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(71) Applicant: **Virta, Jari**
04440 Järvenpää (FI)

(72) Inventor: **Virta, Jari**
04440 Järvenpää (FI)

(74) Representative: **Kolster Oy Ab**
Iso Roobertinkatu 23
PO Box 148
00121 Helsinki (FI)

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(54) **Forearm crutch**

(57) The invention relates to a forearm crutch (1) comprising a shaft, at one end of the shaft an arm rest (2) provided with a hand grip (3) for gripping the forearm crutch. The forearm crutch according to the invention is characterized in that the arm rest (2) of the forearm crutch (1) is provided with a magnet (4) in order to assist in holding the forearm crutch up. The invention further relates to an arrangement comprising a forearm crutch (1) according to the invention and a counterpart thereof.

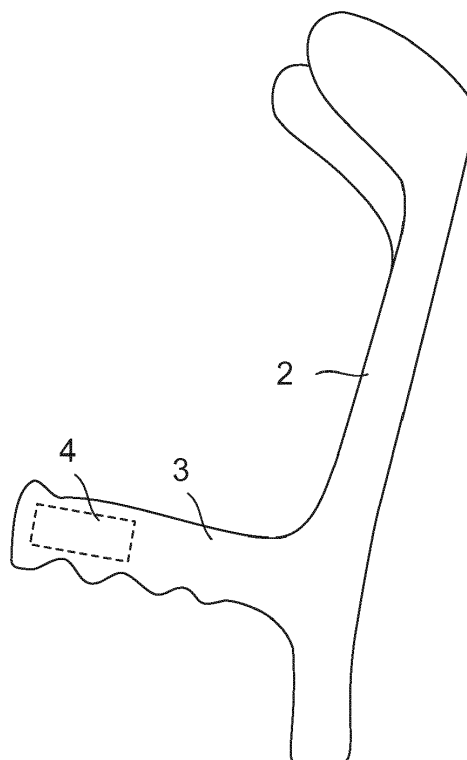


Fig. 2

Description

BACKGROUND OF THE INVENTION

[0001] The invention relates to walking aids, and particularly to underarm and forearm crutches.

[0002] Underarm and forearm crutches, and, currently, forearm crutches in particular, are used on account of short-term injuries, illness or life-long disabilities when a person's leg is unable to bear the normal load when the person is standing or walking and weight needs to be transferred away from the legs. When a patient holds a forearm crutch in both hands, it is difficult to perform daily chores. Letting go of the forearm crutch means that it will fall down, in which case it has to be picked up off the floor after the chores, which is often challenging due to the patient's condition.

[0003] Various straps and cuffs are widely known for fastening the forearm crutches to one another so as to enable them to be handled together with one hand, but even these auxiliary devices fail to solve the problem of the falling forearm crutch.

BRIEF DESCRIPTION OF THE INVENTION

[0004] An object of the invention is thus to provide a forearm crutch and an arrangement so as to enable the aforementioned problems to be solved. The object of the invention is achieved by a forearm crutch and an arrangement which are characterised by what is disclosed in the independent claims. Preferred embodiments of the invention are disclosed in the dependent claims.

[0005] The invention is based on the idea that a magnet is placed inside a hand grip of the forearm crutch, close to an outermost edge of the hand grip, to enable the forearm crutch to be temporarily fastened to a multitude of metallic structures so that it will remain standing and can again be put to use quickly and easily.

BRIEF DESCRIPTION OF THE FIGURES

[0006] The invention is now described in closer detail in connection with the preferred embodiments and with reference to the accompanying drawings, in which:

Figure 1 shows a typical forearm crutch; and
Figure 2 shows a detail of a forearm crutch according to an embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0007] Referring to Figure 1, a typical forearm crutch 1 comprises an elongated shaft usually manufactured from a metal tube. An end of the shaft coming into contact with the ground is often provided with a rubber stopper to improve the grip against the ground and to prevent the forearm crutch from damaging vulnerable surfaces. The length of the shaft is adjustable user-specifically. An up-

per end of the shaft is provided with an arm rest 2 shown in closer detail in Figure 2.

[0008] Figure 2 shows an arm rest 2 according to an embodiment, provided with a hand grip 3 to hold onto by the hand, an upper part of the arm rest being provided with a forearm rest or a forearm cuff to rest the forearm thereon. Presently, the arm rest 2 is typically cast from plastic into a hollow tubular piece, making the structure light but strong. The arm rest may have a frame made from a metal tube in order to further strengthen the structure.

[0009] The invention is based on the idea that a magnet 4 is installed in the arm rest 2 of the forearm crutch, preferably by embedding it in the structure of the arm rest, and particularly preferably by embedding it inside the hand grip 3, close to an end surface thereof. Since the hand grip is typically hollow, it is a very simple procedure to install the magnet already while manufacturing the hand grip. Usually the end surface of the hand grip is provided with a reflector, so removing the reflector makes the interior of the hand grip accessible; it is also possible to install the magnet inside the hand grip afterwards. The magnet may be fastened for instance by gluing or wedging it in the tube of the hand grip. After the magnet has been fastened, the reflector may be replaced or glued in place when necessary, in which case the forearm crutch looks as before. Preferably, a neodymium magnet or another strong magnet is used for ensuring a sufficiently strong magnetic attraction so as to prevent the forearm crutch from falling down even if a distance of some millimetres remains between the magnet embedded in the hand grip and its counterpart.

[0010] In some cases, the hand grip 3 of the forearm crutch is cast solid, in which case in order to install the magnet, a cavity has to be drilled or milled in an outermost end of the hand grip to receive the magnet, after which the surface of the magnet may be protected with a material similar to the original one, by gluing a reflector button thereto, or the magnet may also be left exposed. In an embodiment, the magnet may also be fastened for instance by gluing or by using screws directly to the outermost end of the hand grip or to another point in the arm rest. It is advantageous that a surface-mounted magnet is selected to be slightly weaker than an embedded magnet in order to enable detachment of the forearm crutch to be carried out with ease and such that the detachment causes no risk of falling.

