Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).
Description

[0001] The present invention relates to a data entry terminal with manual validation, comprising at least a left lateral side and a right lateral side, a front wall and a back wall, an upper face and a lower face, a cover being pivotally mounted around a pivot axis between a first position and a second position, said first position being a position for protecting the means of validation from being seen by an unauthorised user and said second position being a closed position, said cover comprising at least a first and a second lateral side having each an internal and an external face, said cover further having a front wall having a first and a second edge, said first edge being substantially at the same level as the upper face of the terminal when the cover is in said second position and the second edge being substantially at the same level as the lower face of the terminal when the cover is in said second position, said internal face of the first and of the second lateral side having each first engaging means provided to be each engaged in second corresponding engaging means being disposed each on said left and said right lateral side of said terminal, both first and both second engaging means being provided to be aligned together according said pivot axis to allow a mutual rotation around said pivot axis of the cover and of the terminal.

[0002] Such a device is known, for example, from the French patent no 2 707 407. FR 2 707 407 describes a data entry terminal comprising a cover mounted pivotally between a first open position and a second closed position. In the device according to the French patent, when the cover is in a closed position, it covers the validation means, in this case, a keyboard. When in open position, the cover is rotated of less than 90° upwards thereby protecting the means of validation from being seen by the merchandiser.

[0003] Unfortunately, such a device as described in the French patent is not easy, nor practical to use and not safe.

[0004] Indeed, when the terminal of FR 2 707 407 is used by a merchandiser, the steps are at least the followings:

1. the merchant opens the cover thereby having in his hand a bulky terminal,
2. the merchant inserts the amount to be paid on the keyboard,
3. the merchant returns the bulky terminal with the cover in open position, the user inserts his/her card and enters his/her personal identification number (PIN) while being protected from the merchant's look.

[0005] Moreover, the terminal according to FR 2 707 407 is only able to ensure security of the user with regards to the merchandiser when he/she is standing in front of him/her. Indeed, all people standing next to the user can see the personal identification number of the user and accordingly, the terminal of FR 2 707 407 does not respond to the "VISA PIN Entry Device Standard" which imposes a terminal to present a shield in order to mask the hand of a user when entering his/her personal identification number. This condition is found in "The VISA PIN Entry Device Standard" Derived Test requirements, Appendix A- Guidance for the Privacy Screen Design, Version 3.0b of April 2004 which is incorporated herein by reference.

[0006] It is an object of the invention to palliate at least some of these drawbacks by providing a terminal which is compact, easy, and practical to use for the merchants and for the user and which ensures security for this latter while respecting security standard.

[0007] To this end, the invention provides a data entry terminal according to the preamble of claim 1, characterised in that when said cover is in said first position, the first edge of the front wall of the cover is provided to be positioned above said second portion, in particular upon said second portion of the upper face of the terminal, in order to form a shield around said first portion.

[0008] The terminal according to the invention as mentioned just before provides, when in first open position, lateral edges extending around the keyboard to prevent an unauthorised user from seeing the personal identification number.

[0009] The cover of the terminal according to the invention rotates with an angle of more than 90°, preferably more than 145° and most preferably around 180°, so that the first edge of the front wall of the cover will be positioned upon the second portion (anywhere upon the upper face of the terminal except upon the keyboard) of the upper face of the terminal, and the cover forms a shield around said first portion being, for example, the keyboard.

[0010] By providing lateral faces for the cover, a shield is formed which preferably rests on the second portion, when the cover is in open position, the terminal according to the invention complies with the security standard by preventing an unauthorised user from seeing the personal identification number of an authorised user when standing next to the user.

[0011] In addition, the terminal remains a compact one, when in a closed position, the terminal is not awkwardly shaped or bulky. The terminal is easy and practical to use. For example, the following steps which are more logic and practical are used:

1. the merchant inserts the amount to be paid on the keyboard with the cover in closed position,
2. the merchant opens the cover, the user inserts his/her card and enters his/her personal identification number (PIN) while being protected from the on-
[0012] There are only two steps which are more easy, they ask an easier manipulation of the device and thus imply lower risks for the terminal to fall, or break.

[0013] Advantageously, the means for reading a portable data support have a slot on said front wall of the terminal and the second position of the cover is a closed position for protecting said means for reading a portable data support.

[0014] Due to the presence of a frontal slot, it is impossible for the merchant to ask the customer to enter his/her PIN without rotating the cover. If the cover remains in the closed position, thereby permitting the keyboard to be visible for the merchant, the card can not be inserted into the slot because the front wall of the cover closes the slot of the reading means. So if the merchant wants to be paid, he has to do the steps as above mentioned:

1. the merchant inserts the amount to be paid on the keyboard with the cover in closed position.
2. the merchant opens the cover to allow the user to insert his or her card into the slot and to enter while being protected from onlookers, his/her personal identification number (PIN).

[0015] It is therefore impossible for a merchant to argue that he forgot to open the cover.

[0016] Moreover, when the cover is closed, the reading means are protected from dust, dirt, rain, or the like.

[0017] In a particularly preferred embodiment, both first and second engaging means are respectively situated in a most upper part of the lateral sides of the cover and of the terminal.

