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(54) **A SYSTEM FOR AN ELECTRICAL INSTALLATION AND MINIATURE SOCKET AND ELECTRICAL PLUG THEREFOR**

SYSTEM FÜR ELEKTRISCHE INSTALLATIONSANLAGE, MINIATURBUCHSE UND ELEKTRISCHE STECKER

SYSTEME POUR INSTALLATION ELECTRIQUE, DOUILLE MINIATURE ET FICHE ELECTRIQUE

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**Description****Technical Field**

5 The present invention relates to an electrical installation system which includes an optional number of electrical outlets disposed within the room or rooms in which different electrical apparatus are to be connected to the mains network. The electric outlets are detachably connectable to one of the miniterminals at predetermined intervals along the electrical conductors drawn or laid in respective rooms. Each miniterminal and associated conductors are protected by a strip arrangement.

**Background Art**

10 Installations systems of this kind are known from US-A 2,647,242, for instance. These known systems often include relatively complicated strip arrangements and profiled sections, which make assembly and installation work and the subsequent fitting of electric outlets (sockets) in desired miniterminals difficult and laborious. The known installation systems are often unattractive from an aesthetic point of view, and the miniterminals included in the system often lack protective means which function to reset the miniterminals automatically to a safe state should an outlet or socket not be connected electrically to a respective miniterminal.

**Disclosure of the Invention**

20 The aforesaid drawbacks associated with known installation systems are avoided by means of the present invention, which is characterized in that that part of a respective miniterminal provided with electrical connector means for accommodating an electric outlet is provided with a cover flap which lies flush with the outer surface of the strip when a miniterminal is not used.

25 The device will conveniently include a protective strip which is secured firmly to the floor, to a wall or to the ceiling of a respective room in which the system is installed, and also a covering strip which extends via and/or between mutually adjacent miniterminals. The cover flap of the miniterminal is therewith intended to coact with the outer surface of the covering strip.

30 The invention also relates to a miniterminal intended for use in the aforesaid installation system. In this regard, the miniterminal comprises a generally rectangular, flat body and a spring-biased covering flap which is mounted in one long side of the body and which when inserting an electrical outlet or plug is opened against the action of a spring force, so as to enable the plug to be inserted freely into corresponding electrical contact elements of the miniterminal present beneath the cover flap.

35 The present invention also relates to an electrical outlet for connection to a miniterminal included in the inventive installation system. The electrical outlet is characterized by a box which is provided with one or more standard outlet contacts and a requisite number of connector pins and at least one latching element for coaction with corresponding means on the miniterminal.

40 The inventive installation system, miniterminal and electric outlet can be modified in various ways, as will be evident from the following description and the following Claims.

**Description of Preferred Embodiments**

45 The inventive installation system will now be described in more detail with reference to a preferred embodiment thereof and also with reference to the accompanying drawings, in which

Figure 1 is an exploded view of the preferred embodiment of the inventive system and illustrates the components of said system;  
 Figures 2a and 2b each illustrate an example of an electric outlet that can be connected to the miniterminals of the system; and  
 50 Figure 3 illustrates part of an inventive installation system, partially in section, and shows an electric outlet connected to a miniterminal.

55 Figure 1 illustrates the various components of a preferred embodiment of the inventive installation system. Thus, the system includes a plurality of miniterminals 2 connected to electrical conductors 1. The electrical conductors 1 and the miniterminals 2 are housed in a strip arrangement which includes a protective strip 5 which is intended to be fitted on the wall, ceiling or floor surface 11 along which the electrical conductors 1 extend. The gap 7 formed between the protective strip 5 and said surface 11 when the strip arrangement is fitted in position is closed by a covering strip 3.

The covering strip 3 is preferably divided into several sections, each extending between two mutually adjacent miniterminals 2. However, the covering strip 3 may consist in a single section or unit which is provided with an aperture for each miniterminal 2.

The purpose of the covering strip 3 is I) to avoid the risk of articles falling behind the protective strip 5, II) to eliminate the risk of the system being damaged by sharp objects, and III) to impart an aesthetic design to the system.

