure of the cabinet door and the other, comprising an edge intended for setting the door in the frame of its opening, can be adjustably slid into the position necessary to absorb the play existing between the stop and the cabinet frame structure.

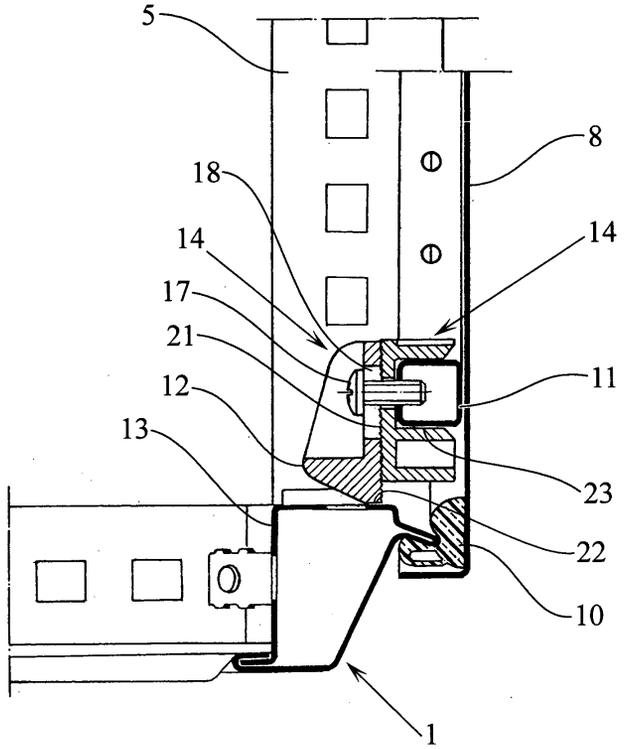

FIG. 3

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Description

[0001] The present invention is intended to disclose an adjustable stop for doors of metal cabinets and the like which imparts novelty and an inventive step to its subject.

[0002] The adjustable stop according to the present invention is intended in particular for metal cabinets of the type used to protect switchboards and the like, carrying in their interior connecting devices and instruments which are conventional in electrical installations and are usually mounted both in the interior of buildings and on the exterior thereof.

[0003] This type of cabinet is conventionally made of metal and the body of the cabinet as well as the cover and other elements are produced by stamping, punching, screwing, soldering, etc. In general, it involves a method which has to combine efficient service with relatively low production costs, given the extensive use of this type of cabinet.

[0004] One of the drawbacks conventionally encountered when inserting the doors of said cabinets is the imprecise fit of said elements, which is why, in many cases, stop elements are arranged in such a way that they are expediently fixed inside the cabinet door, allowing centring thereof, in other words adjusting or "setting" of the door in the cabinet frame.

[0005] Although the aforementioned stops have provided an improvement in the setting of doors of metal cabinets and the like with respect to the body thereof, they still suffer from a considerable drawback with respect to the inefficient adaptation of a stop with fixed dimensional characteristics to cabinet door and body assemblies which may have varying degrees of misalignment, which is why the aforementioned stops are obliged either to always have specific play so their operation is imperfect, or to be manufactured with different dimensions to enable the most appropriate ones to be selected in each case, all of which results in a tedious process and requires a considerable increase in the stocks of parts necessary for assembly and is subject to all of the drawbacks of a method based substantially on trial and error with stops which are mounted to achieve a correct fit.

[0006] To solve the aforementioned problems, the inventor of the present invention has devised an adjustable stop such that, with very simple technical characteristics, a single stop can be used for any assembly of cabinet door and its corresponding body in which it is inserted, leading to the necessary fit in every embodiment. In this way the operator carrying out assembly will always use a single type of stop, adjusting each individual stop quickly and easily to achieve perfect setting.

[0007] To assist understanding there follow by way of non-limiting example some representative drawings of a preferred embodiment of the present invention.

[0008] Fig. 1 shows, in perspective, a view of a cabinet frame with its door equipped with an adjustable stop according to the present invention.

[0009] Fig. 2 shows a detailed perspective view of the characteristic stop assembly.

[0010] Fig. 3 shows a section of the adjustable stop assembly.

[0011] Fig. 4 and 5 respectively show a perspective view of the adjustable stop removed and mounted, according to the present invention.