[0018] By providing the engaging means in the most upper parts of the lateral edge, the space needed to allow the rotation of the cover is reduced.

[0019] In a preferred embodiment according to the invention, at least one of the first engaging means is a groove for allowing a mutual translation movement between the cover and the terminal.

[0020] Thus to open the cover, the merchant has to translate the cover before rotating. This can better prevent accidental opening of the cover.

[0021] In a variant, at least one of the second engaging means is a groove for allowing a mutual translation movement between the cover and the terminal.

[0022] In order also to better prevent the accidental opening of the cover and to better protect the reading means, in an advantageous embodiment, a protrusion is provided on an inner face of the front wall of said cover, said protrusion being provided to be inserted into said slot when the cover is in said second position.

[0023] In a particularly preferred embodiment, the distance between the first engaging means and the front wall of the cover is exactly or at least ½ of the distance between the front wall of the terminal and a rear end of the first portion of the terminal.

[0024] When the distance between the first engaging means and the front wall of the cover is greater than ½ of the distance between the front wall of the terminal and the rear end of the first portion of the terminal, the pivot axis is in a rear second half of this first portion and the front wall becomes, when the cover is open, the rear wall, being in a more rear part than the part corresponding to the end of the validation means.

[0025] When the distance between the first engaging means and the front wall of the cover is exactly ½ of the distance between the front wall of the terminal and the rear end of the first portion of the terminal, the pivot axis is at the medium of this latter between both halves of the first portion and the rear wall abuts substantially at the end of the keyboard. Thus, the cover permits a better sight of the screen while ensuring a perfect protection of the keyboard from being seen from onlookers.

[0026] Advantageously, the lateral sides of the cover, in their front part describe a recess provided to allow the lateral side of the cover, when in open position, to be in the most horizontal position as possible, without any inclination due to the height of the position of the second engaging means.

[0027] In a further most particularly preferred embodiment, the lateral sides of the cover comprise each a front edge connected to said front wall, and a rear edge describing a quarter of circle, said quarter of circle being provided to allow the rotation of the cover, from the first position to the second position or inversely, without buttting a surface upon which said terminal is placed.

[0028] Due to this, when the terminal is placed on a countertop, it is possible to open the cover without butting anything. The quarter of circle is the preferred shape needed for allowing a most terminal point of the lateral side of the cover to be subject to the rotation movement freely gliding without butting anything. Moreover, the rear end describing a quarter of circle allows to ensure a maximal height for the lateral sides which in their turn ensures a maximal safety.

[0029] In fact, when the rear end is a perpendicular end in view of the first edge of the lateral side, when a merchant wants to open the cover, the most terminal point along the second edge (intersection between the second edge of the lateral side and the rear end of the lateral side) of the lateral side of the cover will abut the surface on which the terminal is placed and it is therefore impossible to open it without lifting up said terminal. As mentioned before the shape of the rear ends of the lateral sides of the cover ensures a maximal safety by permitting a maximal height for the lateral sides and provides a more practical terminal which should not be lifted up for opening it.

[0030] Advantageously, said rear edge describing a quarter of circle is provided to be engaged in a groove having a corresponding shape and being provided upon said lateral side of said terminal.

[0031] The groove upon each lateral side of said terminal acts as a guiding means and is provided to help...
for the rotation of the cover.

[0032] Preferably, a spring element is connected to said engaging means, said spring element being provided to allow the cover to stay engaged either in said first position or in said second position.

[0033] In a variant, an opening mechanism is further provided to allow to stay engaged either in said first open position or in said second closed position.

[0034] Preferably a spring element or an opening mechanism will be provided to prevent the cover to move accidentally to the other position when in one position.

[0035] Other embodiments of the device according to the invention are mentioned in the annexed claims.

[0036] The present invention also relates to the use of the data entry terminal as a countertop terminal or as a portable terminal.

[0037] Other characteristics and advantages of the invention will appear more clearly in the light of the following description of some particular non-limiting embodiments of the invention, while referring to the figures.

[0038] Figure 1 is a view in perspective of the device according to the invention with the cover in second closed position.

[0039] Figure 2 is a view in perspective of the device according to the invention with the cover in first open position.

[0040] Figure 3 is a view in perspective of the device according to the invention with the cover in second closed position wherein the distance between the first engaging means and the front wall of the cover is exactly ½ of the distance between the front wall of the terminal and a rear end of the first portion of the terminal.

[0041] Figure 4 is a view in perspective of the device according to the device shown in Figure 3 illustrating the opening or the closing of the cover.

[0042] Figure 5 is a view in perspective of the device according to the device shown in Figure 3 illustrating the cover in the first open position.

[0043] Figure 6 is a view in perspective of an embodiment according to the invention wherein the lateral side of the terminal comprises a substantially horizontal groove as engaging means.

[0044] Figure 7 is a view in perspective of a preferred embodiment according to the invention wherein the groove is ended in the front part by a nick.

[0045] Figure 8 is a view in perspective of a preferred embodiment of the cover according to the invention wherein the groove is ended in the rear part by a nick.