As will be seen from Figure 1, the thickness of the miniterminal 2 is generally equal to the cross-section dimensions of the electric conductor 1. The conductor 1 is connected to the miniterminal 2 at both end-walls 12 of the terminal, and the miniterminal 2 includes the same number of female connectors 13 as the number of wires contained by the conductor or cable 1. In normal use, the female connectors 13 are protected by a covering flap 8, which is appropriately spring-biased towards its closed position.

In the case of the preferred embodiment, the miniterminal 2 includes a slot or recess 14 in which telephone cable (s) and/or antenna cable(s) 9 are accommodated. If desired, the miniterminal 2 may also be provided with female contacts, or sockets, for these cables 9, so as to enable separate connection of a telephone, facsimile machine, radio, television or like apparatus to be made through the miniterminal 2.

The miniterminal 2 of the embodiment illustrated in Figure 1 includes two holes 15 (of which only the left hole is visible in the Figure), by means of which the miniterminal 2 can be secured to the wall 11 by means of screws 16. The miniterminal 2 also includes a further hole 17, by means of which the protective strip 5 can be secured with the aid of screw 18. As will be understood, the hole 17 may be a through-penetrating hole, so that the screw 18 will also function to secure the miniterminal 2 to the wall 11 in addition to the protective strip 5. In this case, the screw 18 may replace at least one of the screws 16.

The upper long side of the miniterminal 2, said side carrying the cover flap 8, includes two latching recesses 10 which are intended to coact with a respective latching element 6 provided on the electrical outlet S1-S4 to be connected electrically to the miniterminal 2.

All electrical outlets S1-S4 that are connectable to the miniterminal 2 present a number of connector pins 19 which correspond to the number of female outlets or connections 13, said connector pins being connected to one or more standard female sockets 20. Compare the different embodiments S1, S2, S3 and S4 of the electrical outlet illustrated in Figures 1, 2a, 2b and 3 respectively. The electrical outlets S1-S4 are also provided with latching elements 6 in the form of a latch hook which enables the outlets to be detachably secured in respective latching recesses 10 of a miniterminal 2, see Figure 3. The latch hooks are released from the latching recess by means of a button device belonging to the latching element. When the installation system includes telephone and/or antenna cables 9, the box 4 that accommodates the electric outlets S1-S4 may also accommodate connector pins and standard connections corresponding to said telephone and/or antenna cables so as to enable power/signals to be taken therefrom.

When installing an inventive system, the number of miniterminals 2 required along the conductor 1 fitted in the room are connected-up. The miniterminals 2 are then screwed to the wall, floor or ceiling surface 11 on which the system shall be placed, by means of the screws 16. When appropriate, telephone and antenna cables 9 are inserted and connected to the miniterminal 2. Protective strips 5 of appropriate lengths are fitted so as to cover the conductors 1, 9 and the miniterminals 2, and are secured to the miniterminals with the aid of screws 18. The gap 7 formed between the miniterminals 2 is covered with covering strips 3, which are press-fitted onto the ends of the miniterminals and which, when fitted, have an upper surface 21 which lies flush with the outer surface of the cover flap 8 of respective miniterminals 2 when closed.

An electric outlet S1-S4 is connected to a miniterminal, by pressing the connector pins 19 of the outlet against the cover flap 8, such as to move the flap away against the action of a spring force and therewith enable insertion of the outlet. The tongues of the latching elements 6 are brought into latching engagement with the latching recesses 10 of the miniterminal 2 at the same time.

An outlet S1-S4 is released from its engagement with a miniterminal 2, by pressing a release button provided on the box 4 and coacting with the latching elements 6, therewith causing the tongues of the latching elements to move out of engagement with the latching means 10 and enable outlet S1-S4 to be removed from the miniterminals 2.

Figure 3 illustrates a modified construction of the cover flap 8 of the miniterminal 2, the cover flap 8 of this embodiment being openable in the longitudinal direction of the system. In this case, the cover flap 8 includes a peg 22 with which the cover flap 8 is moved manually sideways from the upper surface plane of the covering strip 3 against a spring force, before inserting an electric outlet S1-S4 into the miniterminal 2. The cover flap 8 will also be restored by said spring force to its covering position, when the outlet S1-S4 is removed from the miniterminal 2.

