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(54) Column for partitions

(57) The present invention relates to a column for shielding devices for separating a working area into several smaller working areas, e.g. a workshop into several welding work areas. In order to provide a partition which is moveable, comprises a few members and is easy to assemble, the column (1) according to the invention is characterized by the fact that it comprises an I-profile, the shanks (3) and web portion (4) of which define two slots (5) which open in opposite directions and into which wall elements (6) are intended to project, whereby at least one of said shanks (3), on the outer side of said slots, is provided with shank slots (7) for retaining elements (8) for anchoring the column to a ground.

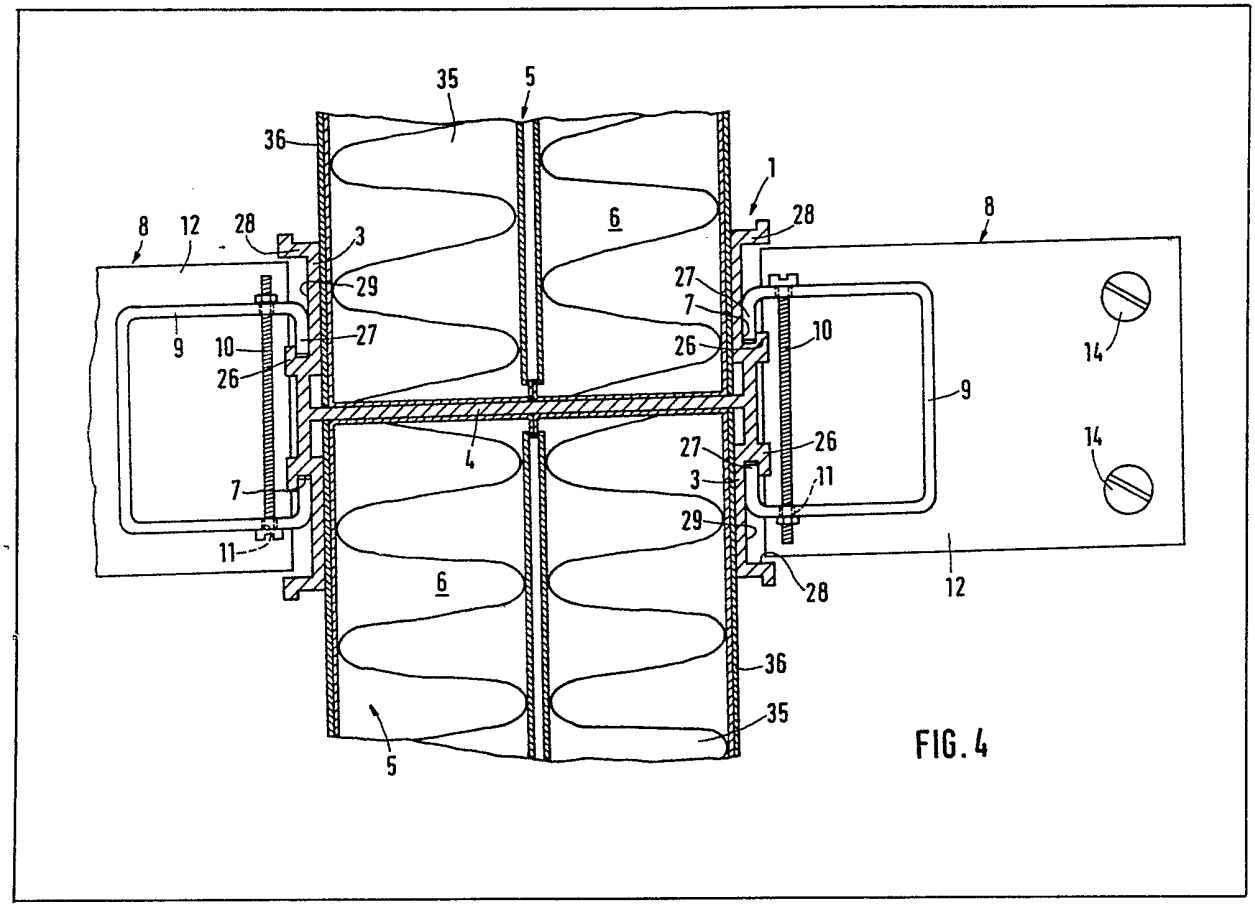

FIG. 4

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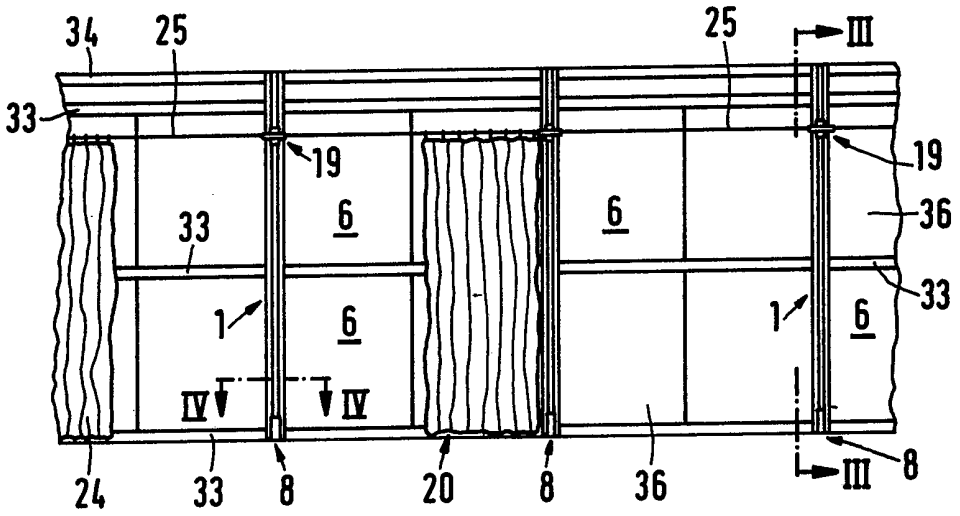
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FIG. 1

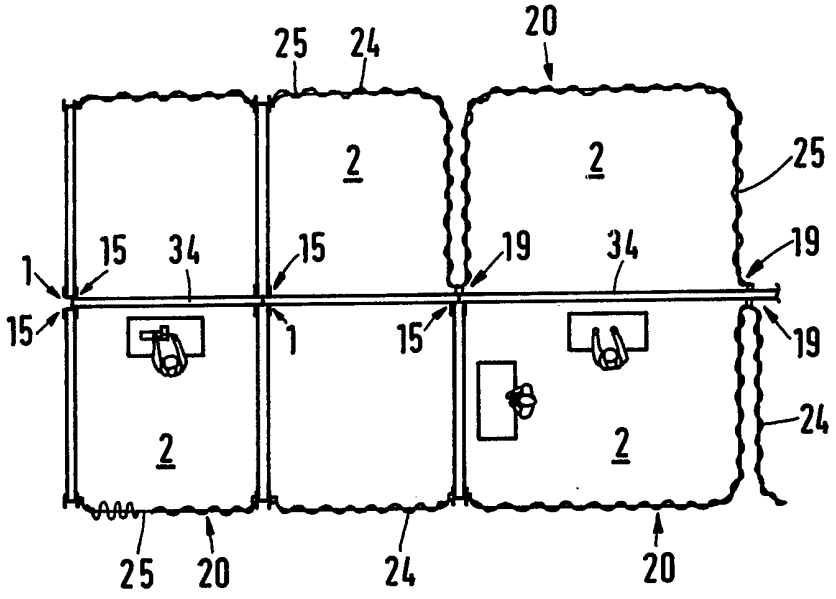
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FIG. 2

