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(54) MANUALLY OPERATED SECTIONAL OVERHEAD DOOR

(57) Manually operated sectional overhead door (1) comprising door panels that are connected to each other with hinge connections, and a safety lock member (3) which is rotatably mounted on a door panel and which is during normal use kept stably in a non-operative position with a cable (4), wherein the safety lock member (3) moves into a safety locking position engaging a first hook member (9) provided on a side rail (5) of the overhead door (1) when the cable (4) is broken to prevent movement of the door (1) with reference to the side rail (5), and wherein at or near and at a lower part of the side rail (5) a swivable hook (6) is provided with a second hook member (7) having a locked position and a release position, and which second hook member (7) in its locked position can cooperate with the safety lock member (3) to hook behind the safety lock member (3) during normal use of the door (1) so as to lock the door (1) when the door is in a closed position and the cable (4) is unbroken.

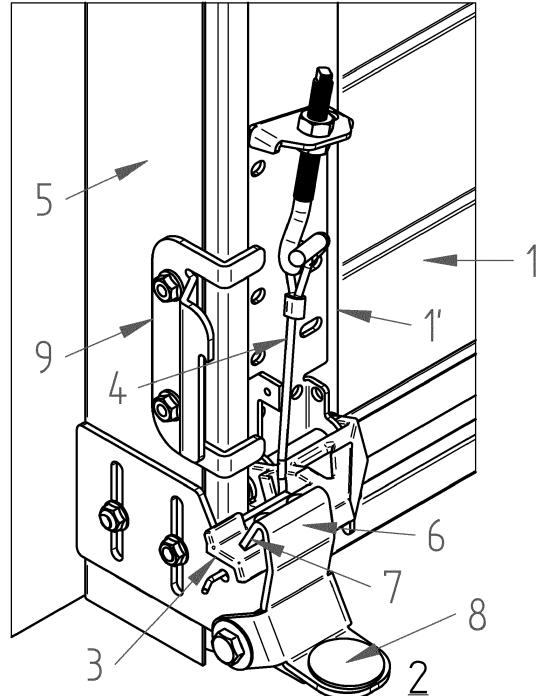


Fig. 1

Description

[0001] The invention relates to a manually operated sectional overhead door comprising door panels that are connected to each other with hinge connections, and a safety lock member which is rotatably mounted on a door panel and which is during normal use kept stably in a non-operative position with a cable, wherein the safety lock member moves into a safety locking position engaging a first hook member provided on a side rail of the overhead door when the cable is broken to prevent movement of the door with reference to the side rail.

[0002] Such a manually operated sectional overhead door is known from practice.

[0003] Instead of a manually operated sectional overhead door, WO2007/128120 discloses a cable operated door provided with a safety lock member which is rotatably mounted on the door and which is during normal use kept stably in a non-operative position with a cable, wherein the safety lock member moves into a safety locking position engaging a hook member provided on a side rail of the door when the cable is broken to prevent movement of the door with reference to the side rail.

[0004] Practice demands that the known manually operated sectional overhead door can be easily locked in its closed position, and also easily released from its locked closed position when it is intended to manually open the door.

[0005] For that purpose according to the invention a manually operated sectional overhead door is proposed in accordance with the features of one or more of the appended claims.

[0006] In a first aspect of the invention at or near and at a lower part of the side rail a swivable hook is provided with a second hook member having a locked position and a release position, and which second hook member in its locked position can cooperate with the safety lock member to hook behind the safety lock member during normal use of the door so as to lock the door when the door is in a closed position and the cable is unbroken.

[0007] When the cable is unbroken the safety lock member is nonoperative, and the door can move up and down unhindered unless the door is in its closed position. In that closed position the new feature of the preferably foot operated swivable hook can lock the door into its closed position, by the feature that its hook member hooks behind the nonoperative safety lock member.

[0008] Easy opening of the door is enabled by the feature that the swivable hook has a foot receptacle, and is movable from its locked position to its release position by pressing engagement of the foot receptacle. When the foot receptacle is engaged, the members removed from its hooking position behind the nonoperative safety lock member, which releases the door to move away from its closed position.