[0046] Figure 9 is a view in perspective of a preferred embodiment according to the invention wherein a protrusion is provided in the inner face of the front wall of the cover.

[0047] Figure 10 is a view in perspective of the device according to the invention with the cover in second closed position wherein the distance between the first engaging means and the front wall of the cover is exactly ½ of the distance between the front wall of the terminal and a rear end of the first portion of the terminal and wherein the rear ends of the lateral side of the cover describe a quarter of circle.

[0048] Figure 11 is a lateral view in perspective of the device according to the device shown in Figure 10 illustrating the opening or the closing of the cover.

[0049] Figure 12 is a lateral view of the device according to the device shown in Figure 10 illustrating the cover in the first open position.

[0050] Figure 13 is a lateral view of the device according to the invention with the cover in first open position wherein the distance between the first engaging means and the front wall of the cover is exactly ½ of the distance between the front wall of the terminal and a rear end of the first portion of the terminal, wherein the rear ends of the lateral side of the cover describe a quarter of circle and wherein the lateral sides of the terminal are each provided with a groove describing a correspondent quarter of circle.

[0051] Figure 14 is a detailed elevation view of the terminal showing the compartimentation the upper face of the terminal comprising a first portion, a second portion and a rear end of the first portion delimiting the first and the second portion in a parallel direction with regards to the pivot axis.

[0052] Figure 15 is a detailed view of an optional opening mechanism for the cover of the terminal.

[0053] In the drawings, a same reference sign has been allotted to a same or analogous element of the data entry terminal according to the invention.

[0054] Figure 1 shows the device 1 according to the invention comprising a left lateral side 2 and a right lateral side 3, a front wall 4 and a back wall 5, an upper face 6 and a lower face 7. As it can be seen at Figure 14, the upper face 6 of the terminal consists of a first portion 6a and a second portion 6b. Returning to Figure 1, the terminal further comprises means for manual validation 8 being confined in said first portion 6a of the upper face 6 of the terminal 1 and a cover 9. The means for manual validation are for example a keyboard 8 which is ended by a rear end 6c (see also Figure 14) delimiting the first portion 6a of the upper face 6 of the terminal 1. The rear end 6c is in fact, being the limit between the first portion 6a and the second portion 6b and the first portion 6a can be defined as extending from the rear end 6c to the front wall 4 of the terminal. The cover 9 comprises at least a first 10, a second lateral side 11 and a front wall 12 each having a first 13 and a second edge 14. The lateral sides 10,11 of the cover have each a front edge connected to the front wall 12 and a rear edge 25. The first 11 and the second 12 lateral side having each first engaging means 15 provided to be each engaged in second corresponding engaging means 16 being each disposed on said left 2 and said right lateral side 3 of said terminal 1.

[0055] The terminal 1 further comprises a screen 17 and optionally additional keys (not shown). It should be understood that means for manual validation can be a keyboard as mentioned before with number or letters, but they can also be an additional biometric identification...
device like fingerprint identification device, a retina recognition system or the like.

[0056] The cover 9 is pivotally mounted around a pivot axis between a first position (open position) and a second position (closed position). In fact the first 16 and the second 15 engaging means are engaged in one other in a aligned manner to form said pivot axis and to allow a mutual rotation around the pivot axis of the cover 9 and of the terminal 1. When the cover 9 is in the second closed position, the first edge 13 of the rear wall 12 is substantially at the same level as the upper face 6 of the terminal 1 and the second edge 14 is substantially at the same level as the lower face 7 of the terminal 1.

[0057] Figure 2 shows the device according to the invention as illustrated in Figure 1 in the first open position after being rotated around the pivot axis. When the cover 9 is in the first position, it protects the means of validation 8 from being seen by an unauthorised user.

[0058] When the cover 9 is in the first open position, the first edge 13 of the front wall 12 of the cover 9 is positioned above said second portion 6b, in particular upon the second portion 6b of the upper face 6 of the terminal 1 and the cover 9 forms a shield around said first portion 6a comprising the keyboard 8. The second edge 14 of the cover is now, when in the open position, the upper edge.

[0059] The person skilled in the art will understand that the cover 9 is rotated with an angle greater than 90°, and preferably greater than 145° and most preferably around 180°.

[0060] In this embodiment, the cover 9, when in open position, protects also the screen 17 from being seen by an unauthorised user.

[0061] Figure 3 illustrates a particular embodiment where the distance between the first engaging means 15 and the front wall 12 of the cover 9 is exactly 1/2 of distance of the distance between the front wall 4 of the terminal 1 and a rear end 6c of the first portion 6a of the terminal 1.

[0062] Figure 3 illustrates the cover 9 in a closed position, which is the position either when the terminal 1 is not used or used for the first step, being, as mentioned previously, when the merchant inserts the amount to be paid on the keyboard 8.

[0063] Figure 4 shows the opening or the closing action of the terminal 1 of this particular embodiment. As it can be seen, the cover 9 is closed or opened with a rotation movement which is completed when the first edge 13 of the cover 9 rests on the second portion 6b of the upper face 6 of the terminal (Figure 5). In this embodiment, the front wall 12 of the cover reaches the rear end 6c of the first portion 6a of the upper face 6 of the terminal 1 when the cover 9 is opened, thereby becoming the rear wall 12 of the shield 9.