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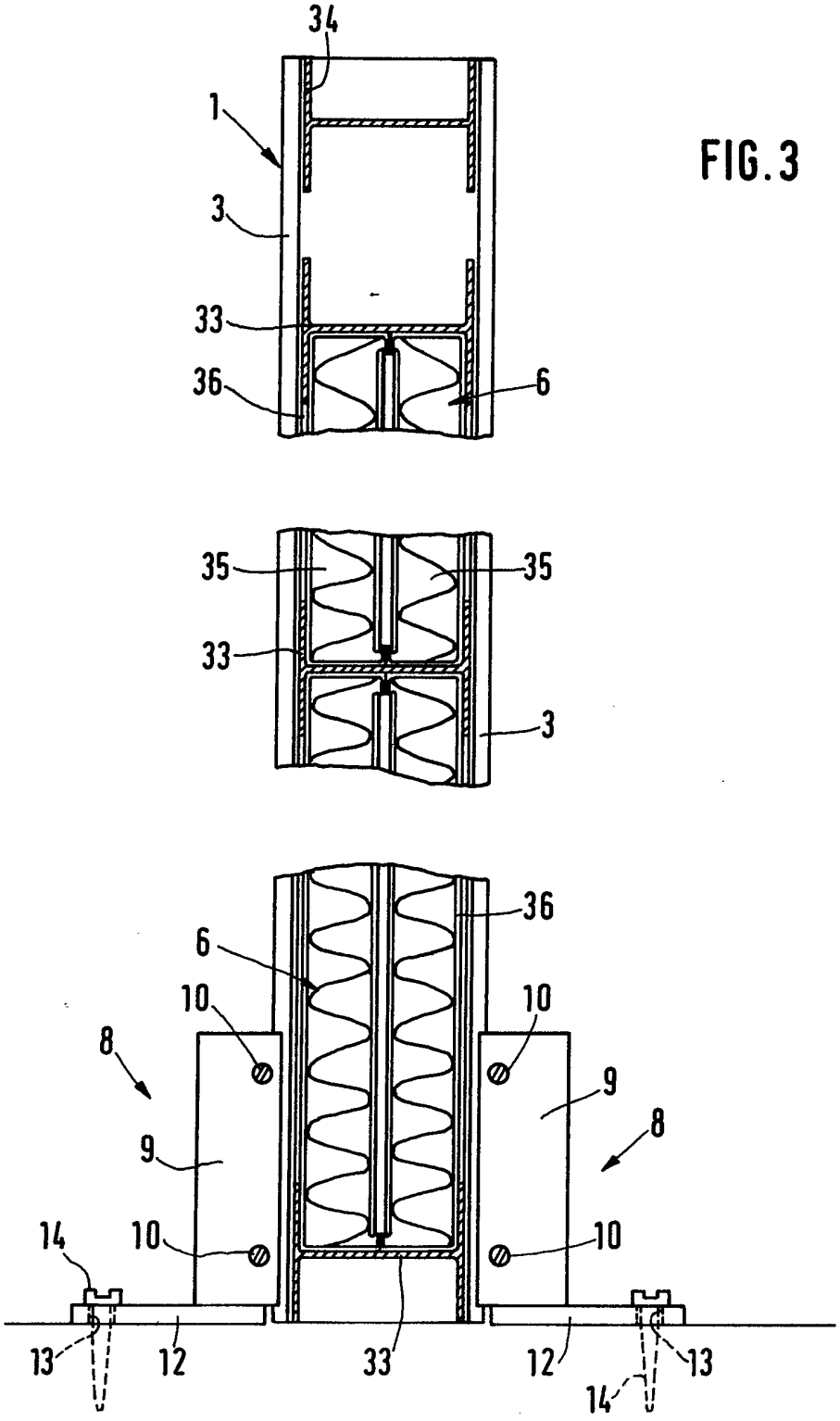