[0009] The invention will hereinafter be further elucidated with reference to the drawing of an exemplary embodiment of a manually operated sectional overhead

door according to the invention that is not limiting as to the appended claims.

[0010] In the drawing:

- 5 - figure 1 shows a view from the left at a detail of a manually operated sectional overhead door according to the invention; and
- figure 2 shows a view from the right at the detail of figure 1 of the manually operated sectional overhead door according to the invention.

[0011] Whenever in the figures the same reference numerals are applied, these numerals refer to the same parts.

[0012] Figure 1 and figure 2 show the parts of a manually operated sectional overhead door 1 that are close to the ground 2 when the door is in its closed position. Such a door 1 comprises door panels (not individually shown) that are connected to each other with hinge connections (not shown). These door panels and the connection of these door panels with hinge connections are so common to the skilled person that an elucidation thereof with reference to the drawing can be dispensed with.

[0013] The manually operated sectional overhead door 1 of the invention also comprises a safety lock member 3 which is rotatably mounted on a door panel 1' and which is during normal use kept stably in a non-operative position with a cable 4, wherein the safety lock member 3 moves into a safety locking position engaging a first hook member 9 provided on a side rail 5 of the overhead door 1 when the cable 4 is broken to prevent movement of the door 1 with reference to the side rail 5.

[0014] According to the invention at or near and at a lower part of the side rail 5 a swivable hook 6 is provided with a second hook member 7 having a locked position and a release position, and which second hook member 7 in its locked position can cooperate with the safety lock member 3 to hook behind the safety lock member 3 during normal use of the door 1 so as to lock the door 1 when the door 1 is in a closed position and the cable 4 is unbroken.

[0015] Preferably the swivable hook 6 has a foot receptacle 8, and is movable from its locked position to its release position by pressing engagement of the foot receptacle 8.

[0016] Although the invention has been discussed in the foregoing with reference to an exemplary embodiment of the manually operated sectional overhead door of the invention and its method of operation, the invention is not restricted to this particular embodiment which can be varied in many ways without departing from the invention. The discussed exemplary embodiment shall therefore not be used to construe the appended claims strictly in accordance therewith. On the contrary the embodiment is merely intended to explain the wording of the appended claims without intent to limit the claims to this exemplary embodiment. The scope of protection of the invention shall therefore be construed in accordance

with the appended claims only, wherein a possible ambiguity in the wording of the claims shall be resolved using this exemplary embodiment.

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Claims

1. Manually operated sectional overhead door (1) comprising door panels that are connected to each other with hinge connections, and a safety lock member (3) which is rotatably mounted on a door panel and which is during normal use kept stably in a non-operative position with a cable (4), wherein the safety lock member (3) moves into a safety locking position engaging a first hook member (9) provided on a side rail (5) of the overhead door (1) when the cable (4) is broken to prevent movement of the door (1) with reference to the side rail (5), **characterized in that** at or near and at a lower part of the side rail (5) a swivable hook (6) is provided with a second hook member (7) having a locked position and a release position, and which second hook member (7) in its locked position can cooperate with the safety lock member (3) to hook behind the safety lock member (3) during normal use of the door (1) so as to lock the door (1) when the door is in a closed position and the cable (4) is unbroken. 10
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2. Manually operated sectional overhead door (1) according to claim 1, **characterized in that** the swivable hook (6) has a foot receptacle (8), and is movable from its locked position to its release position by pressing engagement of the foot receptacle (8). 30

