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(54) **Product series of haulable passenger hoists**

(57) The passenger hoist of the product series is im-
plemented with modules so that the hoist construction

comprises a boom module (3) and a base module (1),
which are combined with a turning device module of the
desired type (2, 10, 11).

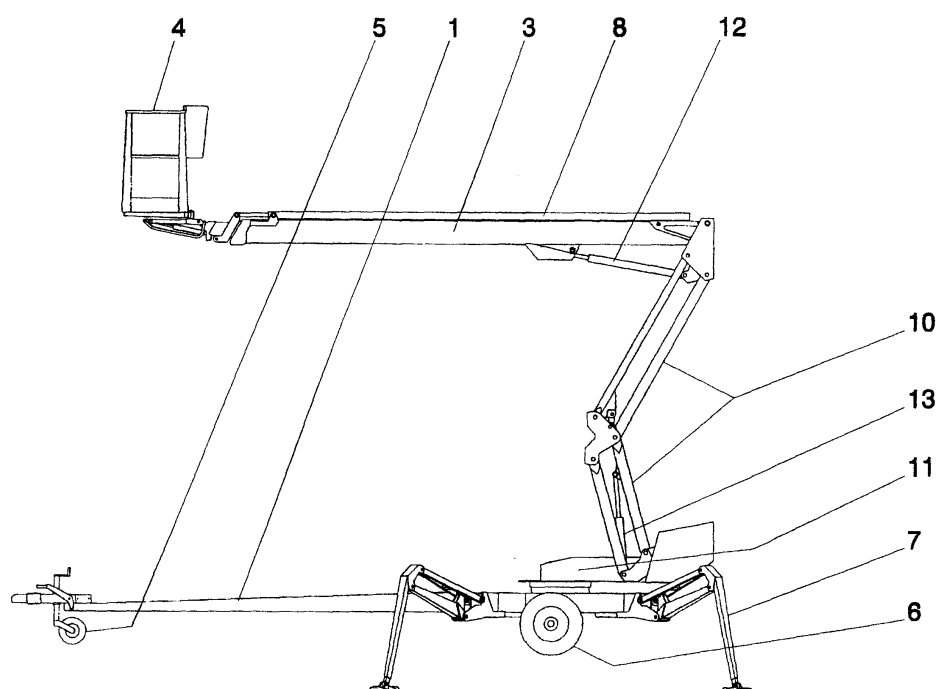


Figure 2

Description

[0001] The invention relates to a new kind of a product series of haulable passenger hoists, which is easier to manufacture than earlier solutions, and the construction of which can be more easily modified during manufacture for different models. The haulable passenger hoist according to the invention can be manufactured for many different hoisting purposes.

[0002] Haulable passenger hoists are generally used for any kind of work where the person carrying out the work must be raised to a higher working level than normally. Work like this includes painting, washing windows, and various building and installation work, among others. Haulable passenger hoists are generally manufactured for maximum working heights of about 10 to 25 metres.

[0003] The construction of the passenger hoist should be designed to allow the hoist to be easily moved from place to place by hauling. For this reason, the construction of the base of the passenger hoist must meet certain requirements. The base must naturally be steady enough during hoisting, but as light as possible when hauled. The size of the base should also allow it to pass through narrow places when hauled.

[0004] The product series of haulable passenger hoists is manufactured with either a telescopic boom construction or a telescopic knuckle boom construction. A haulable passenger hoist with a telescopic boom is of simple construction and it is often used in construction and installation work. A passenger hoist of telescopic boom construction has an adjustable telescopic boom. The working height to be used is determined by the length of the telescopic boom.

[0005] A haulable passenger hoist of telescopic knuckle boom construction differs from a hoist of telescopic boom construction in that it also comprises articulated arms. The construction of a passenger hoist with a telescopic knuckle boom enables vertical movement of the cage. A passenger hoist of telescopic knuckle boom construction also has an adjustable telescopic boom. The working height to be used is determined by the length of the telescopic boom together with the position of the articulated arms.

[0006] In a passenger hoist of telescopic knuckle boom construction, the articulated arms make up a part of the hoisting height, whereby the length of the telescopic boom can be reduced. Therefore a passenger hoist of telescopic knuckle boom construction can be made shorter than a hoist of telescopic boom construction which can reach a similar height.

