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DE ES FR GB IT(71) Applicant: **Massardi, Amedeo**
Via del Signori 73
I-25085 Gavardo (Brescia)(IT)(72) Inventor: **Massardi, Amedeo**
Via del Signori 73
I-25085 Gavardo (Brescia)(IT)(74) Representative: **Modiano, Guido et al**
MODIANO, JOSIF, PISANTY & STAUB
Modiano & Associati Via Meravigli, 16
I-20123 Milan(IT)(54) **Universal key for opening doors from the inside and from the outside.**

(57) The present invention relates to a universal key for opening doors from the inside and from the outside which has the peculiarity of comprising a key body (2) insertable in a lock and provided with a grip (5) and with a stem (6) with a radially protruding ward (7). At the free end of said stem (6) there is a coupling member (20) for engagement with a coupling tang (10) of an auxiliary grip element (11) which is accessible on the opposite side of a lock with respect to the side of insertion of said key body (2).

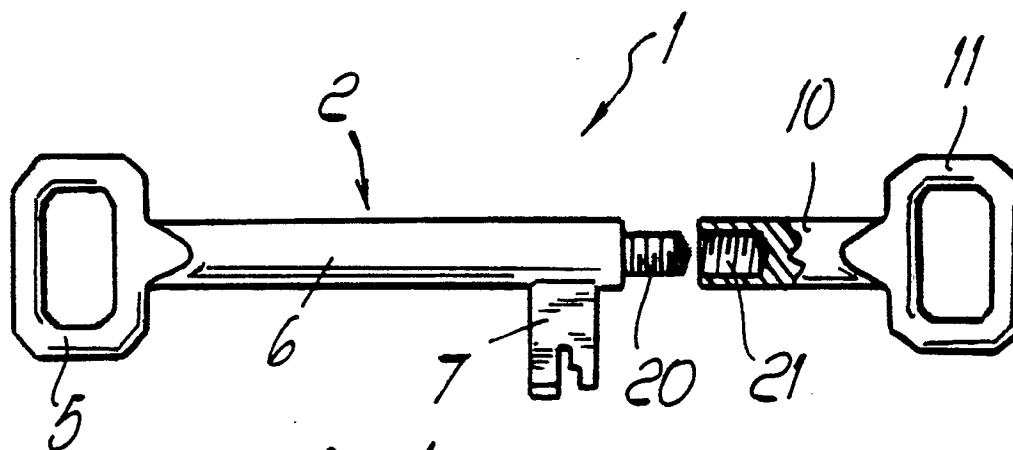


Fig. 1

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UNIVERSAL KEY FOR OPENING DOORS FROM THE INSIDE AND FROM THE OUTSIDE

The present invention relates to a universal key for opening doors from the inside and from the outside.

A deeply felt problem, especially in domestic environments, is to have door locks which allow opening both from the inside and from the outside.

This problem is more deeply felt in the case of bathrooms, children's and elderly people's rooms and the like, so as to have the possibility of opening the door even if the door itself has been locked from the inside.

A possible solution to this problem may be to provide specifically designed locks, but this solution does not lend itself easily in the case of domestic environments and especially in the case of already existing locks, since it would entail the complete replacement of the locks,

The aim of the present invention is to provide a universal key which allows opening both from the inside and from the outside without thereby having to perform the complete replacement of the lock.

Within the scope of the above described aim, a particular object of the invention is to provide a universal key which can be applied extremely rapidly and easily to existing locks, without requiring any complicated or special interventions.

Still another object of the present invention is to provide a universal key which, by virtue of its peculiar constructive characteristics, is capable of giving the greatest assurances of reliability and safety in use.

Not least object of the present invention is to provide a universal key which is easily obtainable starting from elements and materials commonly commercially available and which is furthermore competitive from a merely economical point of view.

The above described aim, as well as the objects mentioned and others which will become apparent hereinafter, are achieved by a universal key for opening doors from the inside and from the outside, according to the invention, characterized in that it comprises a key body insertable in a lock and having a grip and a stem with a radially protruding ward, at the free end of said stem there being coupling means for the engagement of the coupling tang of an auxiliary grip element accessible on the opposite side of the lock with respect to the side of insertion of said key body.

Further characteristics and advantages will become apparent from the detailed description of some preferred but not exclusive embodiments of a universal key for opening doors from the inside and from the outside, illustrated only by way of

non-limitative example in the following drawings, wherein:

figure 1 is a partially cut-away schematic perspective view of the universal key structure according to the invention;

figure 2 is a detail view of the coupling means in a different embodiment; and

figure 3 is a view of the universal key according to the invention schematically applied to a door.

With reference to the above described figures, the universal key structure for opening doors from the inside and from the outside, generally indicated by the reference numeral 1, comprises a key body 2 which, in a per se known manner, is insertable in a lock, generally indicated by the reference numeral 3.

The key body 2 has a grip 5 from which there extends a stem 6 having a ward 7 e.g. of the radially protruding type.

The peculiarity of the invention resides in the fact that coupling means are defined at the free end of the stem 6 and allow to couple the tang 10 of an auxiliary grip 11 which is accessible on the side of the lock 3 opposite to the side of insertion of the key body 2.

According to what is illustrated in figure 1, said coupling means are constituted by a threaded portion 20 defined by the stem 6, which inserts in a threaded seat 21 defined on the tang 10.

A similar solution is illustrated in figure 2, wherein the coupling means are defined by a polygonal seat 30, provided for example on the stem 6, and a polygonal protrusion 31 which is provided on the tang 10.

Naturally it is possible to provide different coupling means or in any case to reverse the type of coupling.