FIG.3

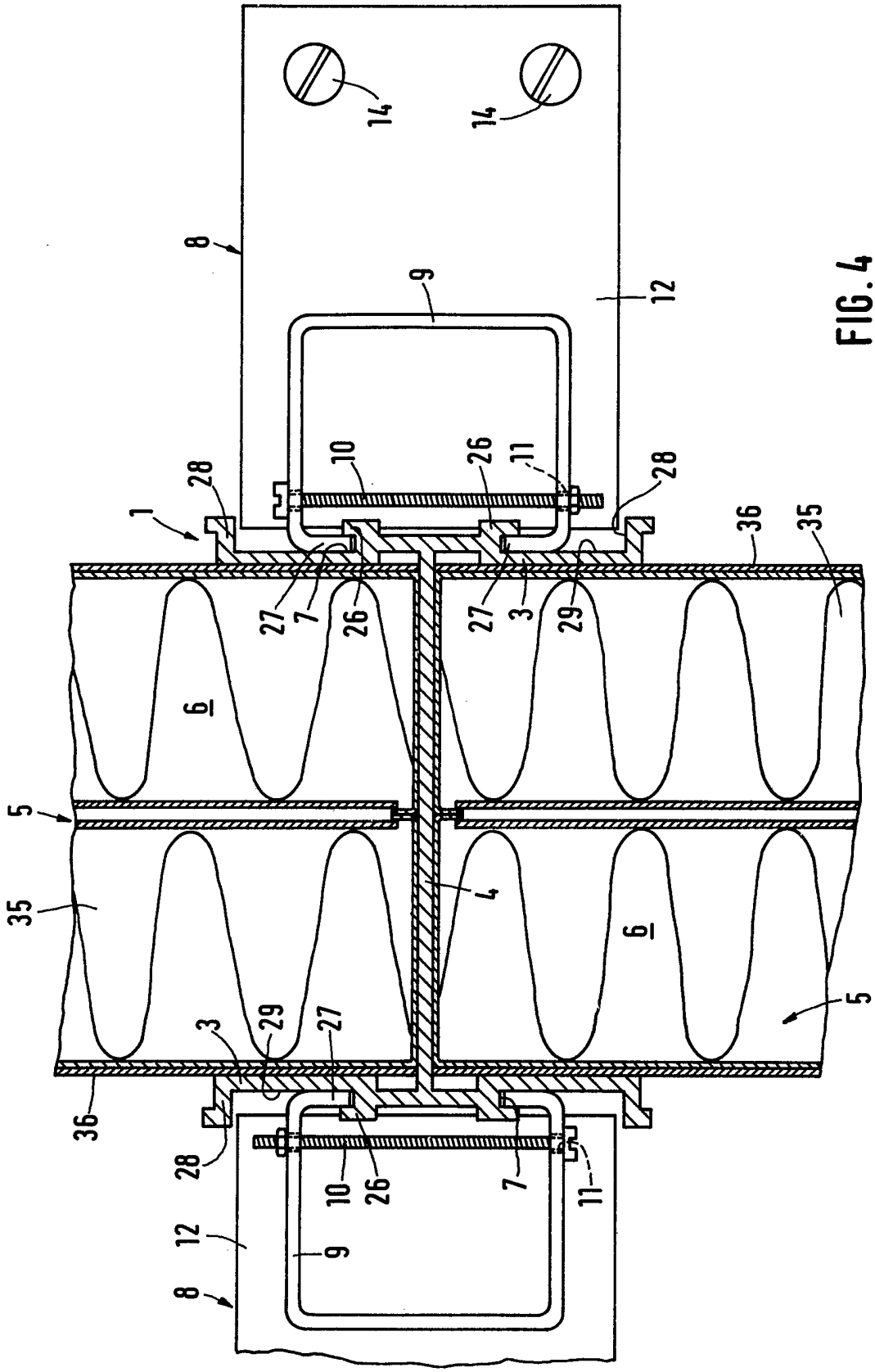
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FIG. 4