[0007] In prior art haulable passenger hoists, the individual construction has been a problem with regard to manufacture. Because passenger hoists have often had different requirements of use, many different sizes and models have been manufactured. Passenger hoists have been manufactured in small series, and the planning, testing and manufacture of each size and model

has been carried out separately. This has brought about the need for a new kind of a product series of haulable passenger hoists, which is easier to manufacture than earlier hoist solutions, and which is constructed of a smaller number of different parts.

[0008] It is the object of the present invention to provide a product series of haulable passenger hoists, which is better than the earlier solutions, and by means of which the above mentioned problems can be solved and the defects corrected. In order to achieve this, the haulable passenger hoist according to the invention is characterized in that the passenger hoist is implemented as a modular construction, which comprises a boom construction and a base construction, combined with a turning device construction of the desired type.

[0009] The haulable passenger hoist according to the invention thus consists of modules. The hoist construction according to the invention comprises a boom module and a base module, which are combined with a turning device module of the desired type.

[0010] In the following, the invention will be described in more detail with reference to the accompanying drawings, of which

Figure 1 shows the haulable passenger hoist according to the invention with telescopic boom construction,

Figure 2 shows the haulable passenger hoist according to the invention with telescopic knuckle boom construction,

[0011] In Figure 1, the haulable passenger hoist according to the invention is implemented with telescopic boom construction. The haulable passenger hoist of telescopic boom construction according to the invention comprises a boom module 3 and a base module 1, which are combined with a turning device 2. A cage module 4 is attached to the boom module 3. The base module 1 comprises wheels 5, 6 and stabilizers 7. The cage module 4 is raised to the intended point of operation by means of hydraulics 8, 9.

[0012] In Figure 2, the haulable passenger hoist according to the invention is implemented with telescopic knuckle boom construction. The haulable passenger hoist of telescopic knuckle boom construction according to the invention comprises a boom module 3 and a base module 1, which are combined with a turning device 11 and articulated arms 10. A cage module 4 is attached to the boom module 3. The base module 1 comprises wheels 5, 6 and stabilizers 7. The cage module 4 is raised to the intended point of operation by means of hydraulics 8, 12, 13.

[0013] The product series of haulable passenger hoists according to the invention is implemented as a modular construction so that a base module 1 of the same size class can be used both in hoists of telescopic boom construction and in hoists of telescopic knuckle boom construction.

boom construction reaching the same hoisting height. Correspondingly, a boom construction 3 of a certain size class used in hoists of telescopic boom construction can also be used in hoists of telescopic knuckle boom construction reaching the next hoisting height.

[0014] Haulable passenger hoists according to the invention can be manufactured for maximum working heights of approx. 7 to 35 metres. The new kind of a product series of haulable passenger hoists is easier to manufacture than the earlier solutions. The construction of the passenger hoist enables easier manufacture of the desired hoist model. The haulable passenger hoist according to the invention can be manufactured for many different hoisting purposes.

reaching the same hoisting height.

8. A passenger hoist according to one of the Claims 1 to 7, **characterized** in that a boom module (3) of a certain size class used in hoists of telescopic boom construction can also be used in hoists of telescopic knuckle boom construction reaching the next hoisting height.
9. A passenger hoist according to one of the Claims 1 to 8, **characterized** in that the maximum working height of the passenger hoist is approx. 7 to 35 metres.

Claims

1. A product series of haulable passenger hoists, **characterized** in that the passenger hoist of the product series is implemented with modules so that the hoist construction comprises a boom module (3) and a base module (1), which are combined with a turning device module of the desired type (2, 10, 11).
2. A passenger hoist according to Claim 1, **characterized** in that the passenger hoist is of telescopic boom construction and comprises a boom module (3) and a base module (1), which are combined with a turning device (2).
3. A passenger hoist according to Claim 1, **characterized** in that the passenger hoist is of telescopic knuckle boom construction and comprises a boom module (3) and a base module (1), which are combined with a turning device (11) and articulated arms (10).
4. A passenger hoist according to Claim 1, 2 or 3, **characterized** in that a cage module (4) is attached to the boom module (3).
5. A passenger hoist according to one of the Claims 1 to 4, **characterized** in that the base module (1) comprises wheels (5, 6) and stabilizers (7).
6. A passenger hoist according to one of the Claims 1 to 5, **characterized** in that the cage module (4) is raised to the intended point of operation by means of hydraulics (8, 9, 12, 13).
7. A passenger hoist according to one of the Claims 1 to 6, **characterized** in that the passenger hoist is implemented as a modular construction so that a base module (1) of the same size class can be used both in hoists of telescopic boom construction and in hoists of telescopic knuckle boom construction