The embodiment of the miniterminal 2 illustrated in Figure 3 is also provided with a childsafe device in the form of a spring-loaded cover plate 23 mounted over and on top of the female connectors 13, as a safeguard against the fingers of inquisitive children.

When inserting the connector pins 19 of the electric outlet S4, the cover plate 23 is moved away against the action of said spring force, so as to allow the connector pins 19 to be inserted into the female connectors 13. However, it is impossible to move the cover plate 23 unless all (in the illustrated embodiment all three) connectors pins 19 act on the

cover plate 23 simultaneously. The cover plate 23 will return to its original position as the electrical outlet S4 is removed, as a result of the action of the spring force which biases the plate towards its closed position.

It will be understood that different embodiments and modifications of the exemplified embodiments are possible within the scope of the invention as defined in the following Claims. For instance, the two parts 3 and 5 of the strip arrangement may have the form of a single unit, suitably of inverted L-shaped cross-section. In this case, miniterminal-accommodating openings are provided at regular intervals in the ceiling (3) of the unit. The invention is thus not limited to the scope of the illustrated and described embodiments thereof and shall therefore be considered to be embraced by those definitions set forth in the following Claims.

## Claims

1. An electrical installation system comprising an optional number of electrical outlets (S1-S4) disposed within the room or rooms in which different electrical apparatus shall be connected to the electric mains, wherein the electrical outlets (S1-S4) are detachably connectable to one of the miniterminals (2) that are mounted at predetermined intervals along and connected electrically to the electrical conductors (1) drawn in said room or rooms, and wherein each miniterminal (2) and the conductors (1) are protected by a strip arrangement (3, 5), **characterized** in that that part of a respective miniterminal (2) which is provided with connecting means for accommodating an electrical outlet (S1-S4) is provided with a cover flap (8) which lies flush with the outer surface of the strip arrangement (3, 5) when no electric outlet (S1-S4) is connected to said miniterminal (2).
2. A system according to Claim 1, **characterized** in that the strip arrangement (3, 5) includes a protective strip (5) which is secured to the floor, a wall or the ceiling of said room, and at least one covering strip (3) which extends via and/or between the mutually adjacent miniterminals (2), the respective cover flaps (8) of said miniterminals being intended to coact with the outer surface of the covering strip (3).
3. A system according to Claim 1 or 2, **characterized** in that the cover flap (8) is spring-biased, wherein the contact pins (19) of an electrical outlet (S1-S4) can be inserted into female connectors (23) provided in the miniterminal (2) against the spring-force of said cover flap (8), said spring-force acting to restore the cover flap (8) to its closed position as the outlet (S1-S4) is removed from the miniterminal.
4. A system according to any one of the preceding Claims, **characterized** in that the protective strip (5) houses antenna and/or telephone cables (9), which are intended for connection to a miniterminal (2).
5. A miniterminal for use in a system according to any one of the preceding Claims, **characterized** by a generally rectangular, flat body and a spring-biased cover flap (8) which is provided on one long side of the body and which when inserting an electrical outlet (S1-S4) can be opened against the action of a spring-force so as to enable the electrical outlet (S1-S4) to be fitted freely into electrical connectors (23) located beneath the cover flap (8) in the miniterminal (2) and therewith enable said outlet (S1-S4) to be connected to said connectors (23), wherein the cover flap (8) is restored to its closing position by said spring-force as the electric outlet (S1-S4) is removed from the miniterminal (2).
6. A miniterminal according to Claim 5, **characterized** in that the cover flap (8) is manoeuvrable by means of the electric outlet (S1-S4).
7. A miniterminal according to Claim 5, **characterized** in that the cover flap (8) is constructed so as to be manually movable in a sideways direction when inserting an electrical outlet (S1-S4), so as to expose the female connectors (13) of the miniterminal (2).
8. A miniterminal according to any one of Claims 5-7, **characterized** by a childsafe device in the form of a spring-biased plate (23) mounted across the female connectors (13) of the miniterminal (2), said plate (23) solely permitting access to the female connectors (13) when a predetermined number of connector pins (19) are brought to bear simultaneously on said plate (23).
9. A miniterminal according to Claim 5, **characterized** in that the thickness of the flat body (2) corresponds generally to the cross-sectional area of the conductor (1) connected to the miniterminal (2) through openings in the two short sides of said terminal; and in that the long side of the body (2) which lies opposite the long side that includes the cover flap has a compartment for accommodating antenna and/or telephone cables (9).