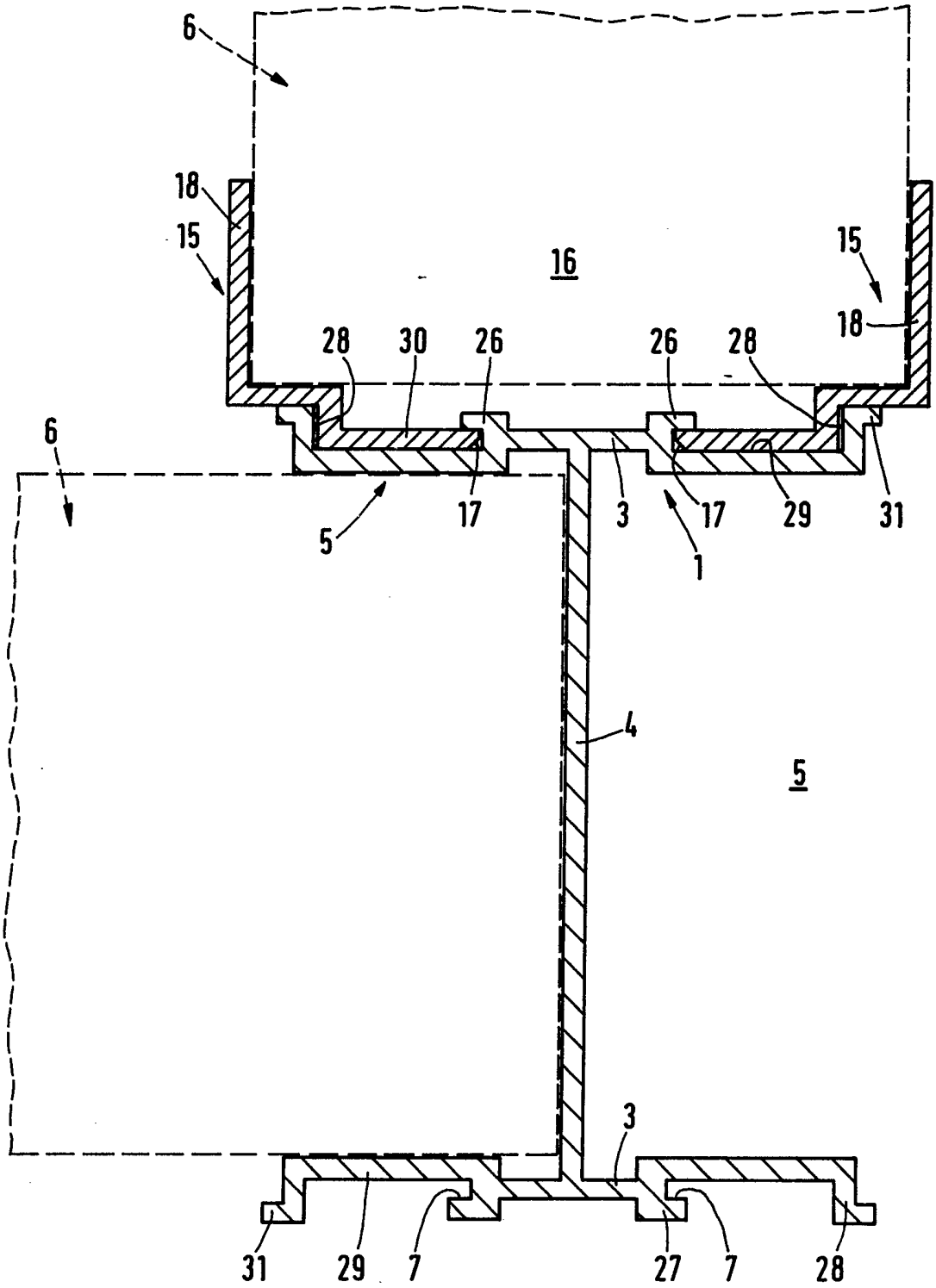

FIG. 5

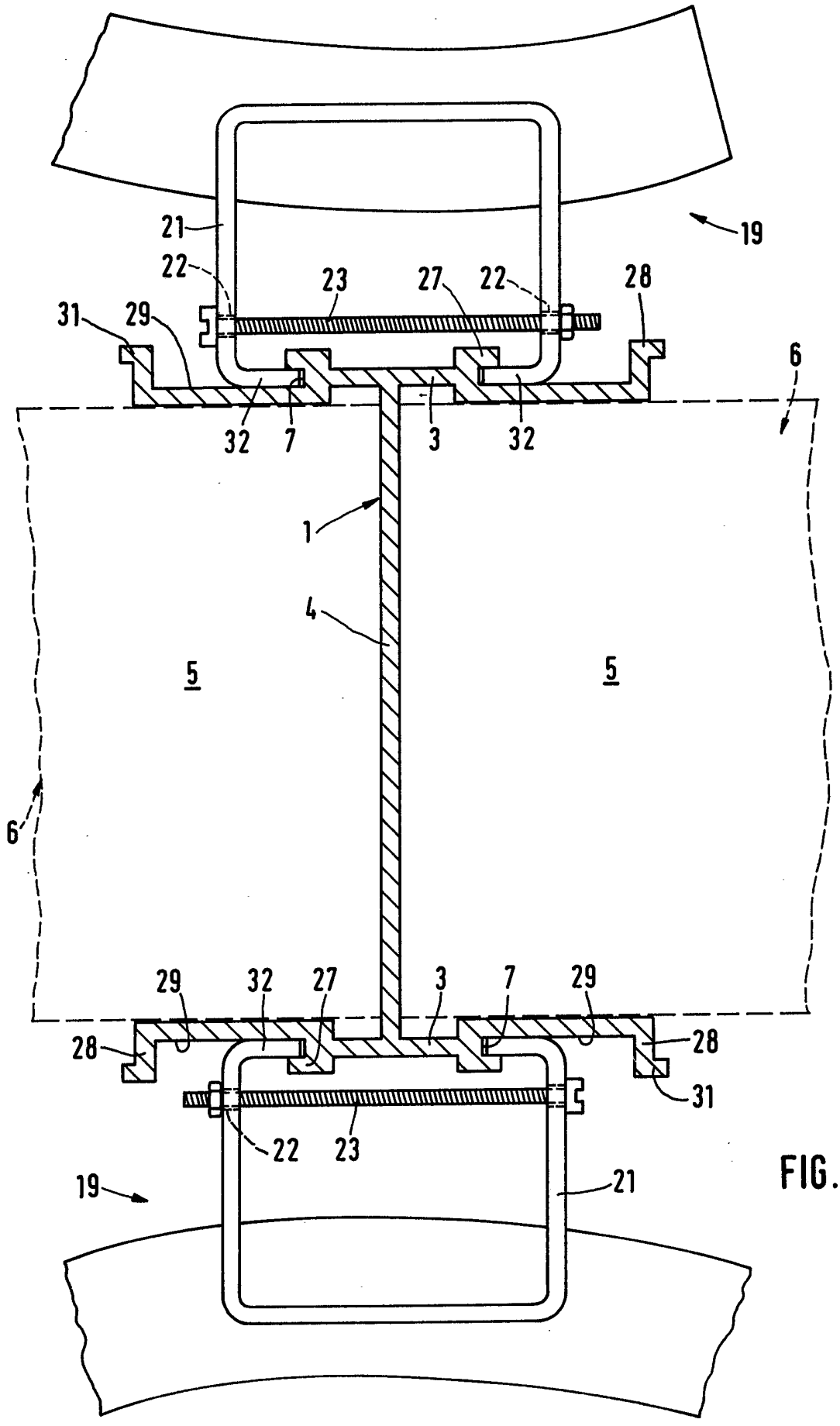
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FIG. 6

SPECIFICATION

Column for shielding devices

The present invention relates to a column for shielding devices for separating a working area into several smaller working areas, e.g. a workshop into several welding work areas.

Shielding devices of known construction are often difficult and take long time to assemble while they comprise several various elements and assembly must be done by skilled personnel with special tools. When high demands are set on the flexibility of such devices, all after the requirements and purposes for which the working area is used, the prior art constructions have not been sufficiently used.

The object of the present invention is to provide a shielding device with great flexibility and comprising a few members that are easy to assemble without special tools and special knowledge. Such a shielding device is obtained by the column according to the invention which is characterized by the fact that it comprises an I-profile, the shanks and web portion of which define two slots which open in opposite directions and into which wall elements are intended to project, whereby at least one of said shanks on the outer side of said slots is provided with shank slots for retaining elements for anchoring the column to a ground.