In practical use, the key body 2 is inserted in the lock 3 and then the tang 10 is applied to the other side of the lock, it being possible to force said tang so as to make the coupling permanent or to apply it so as to allow release of the coupling.

With the described arrangement a key is thus provided which allows to operate the lock from both sides of the door, thus constituting a considerable safety factor especially for bathrooms, children's rooms, elderly people's rooms and the like and in any case in all places in which it is necessary to be always able to open the door from the inside and from the outside.

A very important aspect of the invention resides in the fact that the above described key is also easily applicable to already existing locks,

without thereby having to perform integral replacements or modifications of said lock.

The invention thus conceived is susceptible to numerous modifications and variations, all of which are within the scope of the inventive concept.

Moreover all the details may be replaced with other technically equivalent elements.

In practice, the materials employed, as well as the contingent shapes and dimensions, may be any according to the requirements.

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 scope of each element identified by way of example by such reference signs.

Claims

1. Universal key for opening doors from the inside and from the outside, characterized in that it comprises a key body (2) insertable in a lock (3) and having a grip (5) and a stem (6) with a radially protruding ward (7), at the free end of said stem (6) there being provided coupling means (20,30) for the coupling with the coupling tang (20) of an auxiliary grip element (11) accessible on the opposite side of a lock with respect to the side of insertion of said key body (2).

2. Universal key for opening doors from the inside and from the outside, according to claim 1, characterized in that said coupling means (20) are constituted by a threaded portion provided on said stem (6) and engageable in a threaded seat (21) provided correspondingly on said coupling tang (10).

3. Universal key for opening doors from the inside and from the outside, according to the preceding claims, characterized in that said coupling means (30) are constituted by a polygonal seat (30) provided on said stem (6) and by a polygonal protrusion (31) provided on said tang (10).

4. Universal key for opening doors from the inside and from the outside, according to one or more of the preceding claims, characterized in that said coupling means (20,30) are adapted to rigidly associate said tang (10) and said stem (6) in rotation.

5. Universal key for opening doors from the inside and from the outside, according to one or more of the preceding claims, characterized in that said tang (10) is releasably connectable to said stem (6).

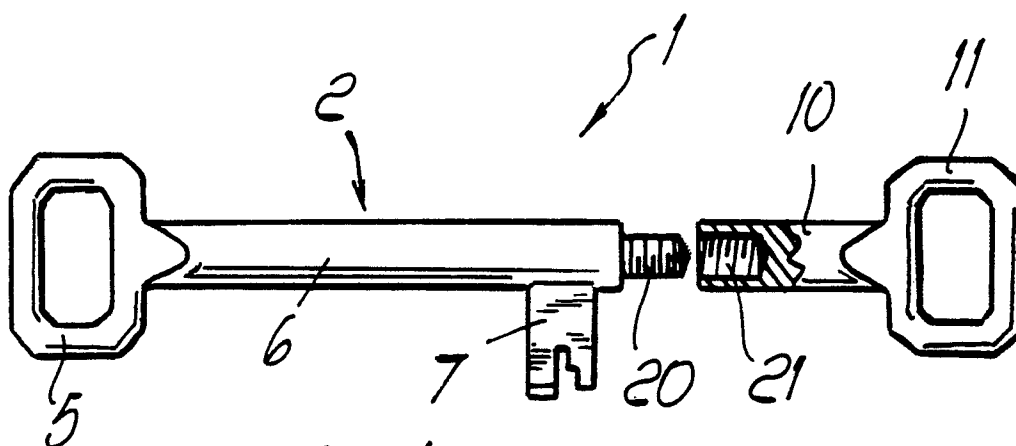


Fig. 1

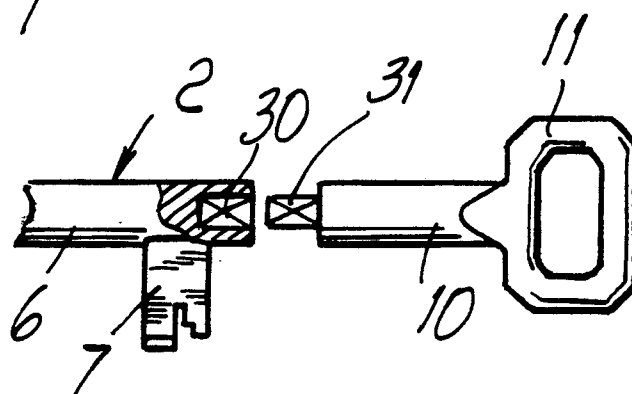


Fig. 2

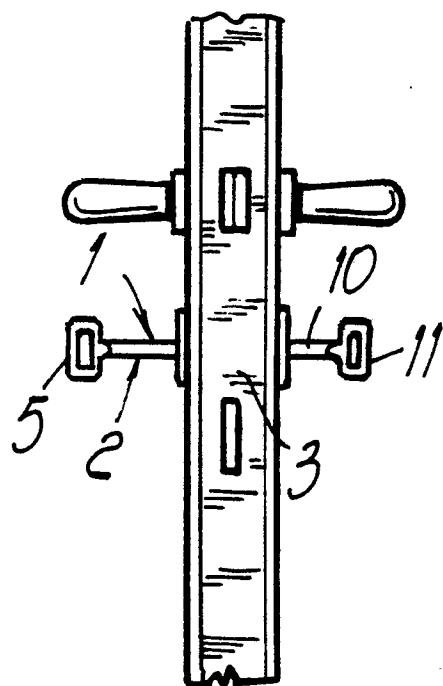


Fig. 3