10. A miniterminal according to any one of Claims 5-9, **characterized** by at least one latching means (10) on that long side which includes said cover flap, said latching means being intended to coact with a latching element (6) provided on the electrical outlet (S1-S4), wherein the latching means (10) and the latching element (6) can only be released from their mutually active, latching engagement by carrying-out a predetermined manipulation.

11. An electrical outlet intended for connection to a miniterminal (2) according to any one of Claims 5-10, **characterized** by a box (4) provided with one or more standard outlet contacts (20) and a requisite number of connector pins (19) extending from that surface which is intended to coact with corresponding connector elements on the miniterminal (2).

12. An outlet according to Claim 11, **characterized** by at least one latching element (6) which extends from the surface containing said connector pins (19) and which engages in a latching means (10) in the miniterminal (2) under the action of a spring force; and in that the box (4) further includes a depressible button by means of which latching engagement of the shouldered tongue of the latching element (6) and corresponding arrestor means in the latching means (10) can be released.

### Patentansprüche

1. Elektrisches Installationssystem mit einer beliebigen Anzahl an elektrischen Steckdosen (S1 - S4), die innerhalb des Raumes oder der Räume verteilt sind, in denen verschiedene elektrische Apparate an das elektrische Netz angeschlossen werden sollen, wobei die elektrischen Steckdosen (S1 - S4) abnehmbar mit einer der Miniaturbuchsen (2) verbindbar sind, die in vorausbestimmten Abständen entlang in dem genannten Raum oder den Räumen verlegten elektrischen Leitungen (1) angeordnet sowie mit diesen elektrisch verbunden sind, und wobei jede Miniaturbuchse (2) sowie die Leitungen (1) durch eine Abdeckenordnung (3, 5) geschützt sind, dadurch gekennzeichnet, daß der mit Anschlußorganen zur Aufnahme einer elektrischen Steckdose (S1 - S4) versehene Teil einer jeweiligen Miniaturbuchse (2) mit einer Abdecklasche (8) versehen ist, die bündig mit der äußeren Oberfläche der Abdeckenordnung (3, 5) liegt, wenn keine elektrische Steckdose (S1 - S4) mit der Miniaturbuchse (2) verbunden ist.

2. System nach Patentanspruch 1, dadurch gekennzeichnet, daß die Abdeckenordnung (3, 5) eine Schutzleiste (5), die am Boden, an einer Wand oder an der Decke des Raumes befestigbar ist, sowie wenigstens einen Abdeckstreifen (3) umfaßt, der sich über und/oder zwischen den zueinander benachbarten Miniaturbuchsen (2) erstreckt, wobei die jeweiligen Abdecklaschen (8) der Miniaturbuchsen mit der äußeren Oberfläche des Abdeckstreifens (3) zusammenwirken.

3. System nach Patentanspruch 1 oder 2, dadurch gekennzeichnet, daß die Abdecklasche (8) federnd ist, wobei die Kontaktstifte (19) einer elektrischen Steckdose (S1 - S4) gegen die Federkraft der Abdecklasche (8) in weibliche in der Miniaturbuchse (2) vorgesehene Anschlüsse (23) einführbar sind, und wobei die Federkraft die Abdecklasche (8) wieder in ihre geschlossene Stellung bringt, sobald die Steckdose (S1 - S4) von der Miniaturbuchse entfernt wird.

