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(54) Desktop stand for portable computer

(57) A desktop stand for a portable computer having a keyboard member (3) and a display panel (4) projecting from a rear end portion of the keyboard member (3). The stand includes a support structure for supporting at least a portion of the keyboard member, a bearing structure under said support structure supporting said support

structure, such that at least the rear end portion of said support structure-supported keyboard member located adjacent the display panel is held at a higher level above a face on which the stand rests than a level at which a front end of the keyboard member remote from the display panel is held, and at least one storage for office supplies.

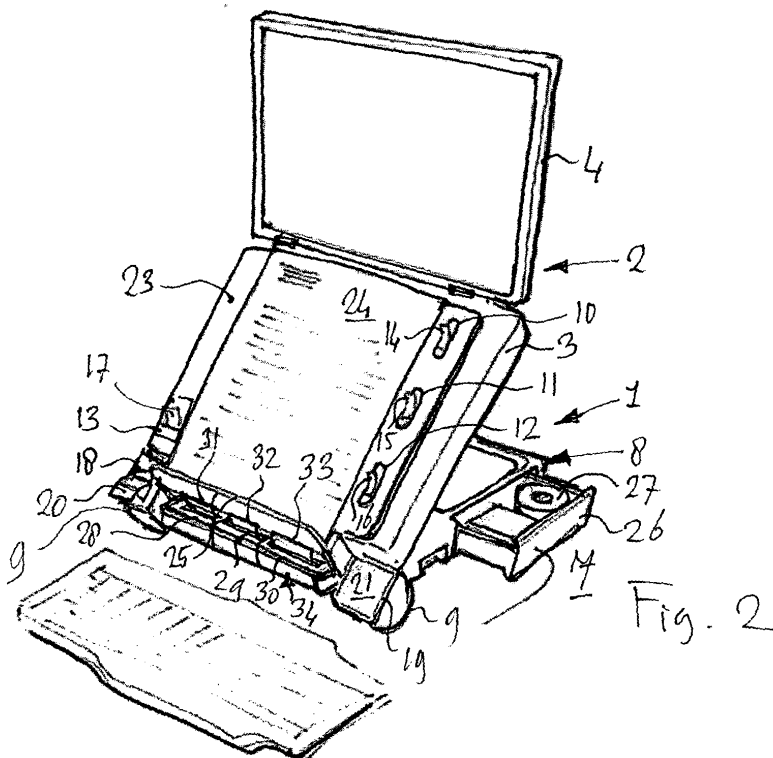


Fig. 2

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Description

FIELD AND BACKGROUND OF THE INVENTION

[0001] The invention relates to a desktop stand for a portable computer.

[0002] In practice, portable computers having a keyboard member and a display panel projecting from a rear end of the keyboard member when in operative condition and for instance pivotable to a position against the keyboard member, are usually denoted by the term "laptop computer", "laptop" or "notebook". Such computers are used not only during travel, but are also used frequently and for long periods in offices, in particular by users who use the computer regularly in different offices and/or at home.

[0003] Use of such a portable computer involves a number of ergonomic drawbacks. Firstly, the display is close to the keyboard. As a consequence, either the position of the display is not sufficiently high, which causes a great risk of neck complaints, or, if the computer is placed higher, the position of the keyboard is too high, so that, inter alia, the shoulder muscles are burdened unduly. Secondly, a laptop entails the drawback that it is not possible to place any documents between the keyboard and the display as is often desired in practice.

[0004] For avoiding the above drawbacks, it is known to operate a laptop computer using a separate keyboard connected to the computer only via a wire or via a wireless connection or to use a keyboard that may be dismounted from the keyboard member. The portable computer can then be placed on a desktop stand. An example of such a desktop stand is described in European Patent 1 301 847.

[0005] Although laptop stands such as the stands described in European Patent 1 301 847 provide a solution for ergonomic problems as well as for the placement of a document, the desktop stand takes up desk space. This often leads to a desktop relatively cluttered with various items, where in particular small items are often difficult to find.

SUMMARY OF THE INVENTION

[0006] It is an object of the present invention to provide a solution that facilitates a more orderly use of desk space, which is often of great value in modern offices, and at the same providing a more orderly workplace leading to a more efficient working process.

[0007] In accordance with the present invention, this object is achieved by providing a desktop stand according to claim 1. Integrating one or more storage facilities for storing office supplies in the desktop stand is helpful for keeping the desktop uncluttered and storing, generally small, office supplies, easily accessible and findable, because, while in use, a desktop stand is typically positioned within reach of the user and contains unused space in which the office supplies can be stored.

[0008] Particular embodiments of the invention are set forth in the dependent claims.

[0009] Further aspects, effects and details of the invention are described with reference to examples of desktop stands according to the invention as shown in the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010]

Fig. 1 is a perspective view of a stand according to a first example of an embodiment of the invention supporting a portable computer;

Fig. 2 is a perspective view of a stand according to Fig. 1 in another operating condition;

Fig. 3 is a perspective view of a stand according to a second example of an embodiment of the invention, in collapsed condition;

Fig. 4 is a perspective view of the stand according Fig. 3, in a first operating condition;

Fig. 5 is a perspective view of the stand according to Figs. 3 and 4, in a second operating condition;

Fig. 6 is a side view of the stand according to Figs. 3-5, in the operating condition shown in Fig. 5;

Fig. 7 is a perspective view of a stand according to a fourth example of an embodiment of the invention supporting a portable computer;

Fig. 8 is a perspective view of a stand according to a fifth example of an embodiment of the invention supporting a portable computer;

Fig. 9 is a perspective view of a stand according to a sixth example of an embodiment of the invention during folding/unfolding; and

Fig. 10 is a perspective view of a part of the stand according to Fig. 9 in operating condition.