[0064] As it can be seen on Figure 5 or 6, when the cover is in the first open position, a rotation of this latter of nearly 180° was performed. Because the distance between the first engaging means 15 and the front wall 12 of the cover 9 is exactly 1/2 of the distance between the front wall 4 (of the terminal 1) and a rear end 6c of the first portion 6a of the terminal 1, the front wall 12 becomes the rear wall 12 of the protecting shield. The first edge 13 of the rear wall 12 is just situated on the second portion 6b of the upper face 6 of the terminal 1, close to the first portion 6a and substantially at the end of the keyboard 8.

[0065] This embodiment also allows the merchant to see the screen 17 of the terminal 1 and provides a shield that more closely surrounds the keyboard 8.

[0066] Figure 6 shows a particular embodiment according to the invention wherein the lateral side 2,3 of the terminal 1 comprises a substantially horizontal groove 18 as engaging means 16.

[0067] It should be understood by those skilled in the art that the groove 18 could also be placed on the lateral side 10,11 of the cover 9 as the first and the second engaging means (15, 16) could also be in each embodiment inverted. Moreover, it should be understood that, at the left of the terminal 1, a groove 18 can be provided on the left lateral side 2 of the terminal 1 and a protrusion 15 can be provided on the lateral left side 11 of the cover 9 while at the right lateral side 3 of the terminal 2 a protrusion can be provided and a groove can be provided on the lateral right side 10 of the cover 9, or inversely.

[0068] As illustrated, the groove of this particular embodiment is substantially horizontal, but it can also be inclined with an angle comprised in the range of 1 to 359°. The groove has at least two particular advantages. Firstly, the groove is provided to reduce accidental rotations of the cover which occurs, for example, when the terminal is used as a portable terminal and is placed in the pocket of the merchandiser. Secondly, namely when the terminal is used as a countertop terminal, it could be interesting to have an inclined groove to prevent that a most terminal point 19 along the first edge 13 (or a most terminal point 20 along the second edge 14) of the cover 9, for example, abuts a surface on which the terminal 1 rests. If the groove 18 has an angle, for example, in the range from 1 to 179°, preferably in the range from 15° to 165°, most preferably from 15° to 75°, the merchant has to lift the cover 9 up before rotating it thereby preventing the end 19, 20 of the cover 9 to abut the surface on which the terminal 1 is placed.

[0069] In a variant of what is shown at Figure 6, a nick 21, or other equivalent blocking means, could be provided at the frontal end of the groove (Figure 7), at the rear end of the groove (Figure 8) or both (not shown).

[0070] The nick 21 will act as a blocking means and a pivot point. If the nick 21 is provided at the frontal end of the groove 18, the cover 9 should firstly be translated from its closed position forwardly, then it would be engaged in the nick 21 which simplifies the rotation by providing a little cavity acting as a blocking means in which the protrusion 15 (for example, the engaging means 15 on the internal face of the lateral side 10,11 of the cover 9) will be accommodated and will rotate. The nick 21 serves thereby as a support and blocking means to help
for the rotation while stopping any translation of the cover 9. After the rotation of the cover, a further translation is performed in the same groove 18 or optionally in another one 18' (not shown) to place the cover in its open position.

[0071] The groove 18 (of Figure 7 and 8) can be as mentioned before in the explanation of Figure 7 inclined with an angle comprised in the indicated range.

[0072] The groove 18' can be similar in shape, size, direction, orientation, inclination or different.

[0073] In a similar manner, as shown at Figure 8, the nick 21 is provided at the rear end of the groove 18. Thus, as the protrusion 15 is accommodated in the nick 21 when the cover is closed, the cover 9 should firstly be rotated from its closed position with an angle of about 180°. Then it would be translated along the groove 18 to place the cover 9 in its open and safe position in order to form said shield.

[0074] It should be understood that all the movements and all engaging means 15,16 are mutual, so, although the groove is described herein as being in the terminal 1 and the protrusion on the cover 9, the contrary is also true. It is clear for those skilled in the art that the protrusion can also be found on the lateral sides 2,3 of the terminal 1 and the groove on the lateral side 10,11 of the cover 9. Moreover, it should be understood that, at the left of the terminal, a groove 18 can be provided on the left lateral side 2 of the terminal 1 and a protrusion 15 can be provided on the left lateral side 11 of the cover 9 while at the right lateral side 3 of the terminal 2 a protrusion can be provided and a groove can be provided on the lateral right side 10 of the cover 9, or inversely.

[0075] An advantageous embodiment is depicted at Figure 9 in which it can be seen that a protrusion 22 is provided on an inner face of the front wall 12 of the cover 9. The protrusion 22 is provided to be inserted into the slot 23 (for example shown at Figure 6, 7, and 8) of the reading means of the terminal 1 when the cover is in the closed second position.