The above and other features of the invention will be further described with reference to the accompanying drawings, in which

Fig. 1 with a side view schematically illustrates a part of a shielding device including columns according to the present invention;

Fig. 2 is a plan view schematically illustrating a part of a shielding device with columns according to the present invention;

Fig. 3 is a section along the line III—III in Fig. 1;

Fig. 4 is a section along the line IV—IV in Fig. 1; and

Figs. 5 and 6 illustrate various combinations possible with the column according to the invention.

As is shown preferably in Figs. 1 and 2, the present invention relates to a column 1 for shielding devices for separating a working area into several smaller working areas 2, e.g. a workshop into several welding work areas. It should be noted however, that the shielding devices may be used at any place where shielding is required, indoors as well as outdoors.

According to the invention, the column 1 comprises an I-profile, the shanks 3 and web portion 4 of which define two slots 5 which open in opposite directions. Sound absorbing wall elements 6 are intended to project into said slots 5. At least one of the shanks 3 has on the outside of said slot 5 shank slots 7 for retaining elements 8 for anchoring the column 1 to a ground. This arrangement permits construction of shielding units of only a few plain elements which are easy to assemble without special tools, and a flexible and rigid construction is obtained.

In order to provide further stability, both shanks 3 have shank slots 7 for retaining elements 8, whereby the column projects in between the retaining elements. The retaining elements 8 preferably comprise a rail 9, the gripping portions 27 of which are brought into the shank slot and retained therein by pressing said gripping portions towards each other by means of suitable clamping means, e.g. a screw and nut joint 10, brought through holes 11 in the rail, and a foot plate 12 provided with holes 13 for retaining means, e.g. bolts or screws 14, for anchoring the foot plate to the ground (see Figs. 3 and 4).

The shank slots 7 for the retaining elements 8 also provide slots for angle members 15 for defining side slots 16 on the outsides of the shanks which are open in opposite directions and intended for wall elements 6. As is evident from Figs. 2, 5 and 6, several different combinations are hereby possible and the flexibility of the shielding device becomes very large. In order to facilitate insertion into the shank slot, the angle member 15 is preferably provided with a chamfer 17 in one end, and in order to permit sufficient retainment of mounted wall elements 6, the opposite end portion 18 is preloaded somewhat inwardly such that two cooperating angle members define a tapering fit for the wall elements. For obtaining a satisfactory retainment of wall elements 6, the length of the angle members 15 is substantially the same as that of the profile 1, i.e. at least 2m.

The shank slots 7 for the retaining elements 8 also define slots for brackets 19 for curtain devices 20 for providing curtain separated working areas 2 (see preferably Fig. 2). The brackets 19 are tubular and may be either double or single (Figs. 2 and 6) and include a rail 21 corresponding to the rail 9 of the retaining elements. The rail 21 has holes 22 for the insertion of a clamping means, e.g. a screw and nut joint 23, for clamping and fixing the rail 21 at the shank slot 7 via the gripping portions 32 of the rail, which are pressed towards each other by means of said joint 23. The curtains 24 in the curtain devices 20, which comprise tubular curtain clasps 25, are preferably about 180 cm in length, whereby the brackets 19 preferably are mounted at a corresponding height on the column 1.

The shank slots 7 for the retaining elements 8 are defined by two hook portions 26 projecting in opposite directions and behind which the gripping portions 27 of the retaining elements interfere. Said hook portions 26 reinforce the profile 1 and is a simple way to form the slots 7. The hook portions 26 and stop portions 28 opposite thereto define together recesses 29 for providing mounting portions 30 having chamferings 17 on the angle members 15. Hereby, the slots 16 for the wall elements 6 are defined, which slots are provided on the outer side of the shanks 3. Thus, the hook portions 26 also provide parts of attachments for the angle members 15, whereby simple assembly thereof is permitted.

For reinforcement of the profile 1, it is at the ends of the shanks 3 provided with bends 31.