DETAILED DESCRIPTION

[0011] In Figs. 1 and 2, a stand in its entirety is designated by reference numeral 1. The stand 1 is intended for supporting a portable computer 2 with a keyboard member 3 and a display panel 4 projecting from a rear end portion of the keyboard member 3. In the present illustration, the keyboard is an integral part of the keyboard member 3, but the keyboard may also be detachable from the keyboard member. For supporting the keyboard member 3, the stand 1 is provided with a support structure, according to this example in the form of a sloping support deck (not shown in Fig. 1, see Fig. 6 for a similar support structure).

[0012] In the present description, the term "front" designates the side of an item generally facing or closest to a user when the stand is in a position for use by that user and the term "rear" designates the side of an item generally facing away from or most remote from the user when the stand is in a position for use by that user. For keeping the support structure in a position having its front

end lower than its rear end, such that the rear end portion of the keyboard member 3 located adjacent the display panel 4 is held at a higher level above a face 7 on which the stand 1 rests than a level at which a front end of the keyboard member 3 remote from the display 4 is held, the stand 1 is equipped with a bearing structure 8 under the support structure 5. The bearing structure 8 is provided in the form of a foot member 8 that is hinged to the support structure 5 at hinges 9.

[0013] The stand according to the present example further comprises a document deck 23 for supporting a document 24. The document deck 23 extends above the support structure when in operative condition for supporting the document 24 in a position extending above the support structure supporting the keyboard member 3, such that, in use, the document 24 is held in a position above the keyboard member 3. A stop 25 is provided at a lower end of the document deck 23 for preventing the document 24 from sliding off the document deck 23. It is observed that a document support that holds a document in a position extending over the keyboard member may also be provided in another form, for instance without a document deck extending above the support structure, such that the document supported held thereby also rests directly on the keyboard member of the portable computer.

[0014] The document deck 23 is provided with storages 10-14 for accommodating office supplies 14-17. Storages 18, 19 for office supplies 20, 21 are furthermore provided in housings of the hinges 9, further storage 26 for office supplies 27 are integrated in the foot member 8 and yet further storages 28-30 for office supplies 31-33 are included in a disconnectable cassette 34.

[0015] Integrating one or more storage facilities for storing office supplies in the desktop stand is helpful for keeping the desktop uncluttered and storing, generally small, office supplies such as self-adhesive slips of paper or plastic, self-adhesive tape, paperclips, glue, glue strips, pencil sharpeners, pencil refills, correction tape, highlight markers etc., easily accessible and findable, because, while in use, a desktop stand is typically positioned within reach of the user and contains unused space in which the office supplies can be stored.

[0016] The storages 10-13, 18, 19 and 28-30 are provided in the form of dispensers for dispensing office supplies. This allows to easily take office supplies one by one from the desktop stand, thereby obviating the need of searching and handling a package when an office supply item is needed. The office supplies that may be dispensed with the dispenser according to this example are self-adhesive tabs 14-16, 20, 31, 32, 33, small leaflets 21, 33 with self-adhesive strips and pre-cut strips 17 of self-adhesive tape.

[0017] The dispensers 10-13 and 18 are each formed by a cartridge removably fixed to the stand. This allows to quickly add a new stock of office supplies of a particular type when the office supplies of that type are used-up.

[0018] According to the present example, the cartridges

10-13, 18 are mounted in recesses, that each have an open end, the cartridge 10-13, 18 having a dispensing side on which supplies to be dispensed are accessible, preferably one at a time. The dispensing sides of the cartridges 10-13, 18 each form a cover at least partially closing off the open end of the recess. Thus, the front of the cartridges 10-13, 18 are about flush with neighbouring surfaces of the desktop stand, yet may be replaced easily from the front side by removing the empty cartridge from the recess and inserting a new cartridge by placing the cartridge into the recess from the front side of the recess.

[0019] Another example of the feature of the storage being disconnectable from the stand 1 is formed by the cassette 34 that contains chambers in which stocks of office supplies 31-33 can be stored. This cassette 34 can be removably coupled to the front end of the desktop stand 1, which for instance allows to make the cassette available as an option to those users having an interest in a particularly large variety of office supplies readily at hand. Disconnecting the cassette 34 also facilitates refilling when one or more of the chambers of the cassette 34 is empty and allows to leave some of the office supplies at the office when the desktop stand 1 is taken along during travel.

[0020] In the present example, the desktop stand 1 further comprises a document support for, when in operating condition, supporting a document 24 in a position extending at least partially over the keyboard member 3, and some of the storages 10-13 are located along a lateral ends of the document support for allowing access to office supplies 14-17 therein along a lateral margin of the document support. This provides the advantage that the office supplies stored in the desktop support can be kept accessible aside the document 24 even while a document 24 is supported by the document support.