[0076] At Figure 10 is depicted the device 1 according to the invention in the most preferred embodiment, with the cover 9 in second closed position, wherein the distance between the first engaging means 15 and the front wall 12 of the cover 9 is substantially exactly ½ of the distance between the front wall 4 of the terminal 1 and a rear end 6c of the first portion 6a of the terminal and wherein the rear ends 25 of the lateral sides 10,11 of the cover 9 describe a quarter of circle. Moreover, the lateral sides 10,11 of the cover 9, in their front part describe a recess 30 provided to allow the lateral sides 10,11 of the cover 9, when in open position, to be in the most horizontal position as possible, without any inclination due to the height of the position of the protrusion 15.

[0077] As it can be seen at Figure 11, during the opening of the cover 9 in order to put the cover in the open position (Figure 12), due to the shape of the rear ends 25 describing a quarter of circle, the most terminal point 20 will never abut the surface on which the terminal 1 is disposed thereby allowing the terminal 1 to stay in place when the cover 9 should be opened. This minimises the risks of breaking, falling, etc. by providing a reduce handling when using the terminal 1. Moreover, the rear ends 25 describing a quarter of circle of the lateral sides 10,11 allow to ensure a maximal high for the lateral sides 10,11 which in their turn ensures a maximal safety while providing a useful terminal.

[0078] Figure 12 illustrated particularly the utility of the recess 30 provided in the front part of the cover to allow the lateral side 10,11 of the cover 9, when in open position, to be in the most horizontal position as possible, without any inclination due to the height of the position of the protrusion 15. The edge 13 of the front wall 12 of the cover 9 rests just on the rear part 6c of the upper part 6 of the terminal without any space between the edge 13 and the upper face 6, thereby providing a better safety for the shield around the keyboard 8 of the terminal according to the invention.

[0079] Advantageously, as illustrated at Figure 13, a groove 26 could be provided on the lateral side 2,3 of the terminal 1. The groove 26 describes a quarter of circle correspondent to the quarter of circle of the rear ends 25 of the lateral sides 10,11 of the cover 9. The groove 26 will be aimed for guiding the ends 25 of the lateral side 10,11 of the cover 9 when rotating around the pivot axis, which is aligned with the engaging means 15,16, and for supporting the most terminal points 19,20 of the edges 13,14.

[0080] It should be envisaged that the shape of the groove 26 and of the rear ends 25 of the lateral sides 10,11 of the cover 9 could be different, although the quarter of circle shape is the most preferred shape.

[0081] In view of the preceding explanation, the steps to use the terminal are the followings:

1. the merchant inserts the amount to be paid on the keyboard 8 with the cover 9 in closed position,
2. the merchant opens the cover 9 to allow the user to insert his or her card into the slot 24 and to enter while being protected from onlookers, his/her personal identification number (PIN).

[0082] The terminal according to the invention is very safe while being practical in view of the terminal of the prior art. Indeed, in the case of a countertop terminal, the possibility to let the cover in a closed position while introducing the amount to be paid is a very practical possibility which simplifies a lot the transaction for the merchant.

[0083] The second step prevents the client to enter his PIN when the cover is in the closed position. It is therefore impossible to introduce the PIN without the protecting shield with the cover is in the closed position, since the access to the slot is blocked therefore not allowing the card to be inserted.

[0084] The shield provided according to the invention is a very safe shield with lateral edges which protect the introduction of the personal identification number from
As can be seen at Figure 15, a spring element 27 is further provided upon a lateral side 2,3 of the terminal 1. The spring element 27 can also be provided on both lateral sides 2,3 of the terminal 1. The spring element 27 is provided for forcing the cover 9 to stay engaged either in said first open position or in said second closed position and to prevent accidental openings of the cover 9.

The protrusion 15, being here provided upon the inner face of the lateral side 10,11 of the cover 9, have a particular shape provided to resist to a movement at the beginning of an opening and a closing movement. To this end, the external area of protrusion 15 presents four peripheral part (28,28’, 29, 29’) which are a flat upper face 28 and a flat lower face 28’ and a right 29 and a left circular part 29’. The protrusion 15 is aimed for being engaged in the corresponding engaging means 16 on the lateral side of the terminal. The corresponding engaging means 16 should preferably be a substantially circular cavity provided to allow the rotation of the protrusion 15 having this particular shape.

The spring element 27 is preferably as illustrated at Figure 15, a longitudinal spring element 27 extending in a parallel manner in view of the direction perpendicularly to the pivot axis placed on the lateral sides 2,3 of the terminal 1.

For obtaining the protrusion 15 of this particular shape, it could be appropriate to add a piece of the required shape around the original first engaging means 15 such as a nut or equivalent or to manufacture directly to cover 9 with this protrusion 15.

When the cover 9 is open, the upper flat part 28 of the protrusion 15 is towards the longitudinal spring element 27. When the merchandiser, the merchant or the user rotates the cover 9 to close the terminal 1, the upper flat surface 28 of the protrusion 15 will exert a resistance against the rotation since the upper surface 28 is in an inclined position and pushes towards the longitudinal spring element 27.