The wall elements 6, which e.g. comprise two layers 35 of sound absorbing material which have been dressed with an outer wall 36 simultaneously functioning as a tool holder, may be produced in various widths, and the distance between adjacent columns 1 must be adapted thereto, but in order to facilitate the handling of the wall elements, said elements are not as high as the column 1 itself, preferably only about 120 cm. Therefore, during assembly of the wall elements, the slots 5 are adapted to receive I-beams 33 that are open in upwards and downwards directions for receiving wall elements. With this embodiment, a stable framework, holding the wall elements in a firm grip, is obtained, as I-beams 33 are provided preferably beneath, under the lowest wall element, as well as between said wall elements and at the top, above the highest wall element, whereby the lower I-beam during assembly also may function as a spacing member for the columns 1. By the arrangement of I-beams of various length it is, as is evident from Fig. 1, also possible to arrange several wall elements 6 beside each other.

A further, I-beam 34 is preferably arranged above the highest I-beam 33 and is thereby used for mounting various equipment and wiring. The I-beams 33 and 34 are mounted on the columns 1 by means of retaining means, e.g. screws (not shown).

Assembly of the shielding device with columns according to the present invention is carried out as follows:

Two pairs of retaining elements 8 with an intermediate I-beam 33, functioning as a spacing member, are arranged as desired and anchored to the ground. Columns 1 are with the shank slots 7 thread onto the rails 9 of the retaining elements 8 and are gripped by the gripping portions 27 of the rails, which gripping portions are tightened around the hook portions 26 of the shank slots by means of the clamping means 10 for fixing the columns. E.g. two elements 6 are inserted into the slots 5 in the columns facing each other and into the I-beam 33. A second I-beam 33 is disposed on top of the wall elements 6 and two additional wall elements 6 on top of said second I-beam. A third I-beam 33 is finally mounted on top of the highest wall elements 6 and an I-beam 34 arranged above said third I-beam 33. Further wall elements 6 may then be arranged as required and assembled as described hereinbefore. Where desired, brackets 19 for curtain devices 20 are mounted in the shank slots 7 in the columns, and where side walls shall extend from the main wall or the main wall run in another direction, are angle members 15 provided in the shank slots 7. Thus, a shielding device is obtained which quickly and easily may be expanded and/or changed as desired and required.

It is obvious for a skilled person that the present invention may be amended or modified within the scope of the following claims without departing from the object of the invention. Thus, the column 1 and all other members of the shielding device except the wall elements 6 and curtains 24 are made of metal, preferably aluminum, but they can be made of any other suitable material.

CLAIMS

1. Column for shielding devices for separating a working area into several smaller working areas, e.g. a workshop into several welding work areas, characterized in that the column comprises an I-profile, the shanks and web portions of which define two slots which open in opposite directions and into which wall elements are intended to project, whereby at least one of said shanks on the outer side of said slots, is provided with shank slots for retaining elements for anchoring the column to a ground.

2. Column according to claim 1, characterized in that both shanks are provided with shank slots for retaining elements whereby the column protrudes in between said elements.

3. Column according to claim 1 or 2, characterized in that the shank slots for the retaining elements also define slots for angle members for providing side slots open in opposite directions, disposed on the outsides of the shanks and intended for wall elements.

4. Column according to any preceding claim, characterized in that the shank slots for the retaining elements also define slots for brackets for curtain devices for providing working areas limited by curtains.

5. Column according to any preceding claim, characterized in that the shank slots for the retaining elements are defined by two hook portions projecting in opposite directions and behind which gripping portions of the retaining elements interfere.

6. Column according to claim 5, characterized in that the hook portions and the stop portions opposite thereto together define recesses for receiving mounting portions of angle members for providing slots for wall elements disposed on the outside of the shanks.

7. Column according to any preceding claim, characterized in that the slots are intended for I-beams which are open in upwards and downwards directions for receiving wall elements.

8. Column according to any preceding claims, characterized in that portions of retaining elements engaging the shank slots or brackets connected to the column have clamping means for tightening gripping portions projecting into the shank slots in a direction towards each other for fixing the gripping portions on the column.

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