[0021] Since the document support includes the document deck 23 extending above the support structure for supporting the keyboard member 3 of the computer 2 when in operative condition, the document 24 is supported evenly and in a flat condition, independently of the design of the keyboard member 3 underneath and sufficient space above the keyboard member 3 is ensured to avoid unduly inhibiting dissipation of heat from the keyboard member 3. The storages 10-13 are located along lateral edges of the document deck 23 for allowing access to office supplies 14-17 therein along the lateral margins of the document deck 23, so that the office supplies 14-17 are nevertheless accessible. Preferably the lateral distance between office supplies 17 and 14-16 along opposite edges of the document deck is larger than the width of standard A4 or letter sized sheets.

[0022] One of the storages 26 is included in the bearing structure. Here relatively large storages can be accommodated, without occupying additional desktop space.

[0023] If, as in the present example, the bearing structure comprises a foot member 8 having a bottom oriented for extending closely along the face on which the desktop

stand when in operating condition, preferably the foot member 8 contains the storage 26 for office supplies 27. In the foot member 8, the storage 26 is close to the desktop and relatively remote from the supporter computer 2, so that the office supplies 27 stored in the foot member 8 are easily accessible for a user. It is observed that also this position of the storage 26 provides the advantage that access to the office supplies is not obstructed if a document 24 is positioned on the desktop stand 1.

[0024] By providing the storage in the form of a storage tray for office supplies, a wide variety of office supplies can be stored therein.

[0025] The storage 26 is formed by storage drawer 26 slidable between a retracted position (shown in Fig. 1) and a extended position (shown in Fig. 2) partially projecting relative to other portions of the foot member 8, so that the office supplies are stored neatly, protected from dust and out of sight when not used, yet easily accessible.

[0026] The foot member 8 has a front end and a rear end and lateral sides extending between the front end and the rear end. The storage 27 is easily accessible on a lateral side of the foot member 8.

[0027] For easy access to the storage 26, it is furthermore advantageous, that, in the extended position, the storage drawer 26 projects laterally from the foot member 8. This causes the storage 26 to be more easily accessible along the side of a computer 2 supported by the desktop stand 1. According to the present example, the shifting motion of the storage drawer 26 is linear, however, also other motion patterns such as pivoting movement about for instance a vertical axis may be envisaged. This would allow the storage drawer to move laterally and, at the same time, towards the user when moving to the extended position.

[0028] According to the present example, the support structure is pivotable about an axis located adjacent the front end of the support structure between an operating position for supporting the support structure in an orientation having its front end lower than its rear end, such that at least the rear end portion of the support structure-supported keyboard member 3 located adjacent the display panel 4 is held at a higher level above the face 7 on which the stand 1 rests than the level at which the front end of the keyboard member 3 remote from the display panel 4 is held, and a collapsed position extending closely adjacent or in contact with the foot member 8. Moreover, the support structure in the collapsed condition covers at least a portion of the storage 26. This allows the storage 26 have an open top, so that its contents is visible and directly accessible when the stand 1 is in operating condition, yet causes the storage 26 to be covered when the stand 1 is collapsed, preventing the office supplies 27 from falling out of the storage 26 during transport.

[0029] The positions of the storages 18, 19 at front left and right corners of the desktop stand 1 are close to the user and accessible independently of the presence of a document 24 on the desktop stand 1.

[0030] In Figs. 3-6 a second example of a desktop

stand 101 according to the invention is shown. The desktop stand 101 according to this example has less storages than the desktop stand 1 described above. A storage 113 similar to the storage 13 is provided along the left hand edge of the document support deck 123 and a storage 110 similar to the storages 10-12 is provided along the right hand edge of the document support deck 123. To obtain a more compact stand 101, the document support deck 123 according to this example has a width that leaves a space equal to the width of one sheet A4 or letter, or slightly less, to one side of each of the storages 110, 113 only whereas the support deck 23 shown in Figs 1 and 2 allowed to position an A4 or letter sized sheet between the storages positioned along the left- and right hand edges of the document support deck. Nevertheless, when such a document is positioned on the support deck 123, office supplies in both storages 110 and 113 are accessible without having to move the document 124 over such a distance that it becomes insufficiently supported by the support deck 123 (for which it preferably needs to be supported up to about 2 cm of the lateral edges, so that preferably a width of at least about 90% of a standard A4 or letter sheet is left from the office supplies along each lateral edge of the transport deck to the respective opposite side).

[0031] At the centre of the document support deck 123, a storage recess 135 is provided for accommodating a pack of larger self-sticking notes 136. By peeling off the protective sheet from the back of such a pack 136, the pack can be fixed to the bottom of the recess.

[0032] Two other storages 111, 112 similar to the storages 10-12 are included in the stop 125 for preventing documents 124 from sliding off the document deck 123. Positioning a storage in the stop 125 such that it is accessible from a front side of the stop 125 provides the advantage that the office supplies therein are close to the user and not covered by a document 124 held on the document support deck 123.

[0033] The desktop stand 101 is collapsible into a flat configuration shown in Fig. 1 and can be used in a first operating condition shown in Fig. 4 if no computer needs to be supported or in a second operating condition shown in Fig. 5, if a computer 2 and/or a document 124 are to be supported. In Fig. 6, the support structure 105, for supporting the computer 2 in the describe position with the rear end of the keyboard member spaced from the support surface on which the stand 101 stands is shown. The inclination of the support structure 105 and of the document support deck 123 may be varied by varying the position of a support leg as is known per se.