[0012] The adjustable stop according to the present invention is applied to doors for metal cabinets and the like, Fig. 1 showing the frame of a metal cabinet comprising the base 1, the upper frame 2, and the supports which make up the back corners 3 and 4 as well as the front corners 5 and 6. The front doors 7 and 8 are articulated by means of hinges, such as 9, 9', to the supports which form the front corners 5 and 6, and possibly have seals. Fig. 3 is a detailed section of a door 8 equipped with a seal coupling 10 which acts against the front edge of the lower side 1 of the cabinet frame.

[0013] The adjustable stop according to the present invention is mounted in an element of the door frame, for example as can be seen in Fig. 2 in a door profile 11, and at its lower edge 12 provides a stop surface located a very short distance from the corresponding front support 13 of the lower frame 1 of the cabinet.

[0014] It will be appreciated that the stop mounted on the profile 11, which as a whole is indicated by the reference numeral 14, could also be mounted on other door profiles, for example a lateral profile or an upper profile, performing its functions of setting in said profiles.

[0015] To achieve adjustability according to the present invention, the stop has the constitution shown in detail in Fig. 4 and 5 in which it can be seen that it comprises two parts, one of which is indicated by reference numeral 15 and the other by reference numeral 16, which can be fixed in the part 15 by means of a self-tapping screw 17 and a slot 18, being fixed to the part 15 through the hole 19. The relative position of the part 15 and the part 16 will vary as the part 16 is displaced with respect to the part 15 by means of the slot 18. To secure the mutual fixing of the parts 15 and 16, these have, on opposing faces, respective indents 20 and 21 of mating shape which will guarantee a permanent fit in use of the stop. It is possible by means of this arrangement for the lower edge 22 of the stop to be disposed at the exact height for proper setting of the doors 7 and 8 with respect to the front frame of the cabinet.

[0016] The method of fixing the part 15 with respect to the door frame element may be variable, the figure showing a recess 23 intended to fit with a profile of the door frame, fixing being brought about by means of the self-tapping screw 17.

[0017] Likewise, to improve the fit between the parts 15 and 16, lateral wings 24 and 25 are arranged in one of said parts, for example part 15, via which the other part, in this case part 16, can be inserted between said wings thus preventing its lateral displacement.

[0018] The integral parts 15 and 16 of the adjustable

stop may be produced using any appropriate method and industrial material, for example inject-moulded plastics material, a light alloy, etc.

Claims

1. Adjustable stop for setting the doors of metal cabinets and the like, of the type comprising a stop which can be coupled to the internal face of the cabinet door, determining a tangential edge with a structural element of the cabinet body to determine the closing position, bringing about setting of the door with respect to the cabinet body, **characterised in that** it comprises two parts which are mutually connectable in an adjustable manner such that one of them is capable of being fixed to a point of the internal structure of the cabinet door and the other, comprising an edge for setting the door in the frame of its opening, can be adjustably slid into the position necessary for absorbing the play existing between the stop and the cabinet frame structure, to achieve play-free setting of the door in the cabinet body.

2. Adjustable stop for setting the doors of metal cabinets and the like according to claim 1, **characterised in that** one of the two mutually sliding integral parts of the adjustable stop has means for connecting it to a profile of the internal face of the door, and the other of said parts is inserted displaceably in the first part, by means of a slot, penetrated by the screw fixing the two parts of the stop and those in the door structure.

3. Adjustable stop for setting the doors of metal cabinets and the like according to the preceding claims, **characterised in that** the part connected to the cabinet door has centring flanges for the other part to prevent lateral displacement thereof.

4. Adjustable stop for setting the doors of metal cabinets and the like according to claim 1, **characterised in that** the contacting faces of the two integral parts of the adjustable stop have mutually engaging indented surfaces allowing a fit thereof into varying positions and preventing accidental sliding thereof.