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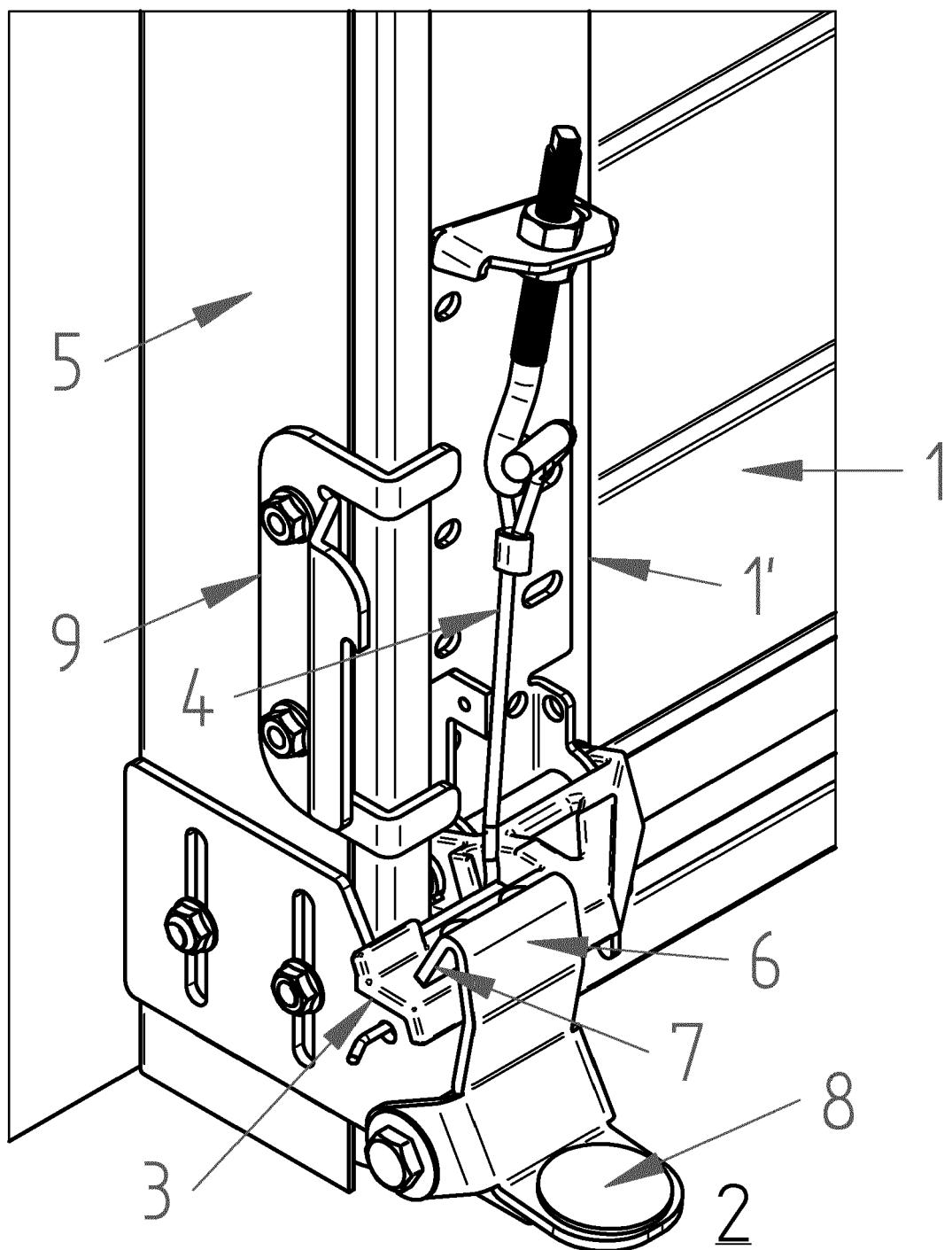
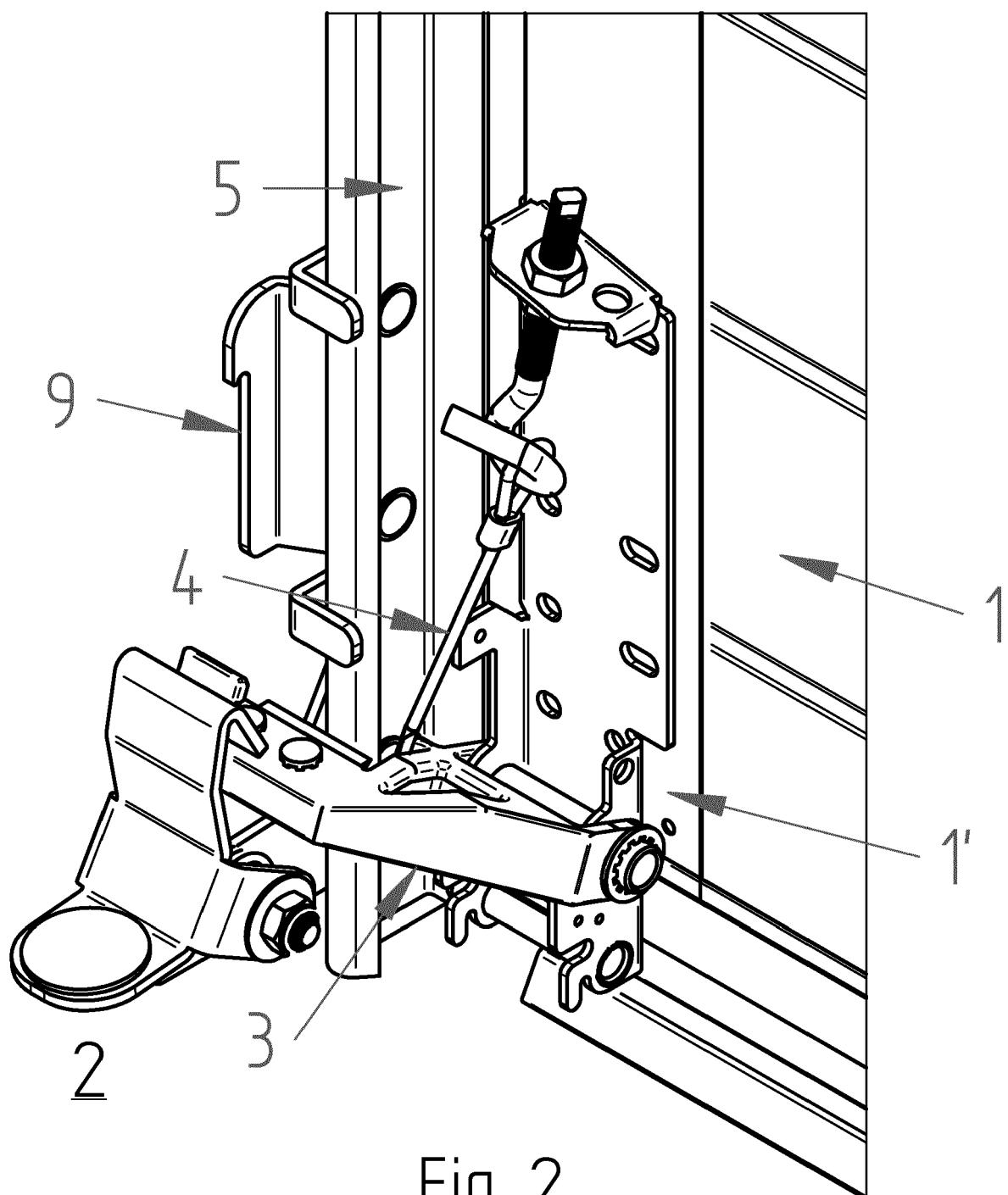


Fig. 1





EUROPEAN SEARCH REPORT

Application Number

EP 20 18 3541

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
10	X WO 2007/128120 A1 (CANIMEX INC [CA]; MICHAUD STEPHANE [CA]) 15 November 2007 (2007-11-15) * page 13, line 27 - page 14, line 22 * * page 16, line 22 - page 17, line 4 * * page 18, line 16 - page 19, line 24 * * page 25, line 19 - page 26, line 4 * * figures 30-40 * -----	1,2	INV. E05D13/00 E05B65/00 E06B9/80 ADD. E05D15/24
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30			TECHNICAL FIELDS SEARCHED (IPC)
35			E05D E05C E05B E06B
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50	1 The present search report has been drawn up for all claims		
55	Place of search The Hague	Date of completion of the search 17 November 2020	Examiner Klemke, Beate
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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
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5 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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-11-2020

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- WO 2007128120 A [0003]