[0034] In Fig. 7, yet another example of a desktop stand 201 according to the present invention is shown. In this desktop stand 201, office supplies 231, 232 are stored in a cassette 234 fixed to the side of a documents support desk 223. This is another example of storages being positioned along a lateral edge of the document support deck 223. A particular advantage of this solution is, that the document support deck 223 may be relatively narrow

(preferably not smaller than slightly (about 10-20%) narrower than an A4 or letter sheet). If the cassette 234 is moreover detachably fixed, this solution also allows to remove the cassette if it is not desired, for instance if the stand is taken along during extensive travel.

[0035] In the desktop stand 301 according to the example shown in Fig. 8, the office supplies 314, 315, 336 are stored in storages (not shown) that are located such that the storages are covered if a document 324 of standard dimensions, such as A4 or letter, is on the document support deck 323. However, the location of the storages along the lateral edges of the document support deck 323 in combination with the individual office supply items ready to be dispensed that project laterally outwardly causes the office supplies to be accessible, even if a document is present on the document support deck 323. Also in this embodiment, the document support deck may be relatively narrow.

[0036] In Figs. 9 and 10, a stand 401 is shown in which the storage 434 for office supplies is integrated in the bearing structure. In partially unfolded condition (shown in Fig. 9) and in the fully folded condition (not shown), the storage, here formed by a cassette 434, is contained in the foot member 408, where it is located in a support leg 406 that is folded into the foot member 408. In the operating condition (shown in Fig. 10) the support leg 406 supports the support structure 405 and can be slid out of the support leg 406 as a drawer, so that it projects laterally from the rest of the stand 401 and is easily accessible along the side of a computer supported by the desktop stand 401.

[0037] It will be readily understood by anyone skilled in the art that within the framework of the present invention as set forth in the claims, still many other variants and structural possibilities are conceivable. In particular, although each of the examples is a foldable desktop stand, it will readily be clear that the invention may also be embodied in a non-foldable desktop stand, for one based on one of the embodiments shown in Figs 1-8 except that the hinges are replaced by a non-foldable connection, non-pivotable or integral construction.

Claims

1. A desktop stand for a portable computer having a keyboard member and a display panel projecting from a rear end portion of the keyboard member, comprising:

a support structure for supporting at least a portion of the keyboard member,
a bearing structure under said support structure supporting said support structure, such that at least the rear end portion of said support structure-supported keyboard member located adjacent the display panel is held at a higher level above a face on which the stand rests than a

level at which a front end of the keyboard member remote from the display panel is held, and at least one storage for office supplies.

2. A stand according to claim 1, wherein the bearing structure comprises the storage for office supplies.
3. A stand according to claim 1 or 2, wherein the bearing structure comprises a foot member having a bottom oriented for extending closely along said face when in operating condition, the foot member comprising the storage for office supplies.
4. A stand according to claim 3, wherein the storage is provided in the form of a storage tray for office supplies.
5. A stand according to any of the claims 3-4, wherein the storage is provided in the form of a storage drawer slidable between a retracted position and an extended position partially projecting relative to other portions of the foot member in a direction.
6. A stand according to any of the claims 3-5, wherein the foot member has a front end and a rear end and lateral sides extending between the front end and the rear end and wherein the storage is accessible on a lateral side of the foot member.
7. A stand according to claims 5 and 6, wherein, in the extended position, the storage drawer projects laterally from the foot member.
8. A stand according to any of the claims 3-7, wherein the support structure is pivotable about an axis located adjacent the front end of the support structure between an operating position for supporting said support structure in an orientation having its front end lower than its rear end, such that at least the rear end portion of said support structure-supported keyboard member located adjacent the display panel is held at a higher level above the face on which the stand rests than the level at which the front end of the keyboard member remote from the display panel is held, and a collapsed position extending closely adjacent or in contact with the foot member, the support structure in the collapsed condition covering at least a portion of the storage.
9. A stand according to any of the preceding claims, wherein the storage is provided in the form of a dispenser for dispensing office supplies.
10. A stand according to claim 9, wherein the dispenser is in the form of a cartridge removable from the stand.
11. A stand according to claim 10, wherein the cartridge is mounted in a recess having an open end, the car-

tridge having a dispensing side on which supplies to be dispensed are accessible, the dispensing side of the cartridge forming a cover at least partially closing off the open end of the recess.

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12. A stand according to any of the preceding claims, wherein the storage is disconnectable from the stand.

13. A stand according to any of the preceding claims, further comprising a document support for, when in operating condition, supporting a document in a position extending at least partially over the keyboard member, wherein the storage is located along a lateral end of the document support for allowing access to office supplies therein along a lateral margin of the document support.

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14. A stand according to claim 13, wherein the document support includes a document deck extending above said support structure when in operative condition, wherein the storage is located along a lateral edge of the document deck for allowing access to office supplies therein along a lateral margin of the document deck.

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15. A stand according to any of the claim 12-14, wherein the document support includes a stop for preventing documents from sliding off the document support, the stop carrying the storage in a location accessible from a front side of the stop.