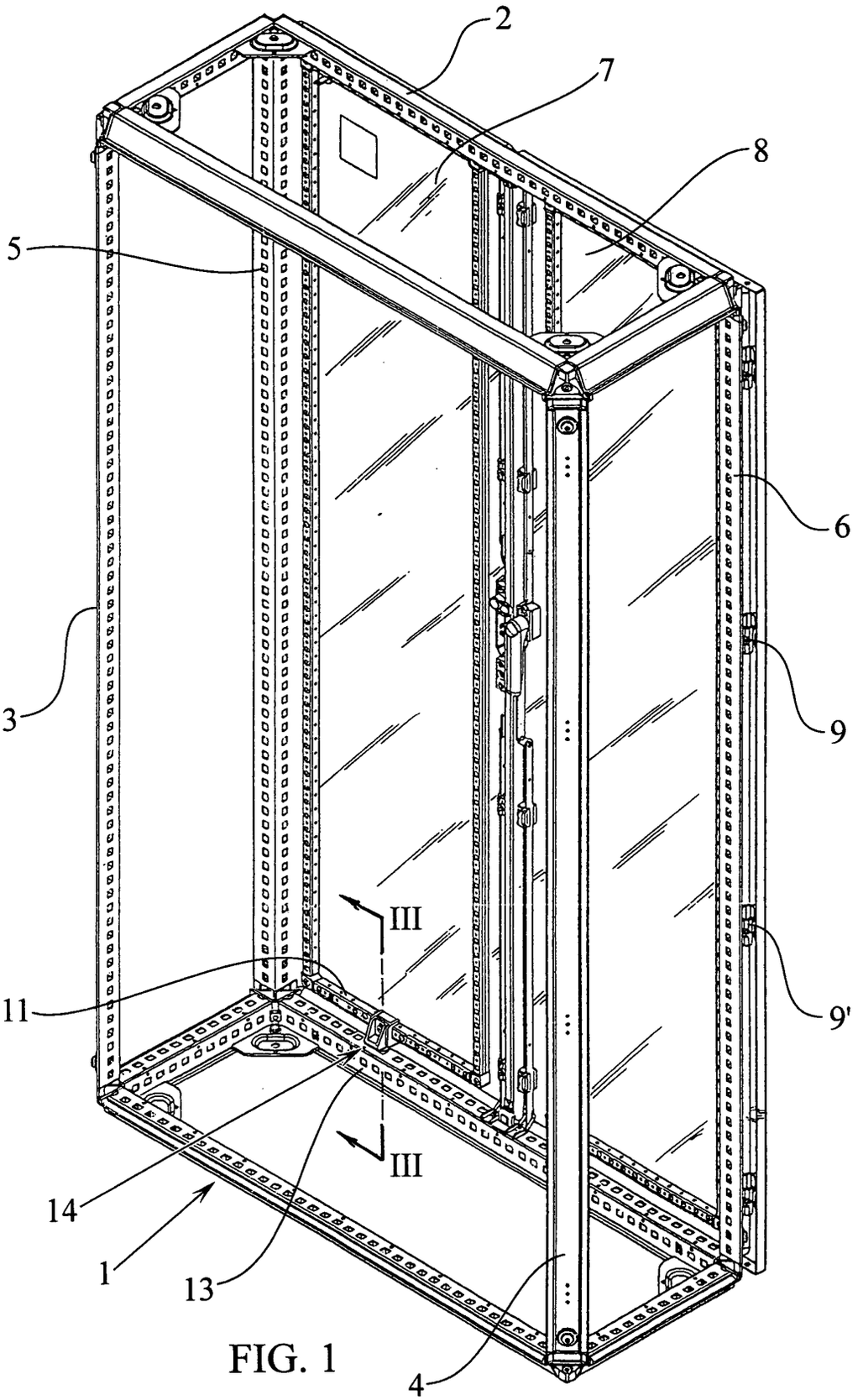

FIG. 1

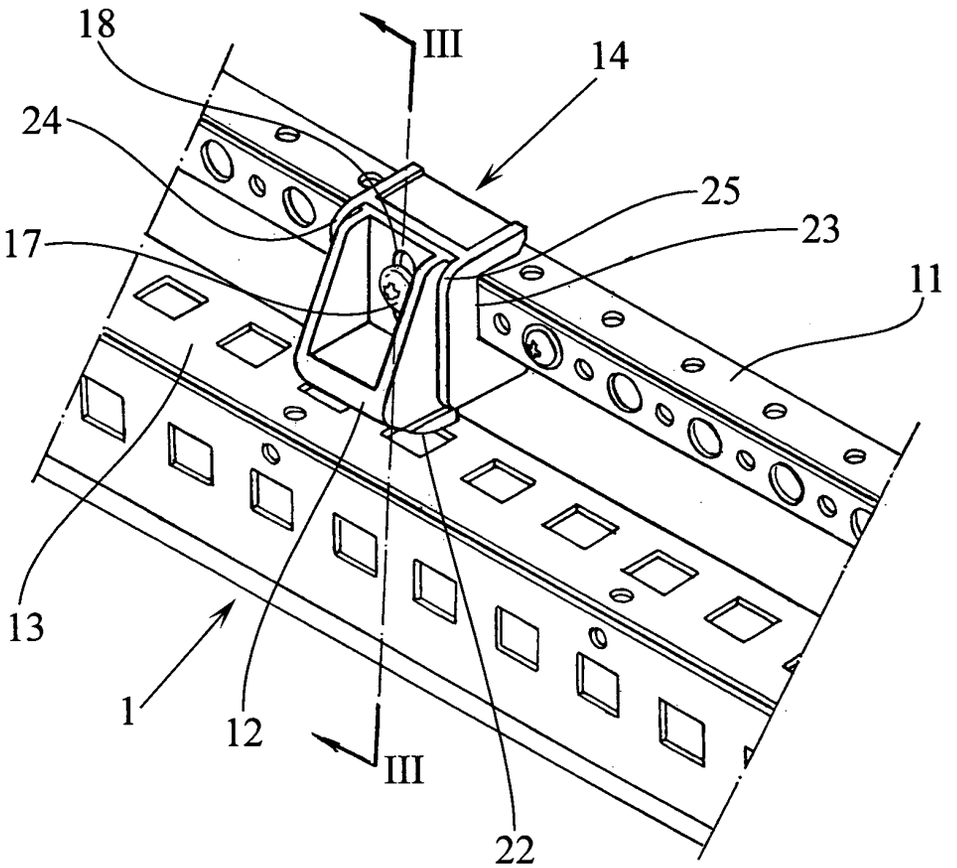