4. System nach einem der vorhergehenden Patentansprüche, dadurch gekennzeichnet, daß die Schutzleiste (5) Antennen- und/oder Telefonkabel (9) aufnimmt, die zum Anschluß an eine Miniaturbuchse vorgesehen sind.

5. Miniaturbuchse zur Verwendung in einem System nach einem der vorhergehenden Patentansprüche, gekennzeichnet durch ein im wesentlichen rechteckiges, flaches Gehäuse sowie eine an einer Längsseite des Gehäuses angebrachte federnde Abdecklasche (8), die beim Einführen einer elektrischen Steckdose (S1 - S4) entgegen der Wirkung der Federkraft geöffnet werden kann, um das freie Einsetzen der elektrischen Steckdose (S1 - S4) in elektrische Anschlüsse (23) zu ermöglichen, die unterhalb der Abdecklasche (8) in der Miniaturbuchse (2) angeordnet sind und damit die Verbindung der Steckdose (S1 - S4) mit den Anschlüssen (23) gestatten, wobei die Abdecklasche (8) durch die Federkraft wieder in ihre Schließstellung gelangt, sobald die elektrische Steckdose von der Miniaturbuchse (2) abgenommen wird.

6. Miniaturbuchse nach Patentanspruch 5, dadurch gekennzeichnet, daß die Abdecklasche (8) mittels der elektrischen Steckdose (S1 - S4) betätigbar ist.

7. Miniaturbuchse nach Patentanspruch 5, dadurch gekennzeichnet, daß die Abdecklasche (8) so ausgebildet ist, daß sie beim Einführen einer elektrischen Steckdose (S1 - S4) manuell in eine seitliche Richtung bewegbar ist,

um die weiblichen Anschlüsse (13) der Miniaturbuchse (2) freizulegen.

- 5 8. Miniaturbuchse nach einem der Patentansprüche 5 bis 7, gekennzeichnet durch eine Kindersicherungs-Einrichtung in Form einer federbelasteten Platte (23), die quer über den weiblichen Anschlüssen (13) der Miniaturbuchse (2) angebracht ist, wobei die Platte (23) den Zugang zu den weiblichen Anschlüssen (13) nur freigibt, wenn eine vorausbestimmte Anzahl von Kontaktstiften (19) gleichzeitig auf der Platte (23) zur Anlage gebracht wird.
- 10 9. Miniaturbuchse nach Patentanspruch 5, dadurch gekennzeichnet, daß die Dicke des flachen Körpers (2) im wesentlichen der Querschnittsfläche der durch Öffnungen in den beiden kurzen Seiten der Miniaturbuchse (2) an die Buchse angeschlossenen Leitung (1) entspricht, und daß die lange Seite des Körpers (2), welche der die Abdecklasche enthaltenden Längsseite gegenüberliegt, einen Raum zur Aufnahme von Antennen- und/oder Telefonkabeln (9) aufweist.
- 15 10. Miniaturbuchse nach einem der Patentansprüche 5 bis 9, gekennzeichnet durch wenigstens ein Schnapporgan (10) auf der die Abdecklasche enthaltenden Längsseite, welches Schnapporgan vorgesehen ist, um mit einem Schnappelement (6) zusammenzuwirken, das auf der elektrischen Steckdose (S1 - S4) angeordnet ist, wobei das Schnapporgan (10) und das Schnappelement (6) nur durch Ausführung einer vorbestimmten Manipulation aus ihrem gegenseitigen aktiven Schnappeingriff lösbar sind.
- 20 11. Elektrische Steckdose zur Verbindung mit einer Miniaturbuchse (2) nach einem der Patentansprüche 5 bis 10, gekennzeichnet durch einen Kasten (4), der mit einer oder mehreren Normsteckdosen (20) sowie einer erforderlichen Anzahl von Kontaktstiften (19) versehen ist, die sich von jener Oberfläche herauserstrecken, welche zur Zusammenwirkung mit entsprechenden Anschlußelementen auf der Miniaturbuchse vorgesehen ist.
- 25 12. Steckdose nach Patentanspruch 11, gekennzeichnet durch wenigstens ein Schnappelement (6), das sich aus der die Kontaktstifte (19) aufnehmenden Oberfläche herauserstreckt und unter Einwirkung einer Federkraft in ein Schnapporgan (10) in der Miniaturbuchse (2) eingreift, wobei der Kasten (4) ferner einen eindrückbaren Knopf umfaßt, mittels welchem der Schnappeingriff der Schulterzunge des Schnappelementes (6) und entsprechender Arretierorgane am Schnapporgan (10) lösbar sind.
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## Revendications