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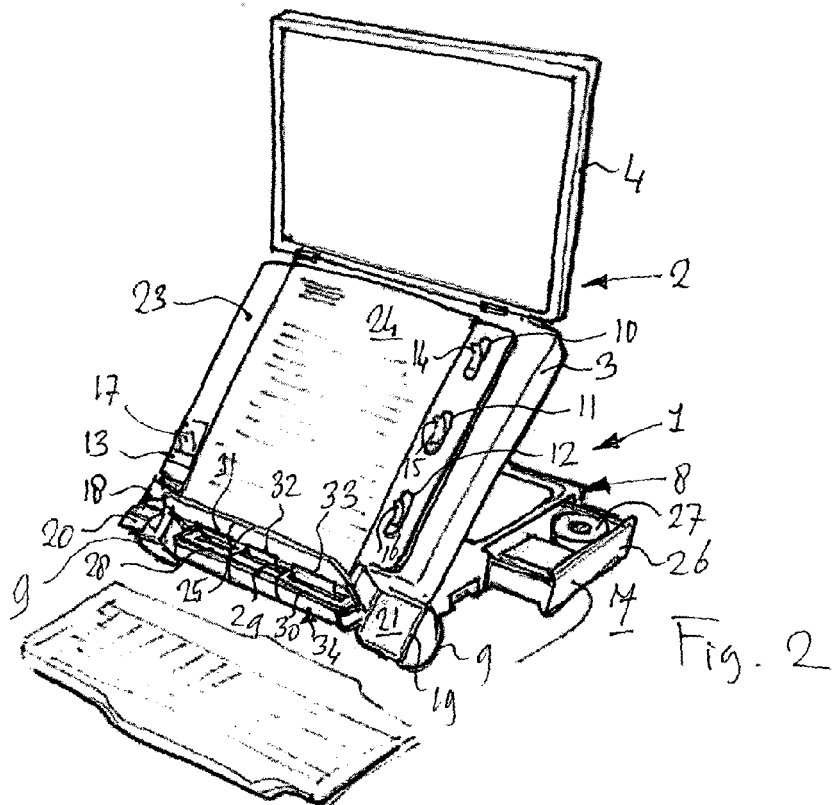
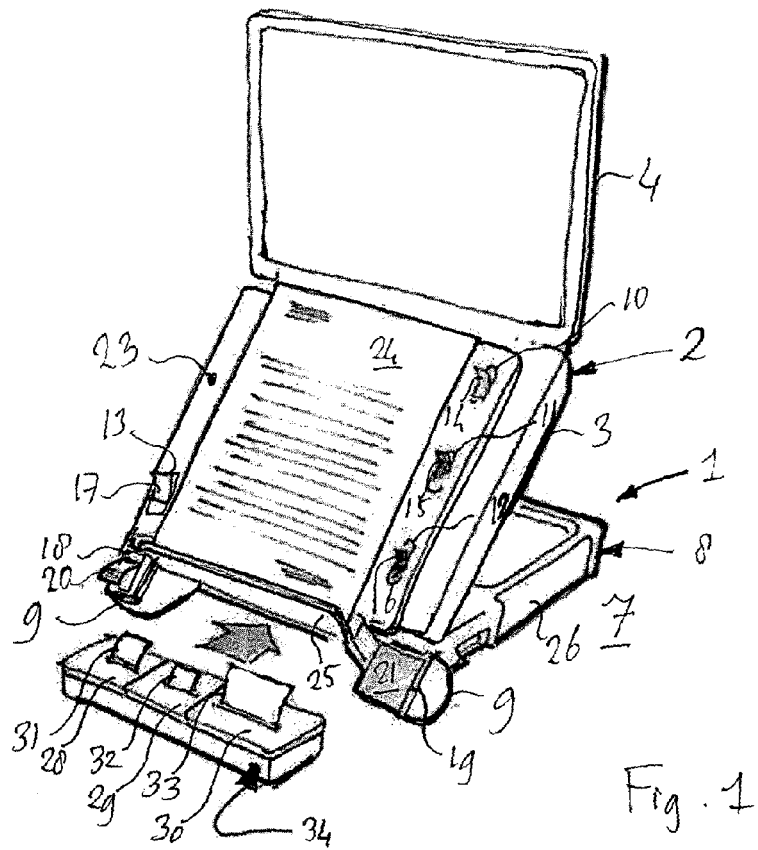
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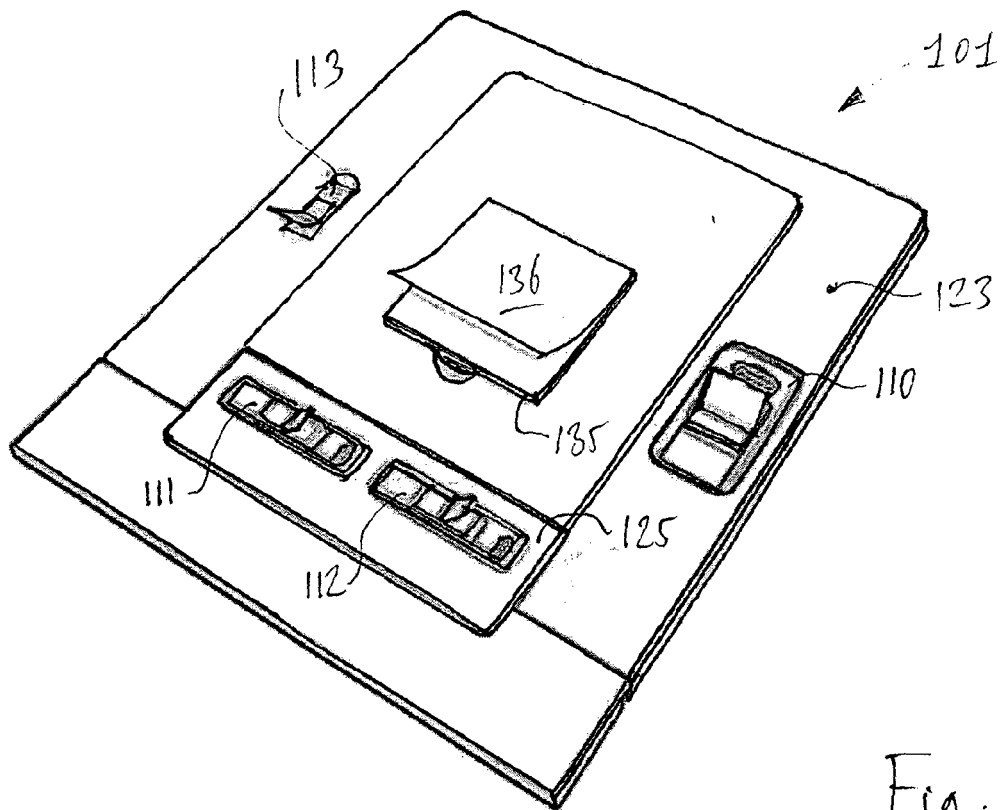