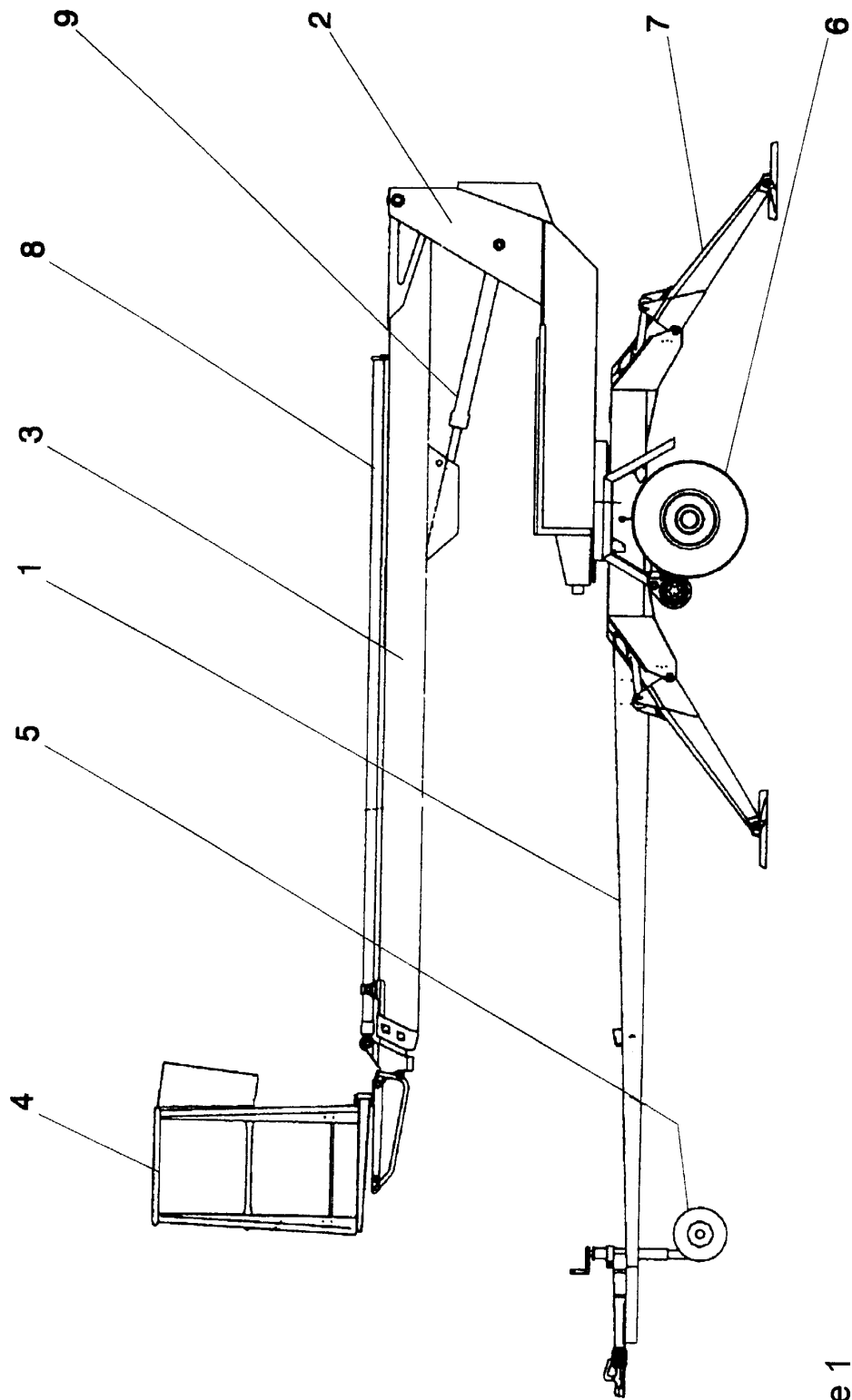


Figure 1

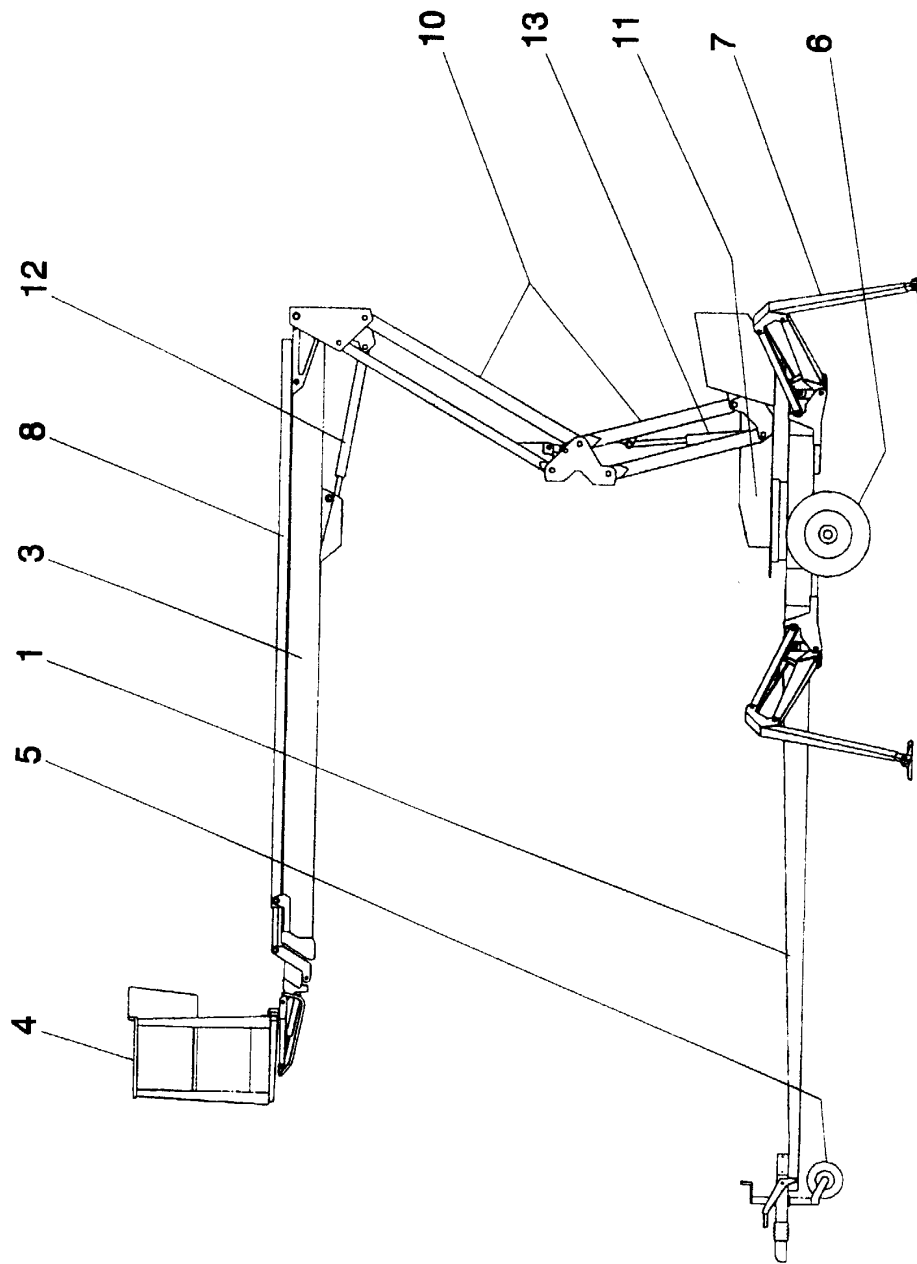


Figure 2



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 66 0074

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 747 316 A (KIDDE INDUSTRIES) 11 December 1996 (1996-12-11)	1-4, 6	B66F11/04
Y	* column 1-5; figures 1-3 *	7, 8	
Y	EP 0 672 612 A (LINGEN) 20 September 1995 (1995-09-20) * column 4, line 56,57 *	7, 8	
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A	* column 4-9; figures 1, 2 *	9	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B66F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 21 October 1999	Examiner Vollering, J
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			

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

EP 99 66 0074

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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21-10-1999

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