[0011] The forearm crutch equipped with a magnet in the above-described manner may be placed standing against structures made from ferromagnetic metal, such as iron, to which the forearm crutch adheres and thus remains standing. Typically, suitable structures can be found in places where a person on forearm crutches is compelled to let go of the forearm crutch, such as in the kitchen the frames of refrigeration devices and the stove, in utility rooms the frames of washing and drying machines, by outer doors doorframes and/or doorcases, in business premises customer service desks, etc.

[0012] In places where a need presumably exists at times to let go of the forearm crutch while carrying out chores but where no counter magnet nor ferromagnetic material is conveniently available for the forearm crutch, a special arrangement may be employed. For instance in connection with wooden and plastic furniture and structures it is also possible to use a batten or a sheet which made for instance of iron sheet or sheet metal or containing permanent magnets and which can be fastened to the structure in question to enable the person on crutches to easily find a place to leave the forearm crutch standing up while performing his or her chores.

[0013] It will be apparent to a person skilled in the art that as technology advances, the basic idea of the invention may be implemented in many different ways. The invention and its embodiments are thus not restricted to the examples described above but may vary within the scope of the claims.

Claims

1. A forearm crutch (1) comprising a shaft, at one end of the shaft an arm rest (2) provided with a hand grip (3) for gripping the forearm crutch, **characterized in that** the arm rest (2) of the forearm crutch (1) is provided with a magnet (4) in order to assist in holding the forearm crutch up.
2. A forearm crutch as claimed in claim 1, **characterized in that** the magnet (4) is embedded at least partly inside the hand grip (3).
3. A forearm crutch as claimed in claim 1 or 2, **characterized in that** the magnet (4) is a neodymium magnet.
4. A forearm crutch as claimed in claim 3, **characterized in that** the magnet (4) is embedded completely inside the hand grip (3), close to an outermost surface thereof as viewed from the shaft of the forearm crutch (1), and **in that** at least part of the outermost surface is covered by a reflector.
5. An arrangement, **characterized in that** it comprises a forearm crutch (1) as claimed in any one of claims 1 to 4 and comprising a magnet, and a counterpart comprising ferromagnetic material and arranged to be fastened to a structure, the counterpart preventing the forearm crutch (1) placed against the structure from falling down due to the influence of magnetic attraction between the magnet (4) of the forearm crutch and its counterpart.

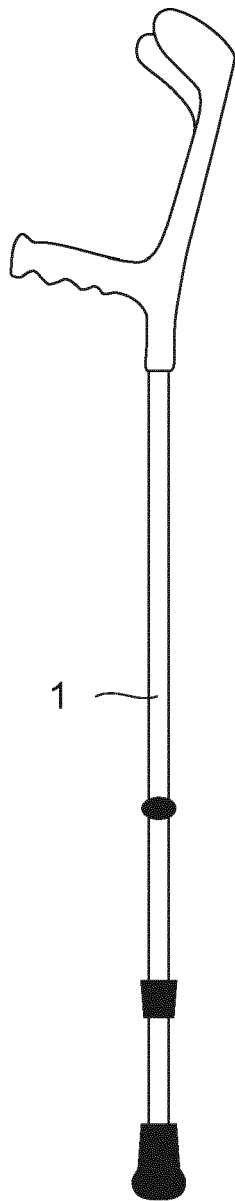


Fig. 1

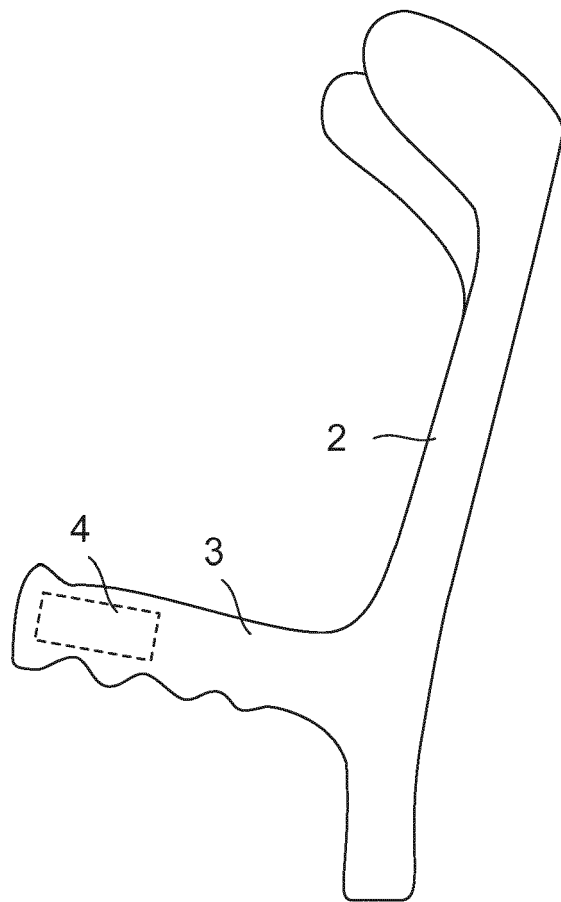


Fig. 2



EUROPEAN SEARCH REPORT

Application Number
EP 15 15 4801

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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A	WO 2011/048028 A1 (STOKES CONALL [IE]) 28 April 2011 (2011-04-28) * page 7, line 7 *	3	TECHNICAL FIELDS SEARCHED (IPC) A61H
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 20 November 2015	Examiner Shmonin, Vladimir
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 15 15 4801

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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