FIG. 2

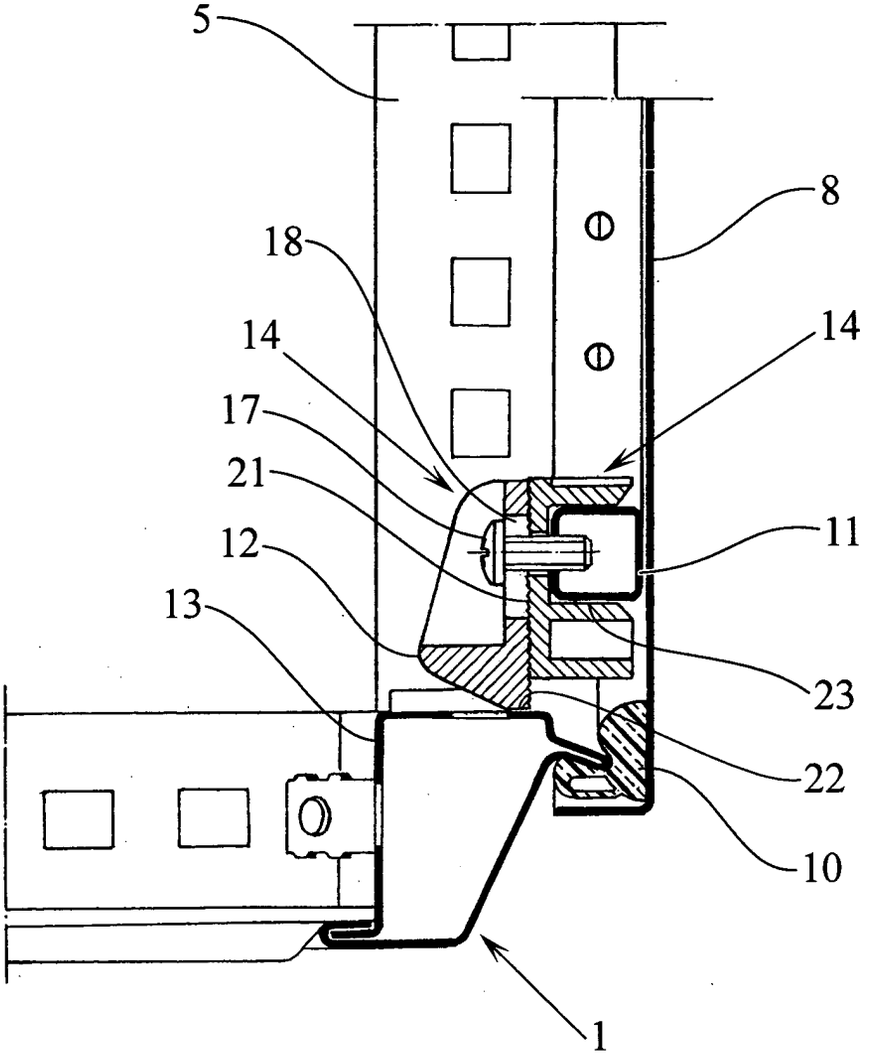

FIG. 3