During the closing movement, when this resistance point is passed, the upper face 28 of the protrusion 15 has a little rotated and the spring element 27 is contacted a circular part 29 of the protrusion 15. The circular part 29 of the protrusion 15 glides upon the spring element 27 due to its shape and the cover closes relatively freely.

At the end of the closing movement, when the circular part 29 is ended, the lower flat part 28’ contacts nearly the spring element 27. When the merchant or other closes the terminal 1, he has to exert a little pressure to the cover 9 to pass this resistance point being the same as when he begins to close the cover 9. After this resistance point is passed, the lower flat part 28’ contacts completely the spring element 27 thereby maintaining the cover in the closed position and providing a resistance to the rotation occurring during accidental opening.

For opening the terminal, the merchant or the like has to pass the resistance point corresponding to the end of the lower flat part 28’. When the lower flat part 28’ of the protrusion 15 has a little rotated, the spring element 27 contacts the beginning of the circular part 29 of the protrusion 15. Then, the circular part 29 of the protrusion 15 glides upon the spring element 27 due to its shape and the cover closes relatively freely.

At the end of the opening movement, when the circular part 29 is ended, the upper flat part 28 contacts nearly the spring element 27. When the merchant or other opens the terminal 1, he has to exert a little pressure to the cover 9 to pass this resistance point being the same as when he begins to open the cover 9. After this resistance point is passed, the upper flat part 28 contacts completely the spring element 27 thereby maintaining the cover 9 in the open position and providing a resistance to keep the shield in place when using the terminal 1.

Such a terminal is for example a debit/credit card payment device. The terminal provided, according to the invention, is as practical for a countertop terminal as for a portable terminal. Further, the terminal according to the invention also comprises means to establish a communication with a server as it is impossible otherwise to use the terminal for bank transaction.

Although the preferred embodiments of the invention have been disclosed for illustrative purpose, those skilled in the art will appreciate that various modifications, additions or substitutions are possible, without departing from the scope and spirit of the invention as disclosed in the accompanying claims.

**Claims**

1. Data entry terminal (1) with manual validation, comprising at least a left lateral side (2) and a right lateral side (3), a front wall (4) and a back wall (5), an upper face (6) and a lower face (7), said upper face (6) consisting of a first portion (6a) and a second portion (6b), said terminal further comprising means for reading a portable data support, means for manual validation (8) of the data, said means for manual validation of the data being confined in said first portion (6a) of the upper face (6) of the terminal (1), and a cover (9) being pivotally mounted around a pivot axis between a first position and a second position, said first position being a position for protecting the means of validation (8) from being seen by an unauthorised user and said second position being a closed position, said cover (9) comprising at least a first (10) and a second lateral side (11) having each an internal and an external face, said cover (9) further having a front wall (12) having a first (13) and a second edge (14), said first edge (13) being substantially at the same level as the upper face (6) of the terminal (1) when the cover (9) in said second position and the second edge (14) being substantially at the same level as the lower face (7) of the terminal (1) when
the cover (9) is in the second position, said internal face of the first (10) and of the second lateral side (11) having each first engaging means (15) provided to be each engaged in second corresponding engaging means (16) being disposed each on said left (2) and said right lateral side (3) of said terminal (1), both first (15) and both second engaging means (16) being provided to be aligned together according said pivot axis to allow a mutual translation movement around said pivot axis of the cover (9) and of the terminal (1). characterised in that said cover (9) is provided to rotate with an angle of more than 90° when rotating from said second position to be in said first position so that the first edge (13) of the front wall (12) is provided to be positioned above said second portion (6b).

2. Data entry terminal (1) according to claim 1, wherein said cover is provided to rotate with an angle of more than 145°.

3. Data entry terminal (1) according to claim 1 or 2, wherein said cover is provided to rotate with an angle around 180°.

4. Data entry terminal (1) according to anyone of the precedent claims wherein the first edge (13) of the front wall (12) of the cover (9) is provided to be positioned upon said second portion (6b) of the upper face (6) of the terminal (1), in order to form a shield around said first portion (6a).

5. Data entry terminal (1) according to anyone of the precedent claims, wherein the means for reading a portable data support have a slot (24) on said front wall (4) of the terminal (1) and wherein the second position of the cover (9) is a position for protecting said means for reading a portable data support.

6. Data entry terminal (1) according to anyone of the precedent claims, wherein said both first and both second engaging means (15,16) are respectively situated in a most upper part of the lateral sides (2,3,10,11) of the cover (9) and of the terminal (1).

7. Data entry terminal (1) according to anyone of the precedent claims, wherein at least one of said first engaging means (15) is a groove (18) for allowing a mutual translation movement between the cover (9) and the terminal (1).

8. Data entry terminal (1) according to anyone of the precedent claims, wherein at least one of the said second engaging means (16) is a groove (18) for allowing a mutual translation movement between the cover (9) and the terminal (1).

9. Data entry terminal (1) according to anyone of the precedent claims, wherein a protrusion (22) is provided on an inner face of the front wall (12) of said cover (9), said protrusion (22) being provided to be inserted into said slot (24) when the cover (9) is in said second position.