Fig. 3

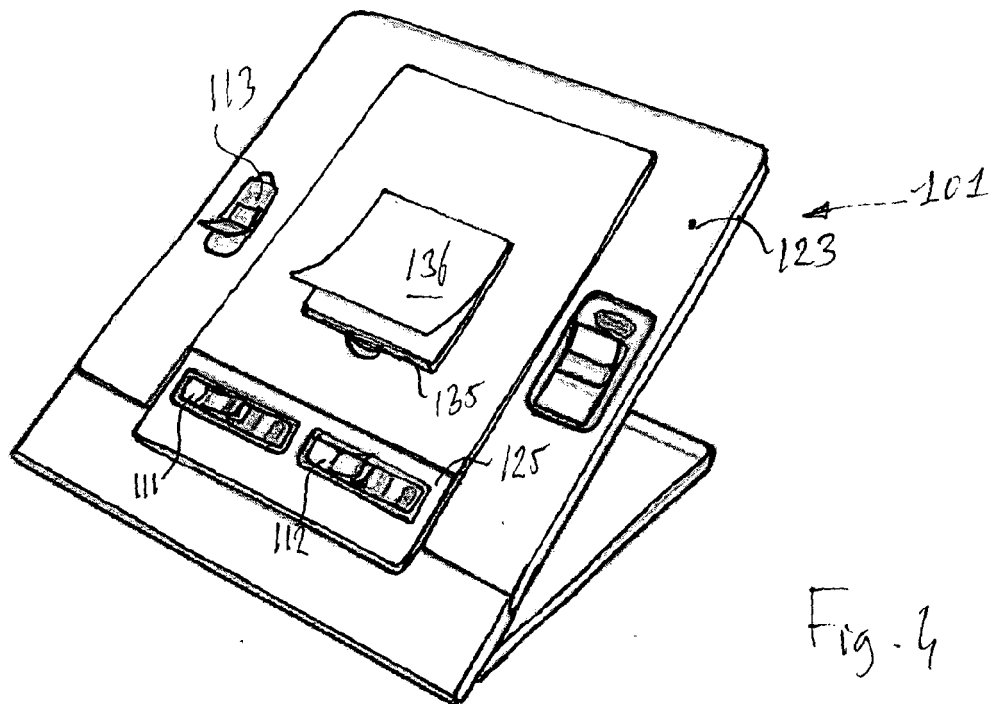
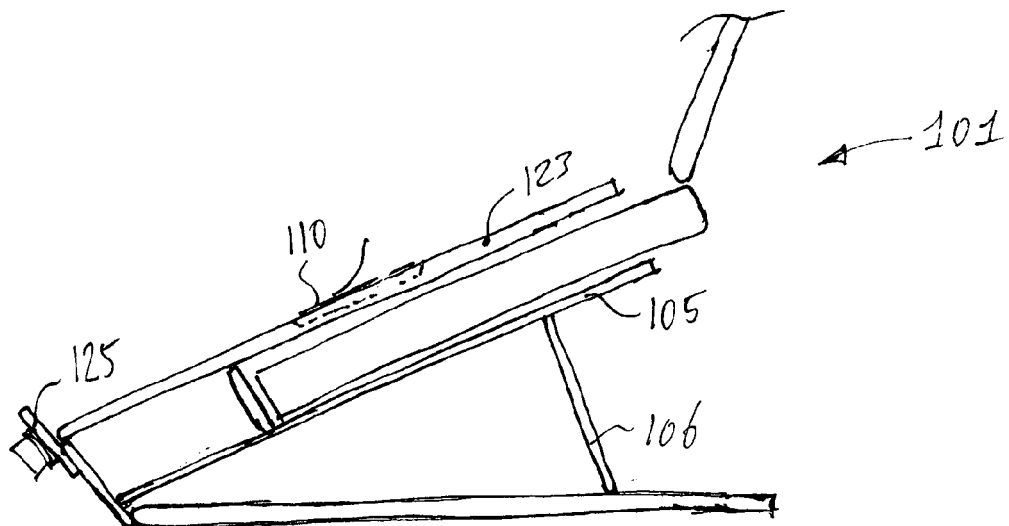
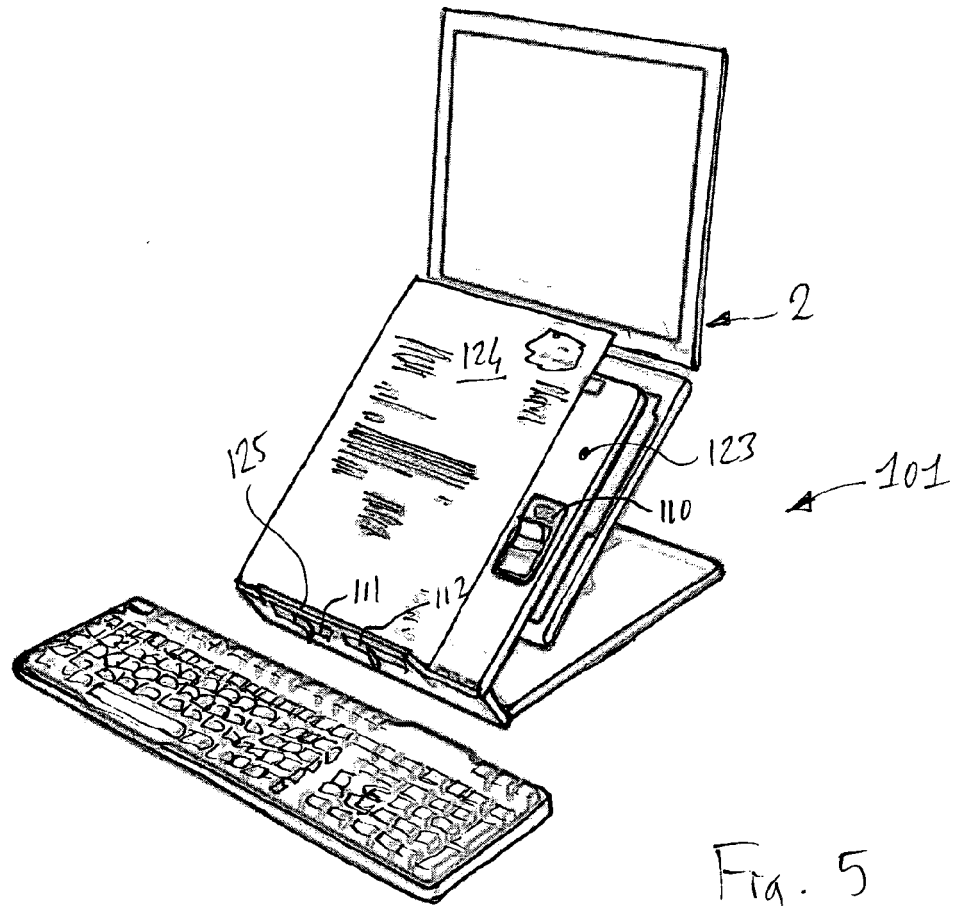