- 35 1. Système d'installation électrique, comprenant un nombre optionnel de prises électriques (S1-S4) disposées à l'intérieur de la ou des pièces dans lesquelles différents appareils électriques doivent être connectés au réseau électrique, dans lequel les prises électriques (S1-S4) se connectent de manière amovible à l'une des mini-bornes (2) qui sont montées à des intervalles prédéterminés le long des conducteurs électriques (1) tirés dans ladite ou lesdites pièces, et connectées électriquement à ceux-ci, et dans lequel chaque mini-borne (2) et les conducteurs (1) sont protégés par un dispositif à bande (3, 5), caractérisé en ce que la partie d'une mini-borne respective (2) qui est munie de moyens de connexion pour recevoir une prise électrique (S1-S4) est munie d'un volet de fermeture (8) qui se trouve en affleurement avec la surface extérieure du dispositif à bande (3, 5) lorsque aucune prise électrique (S1-S4) n'est connectée à ladite mini-borne (2).
- 40 2. Système selon la revendication 1, caractérisé en ce que le dispositif à bande (3, 5) comprend une bande protectrice (5) qui est fixée au sol, au mur ou au plafond de ladite pièce, et au moins une bande de couverture (3) qui s'étend à travers et/ou entre les mini-bornes (2) mutuellement adjacentes, les volets de fermeture (8) respectifs desdites mini-bornes étant destinés à coopérer avec la surface extérieure de la bande de couverture (3).
- 45 3. Système selon la revendication 1 ou 2, caractérisé en ce que le volet de fermeture (8) est monté sur ressort, dans lequel les broches de contact (19) d'une prise électrique (S1-S4) peuvent être insérées dans des connecteurs femelles (23) prévus dans la mini-borne (2) contre la force de ressort dudit volet de fermeture (8), ladite force de ressort agissant pour ramener le volet de fermeture (8) dans sa position fermée lorsque la prise (S1-S4) est retirée de la mini-borne.
- 50 4. Système selon l'une quelconque des revendications précédentes, caractérisé en ce que la bande protectrice (5) abrite des câbles (9) d'antenne d'immeuble et/ou de téléphone, qui sont destinés à être connectés à une mini-borne (2).
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5. Mini-borne destinée à être utilisée dans un système selon l'une quelconque des revendications précédentes, caractérisée par un corps plat globalement rectangulaire et un volet de fermeture (8) monté sur ressort, qui est prévu sur un grand côté du corps et qui, lorsqu'on insère une prise électrique (S1-S4), peut s'ouvrir contre la force de ressort de manière à permettre à la prise électrique (S1-S4) de se monter librement dans les connecteurs électriques (23) situés sous le volet de fermeture (8) de la mini-borne (2), et qui permet ainsi à ladite prise (S1-S4) de se connecter auxdits connecteurs (23), dans laquelle le volet de fermeture (8) est ramené dans sa position fermée par ladite force de ressort lorsque la prise électrique (S1-S4) est retirée de la mini-borne (2).
6. Mini-borne selon la revendication 5, caractérisée en ce que le volet de fermeture (8) peut être manoeuvré au moyen de la prise électrique (S1-S4).
7. Mini-borne selon la revendication 5, caractérisée en ce que le volet de fermeture (8) est construit en sorte d'être mobile manuellement dans une direction latérale lorsqu'on insère une prise électrique (S1-S4), de manière à exposer les connecteurs femelles (13) de la mini-borne (2).
8. Mini-borne selon l'une des revendications 5 à 7, caractérisée par un dispositif de protection pour les enfants, sous la forme d'une plaque (23) pressée par ressort, montée en travers des connecteurs femelles (13) de la mini-borne (2), ladite plaque (23) ne permettant l'accès aux connecteurs femelles (13) que lorsqu'un nombre prédéterminé de broches de connexion (19) sont amenées simultanément en appui contre ladite plaque (23).
9. Mini-borne selon la revendication 5, caractérisée en ce que l'épaisseur du corps plat (2) correspond globalement à la surface de section transversale du conducteur (1) connecté à la mini-borne (2) à travers des ouvertures dans les deux petits côtés de ladite borne ; et en ce que le grand côté opposé à celui qui comprend le volet de fermeture a un compartiment destiné à recevoir des câbles (9) d'antenne et/ou de téléphone.
10. Mini-borne selon l'une quelconque des revendications 5 à 9, caractérisée par au moins un moyen de verrouillage (10) sur le grand côté qui comprend ledit volet de fermeture, ledit moyen de verrouillage étant destiné à coopérer avec un élément de verrouillage (6) prévu sur la prise électrique (S1-S4), dans laquelle les moyens de verrouillage (10) et l'élément de verrouillage (6) ne peuvent être libérés de leur prise de verrouillage mutuelle active qu'en effectuant une manipulation prédéterminée.
11. Prise électrique destinée à se connecter à une mini-borne (2) selon l'une quelconque des revendications 5 à 10, caractérisée par un boîtier (4) muni d'un ou plusieurs contacts de sortie standards (20) et d'un nombre approprié de broches de connexion (19) s'étendant depuis la surface qui est destinée à coopérer avec des éléments de connecteurs correspondants présents sur la mini-borne (2).
12. Prise selon la revendication 11, caractérisée par au moins un élément de verrouillage (6) qui s'étend depuis la surface contenant lesdites broches de connexion (19) et qui met en prise un moyen de verrouillage (10) dans la mini-borne (2) sous l'action d'une force de ressort ; et en ce que le boîtier (4) comprend de plus un bouton poussoir au moyen duquel la prise de verrouillage de la languette à épaulement de l'élément de verrouillage (6) et d'un moyen d'arrêt correspondant présent dans le moyen de verrouillage (10) peut être libérée.