10. Data entry terminal (1) according to anyone of the precedent claims, wherein the distance between the first engaging means (15) and the front wall (12) of the cover (9) is at least ½ of the distance between the front wall (4) of the terminal (1) and a rear end (6c) of the first portion (6a) of the terminal.

11. Data entry terminal (1) according to claim 10, wherein in the distance between the first engaging means (15) and the front wall (12) of the cover (9) is exactly ½ of the distance between the front wall (4) of the terminal (1) and a rear end (6c) of the first portion (6a) of the terminal.

12. Data entry terminal (1) according to anyone of the precedent claims, wherein the lateral sides (10,11) of the cover (9) comprise each a front edge connected to said front wall (12), and a rear edge (25) describing a quarter of circle, said quarter of circle being provided to allow the rotation of the cover (9), from the first position to the second position or inversely, without butting a surface upon which said terminal (1) is placed.

13. Data entry terminal (1) according to claim 12, wherein said rear edge (25) describing a quarter of circle is provided to be engaged in a groove (26) having a corresponding shape and being provided upon said lateral side (2,3) of said terminal (1).

14. Data entry terminal (1) according to anyone of the precedent claims, wherein a spring element is connected to said engaging means, said spring element being provided to allow the cover (9) to stay engaged either in said first position or in said second position.

15. Data entry terminal (1) with manual validation according to anyone of the claims 1 to 12, wherein an opening mechanism is further provided to allow the cover (9) to stay engaged either in said first open position or in said second closed position.

16. Use of the data entry terminal (1) with manual validation according to anyone of the precedent claims, the terminal being used as a countertop terminal.

17. Use of the data entry terminal (1) with manual validation according to any one of the precedent claims, the terminal being used as a portable terminal.
Dateneingabestation (1) zur handausführbaren Validierung, welche zumindest eine linke Seitenwand (2) und eine rechte Seitenwand (3), eine Vorderwand (4) und eine Hinterwand (5), eine Oberseite (6) und eine Untere (7) umfasst, wobei die Oberseite (6) aus einem ersten Abschnitt (6a) und einem zweiten Abschnitt (6b) besteht, wobei die Station ferner Mittel zum Lesen eines tragbaren Datenträgers, Mittel zum handausführbaren Validieren (8) der Daten, wobei das Mittel zum handausführbaren Validieren der Daten in dem ersten Abschnitt (6a) der Oberseite (6) der Station (1) untergebracht ist, und eine Abdeckung (9) umfasst, welche gelenkig um eine Drehachse zwischen einer ersten Position und einer zweiten Position angebracht ist, wobei die erste Position eine Position zum Schützen des Validationsmittels (8) ist, so dass es nicht von einem unbefugten Benutzer gesehen wird, und wobei die zweite Position eine geschlossene Position ist, wobei die Abdeckung (9) zumindest eine erste (10) und eine zweite Seitenwand (11) umfasst, welche jeweils eine Innen- und eine Außenfläche aufweisen, wobei die Abdeckung (9) ferner eine Vorderwand (12) aufweist, welche eine erste (13) und eine zweite Kante (14) aufweist, wobei sich die erste Kante (13) im Wesentlichen auf der gleichen Höhe wie die Oberseite (6) der Station (1) befindet, wenn sich die Abdeckung (9) in der zweiten Position befindet, und wobei sich die zweite Kante (14) im Wesentlichen auf der gleichen Höhe wie die Untere (7) der Station (1) befindet, wenn sich die Abdeckung (9) in der zweiten Position befindet, wobei die Innenfläche der ersten Kante (13) eine Eingriffmitte (15) aufweist, welche bereitgestellt sind, um jeweils in zweite entsprechende Eingriffmittel (16) einzugreifen, welche sich jeweils an der linken (2) und der rechten Seitenwand (3) der Station (1) befinden, wobei beide erste (15) und beide zweite Eingriffmittel (16) gemäß der Drehachse aufeinander ausgerichtet bereitgestellt sind, um eine gegenseitige Drehung um die Drehachse der Abdeckung (9) und der Station (1) zu ermöglichen, dadurch gekennzeichnet, dass die Abdeckung (9) so bereitgestellt ist, dass sie sich mit einem Winkel von mehr als 90° dreht, wenn sie aus der zweiten Position in die erste Position gedreht wird, so dass sich die erste Kante (13) der Vorderwand (12) über dem zweiten Abschnitt (6b) befindet.

Dateneingabestation (1) nach Anspruch 1, wobei die Abdeckung so bereitgestellt ist, dass sie sich mit einem Winkel von mehr als 145° dreht.

Dateneingabestation (1) nach Anspruch 1 oder 2, wobei die Abdeckung so bereitgestellt ist, dass sie sich mit einem Winkel von rund 180° dreht.

Dateneingabestation (1) nach einem der vorhergehenden Ansprüche, wobei die erste Kante (13) der Vorderwand (12) der Abdeckung (9) so bereitgestellt ist, dass sie sich über dem zweiten Abschnitt (6b) der Oberseite (6) der Station (1) befindet, um einen Schirm um den ersten Abschnitt (6a) zu bilden.