Fig. 4



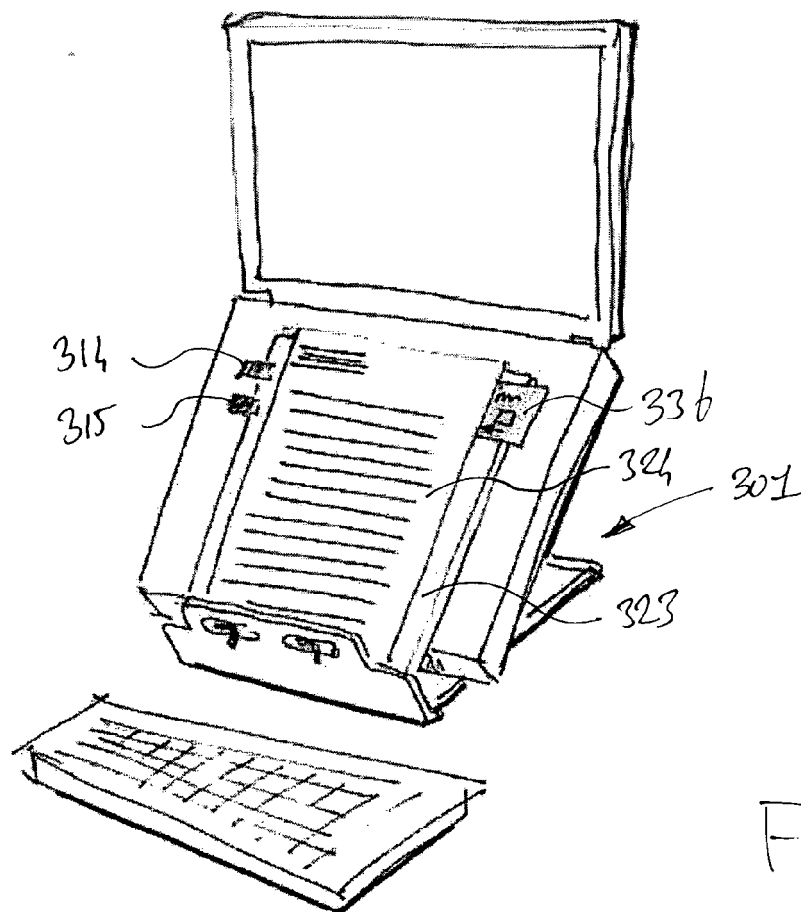
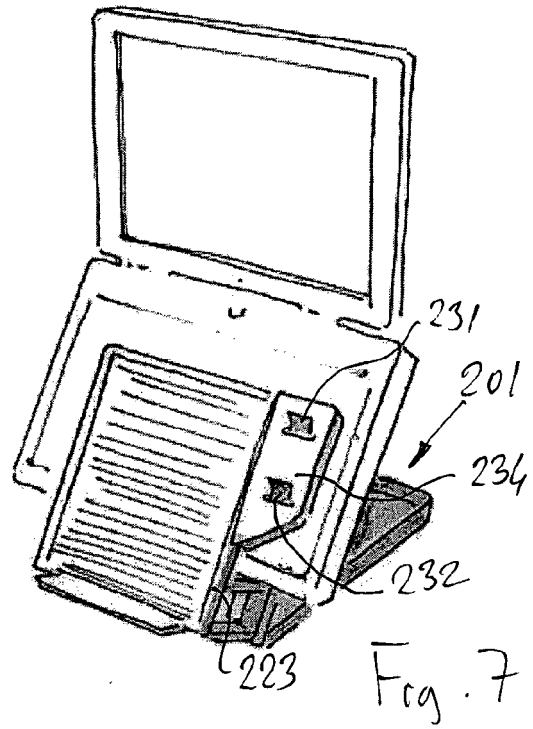