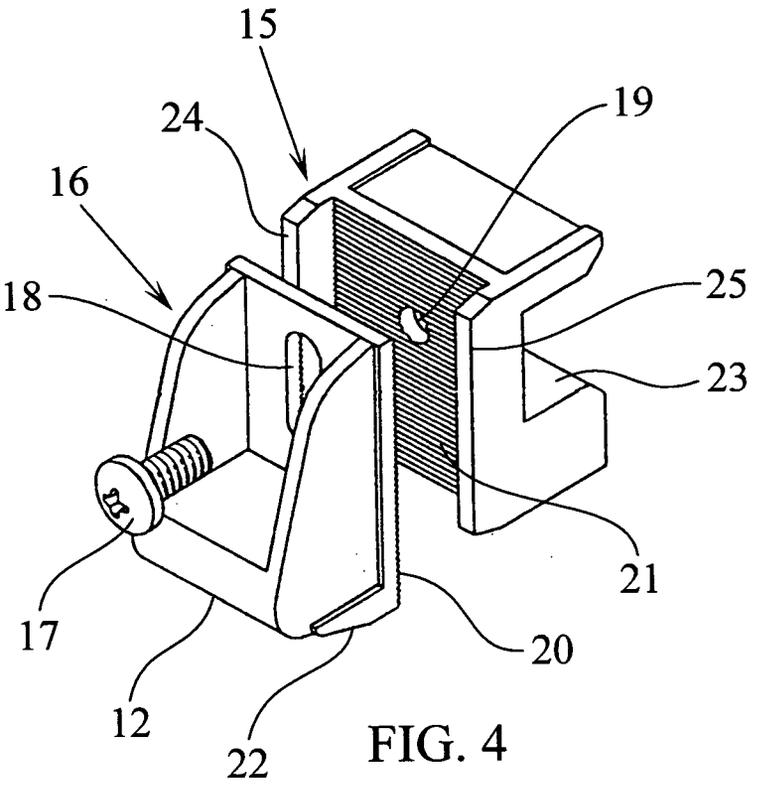

FIG. 4

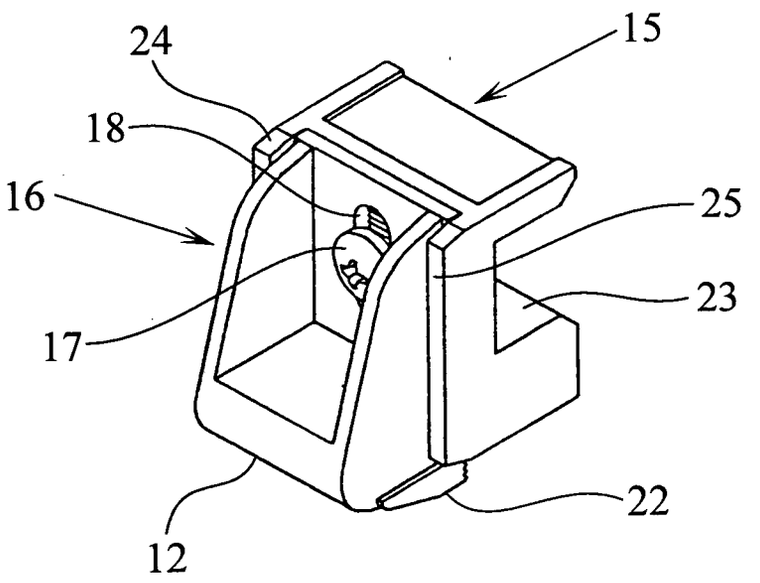

FIG. 5