Fig. 1

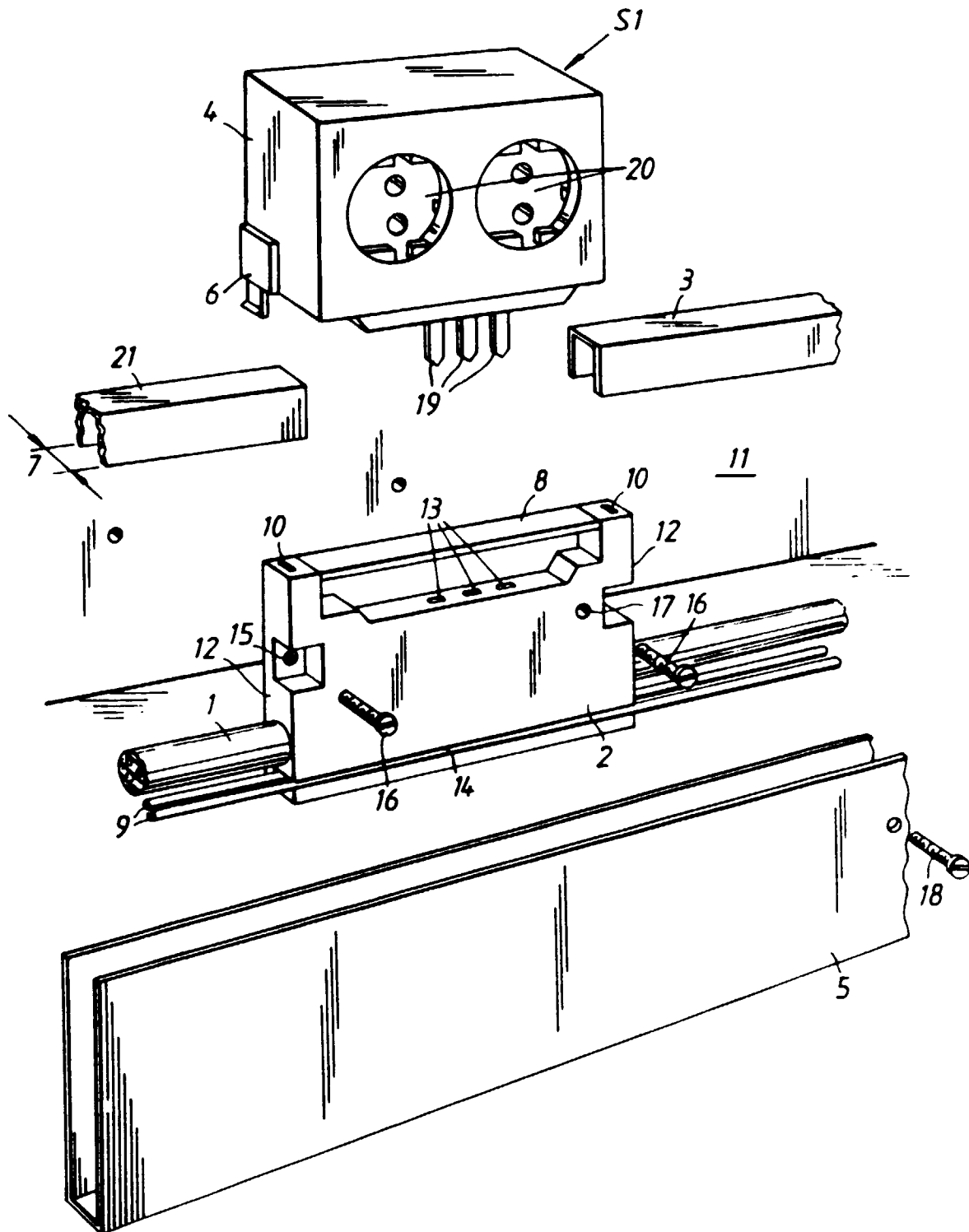


Fig. 2a

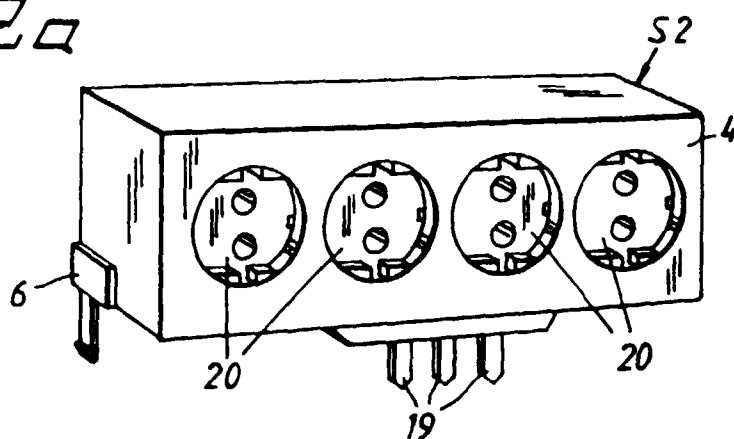


Fig. 2b

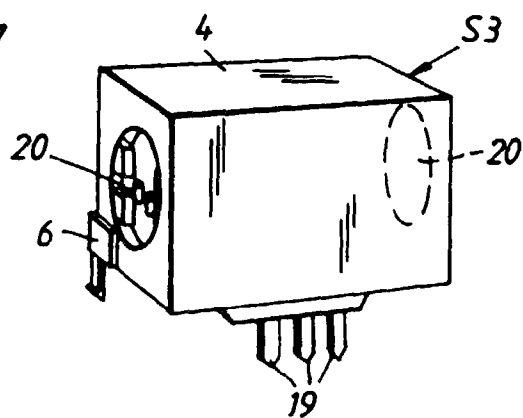


Fig. 3