Fig. 8

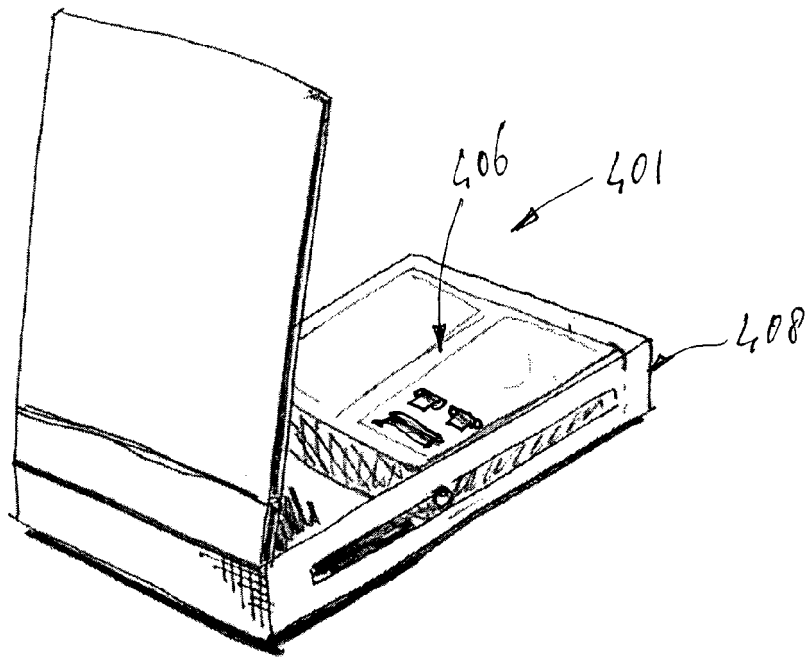


Fig. 9

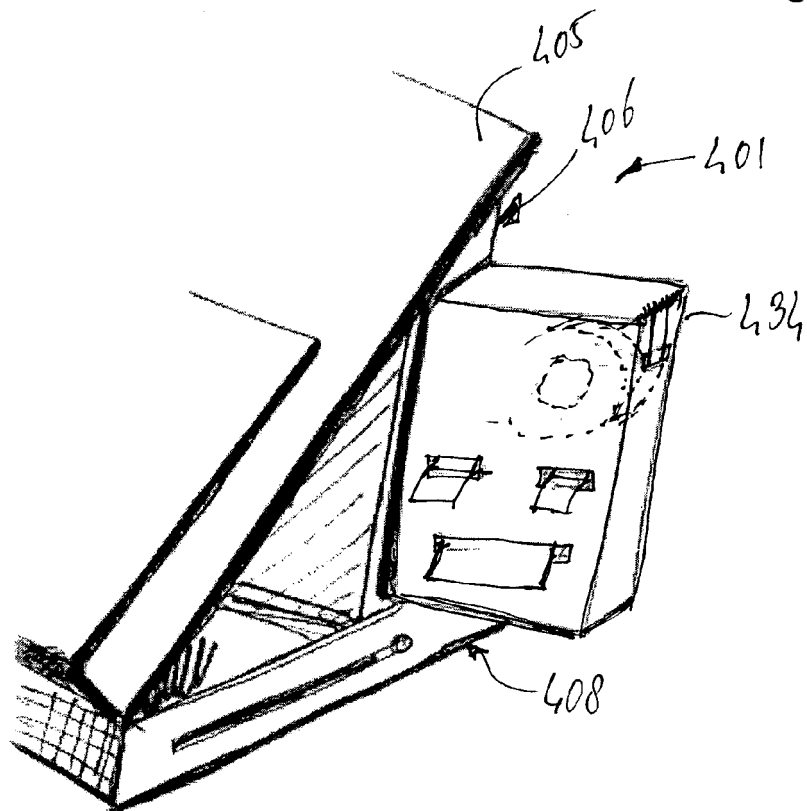


Fig. 10



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 05 01 0036

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 22 September 2005	Examiner Pirou, Y.N.
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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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 05 01 0036

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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22-09-2005

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