Dateneingabestation (1) nach einem der vorhergehenden Ansprüche, wobei das Mittel zum Lesen eines tragbaren Datenträgers einen Schlitz (24) an der Vorderwand (4) der Station (1) aufweist, und wobei die zweite Position der Abdeckung (9) eine Position zum Schützen des Mittels zum Lesen eines tragbaren Datenträgers ist.

Dateneingabestation (1) nach einem der vorhergehenden Ansprüche, wobei sich die beiden ersten und die beiden zweiten Eingriffmittel (15, 16) entsprechend in einem obersten Teil der Seitenwände (2, 3, 10, 11) der Abdeckung (9) und der Station (1) befinden.

Dateneingabestation (1) nach einem der vorhergehenden Ansprüche, wobei zumindest eines der ersten Eingriffmittel (15) eine Nut (18) ist, um eine gegenseitige Translationsbewegung zwischen der Abdeckung (9) und der Station (1) zu ermöglichen.

Dateneingabestation (1) nach einem der vorhergehenden Ansprüche, wobei zumindest eines der zweiten Eingriffmittel (16) eine Nut (18) ist, um eine gegenseitige Translationsbewegung zwischen der Abdeckung (9) und der Station (1) zu ermöglichen.

Dateneingabestation (1) nach einem der vorhergehenden Ansprüche, wobei ein Vorsprung (22) auf einer Innenfläche der Vorderwand (12) der Abdeckung (9) bereitgestellt ist, wobei der Vorsprung (22) bereitgestellt ist, um in den Schlitz (24) eingeführt zu werden, wenn sich die Abdeckung (9) in der zweiten Position befindet.

Dateneingabestation (1) nach einem der vorhergehenden Ansprüche, wobei die Distanz zwischen dem ersten Eingriffmittel (15) und der Vorderwand (12) der Abdeckung (9) mindestens die Hälfte der Distanz zwischen der Vorderwand (4) der Station (1) und dem hinteren Ende (6c) des ersten Abschnittes (6a) der Station ist.

Dateneingabestation (1) nach Anspruch 10, wobei die Distanz zwischen dem ersten Eingriffmittel (15) und der Vorderwand (12) der Abdeckung (9) genau die Hälfte der Distanz zwischen der Vorderwand (4) der Station (1) und dem hinteren Ende (6c) des ersten Abschnittes (6a) der Station ist.

Dateneingabestation (1) nach einem der vorherge-
1. Terminal de saisie de données (1) à validation manuelle, comprenant au moins un côté latéral gauche (2) et un côté latéral droit (3), une paroi avant (4) et une paroi arrière (5), une face supérieure (6) et une face inférieure (7), ladite face supérieure (6) consistant en une première partie (6a) et une deuxième partie (6b), ledit terminal comprenant en outre des moyens pour lire un support de données portable, des moyens de validation manuelle (8) des données, lesdits moyens de validation manuelle des données étant confinés dans ladite première partie (6a) de la face supérieure (6) du terminal (1), et un cache (9) étant monté de manière à pivoter autour d’un axe de pivotement entre une première position et une deuxième position, ladite première position étant une position destinée à protéger les moyens de validation (8) des regards d’un utilisateur non autorisé et ladite deuxième position étant une position fermée, ledit cache (9) comprenant au moins un premier (10) et un deuxième côté latéral (11) ayant chacun une face interne et une face externe, ledit cache (9) ayant en outre une paroi frontale (12) ayant un premier (13) et un deuxième bord (14), ledit premier bord (13) étant sensiblement au même niveau que la face supérieure (6) du terminal (1) quand le cache (9) est dans ladite deuxième position et le deuxième bord (14) étant sensiblement au même niveau que la face inférieure (7) du terminal (1) quand le cache (9) est dans la deuxième position, ladite face interne du premier (10) et du deuxième côté latéral (11) ayant chacune des premiers moyens d’engagement (15) prévus pour être engagés chacun dans des deuxième moyens d’engagement (16) correspondants qui sont disposés chacun sur ledit côté latéral gauche (2) et ledit côté latéral droit (3) dudit terminal (1), les deux premiers (15) et les deux deuxième moyens d’engagement (16) étant prévus pour être alignés ensemble d’après ledit axe de pivotement pour permettre une rotation mutuelle autour dudit axe de pivotement du cache (9) et dudit terminal (1), caractérisé en ce que ledit cache (9) est prévu pour pivoter d’un angle de plus de 90° quand il pivote de ladite deuxième position pour être dans ladite première position de sorte que le premier bord (13) de la paroi frontale (12) est prévu pour être positionné au-dessus de ladite deuxième partie (6b).

2. Terminal de saisie de données (1) selon la revendication 1, dans lequel ledit cache est prévu pour pivoter d’un angle de plus de 145°.

3. Terminal de saisie de données (1) selon la revendication 1 ou 2, dans lequel ledit cache est prévu pour pivoter d’un angle d’environ 180°.

4. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel le premier bord (13) de la paroi frontale (12) du cache (9) est prévu pour être positionné sur ladite deuxième partie (6b) de la face supérieure (6) du terminal (1) en vue de former un écran autour de ladite première partie (6a).

5. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel les moyens de lecture d’un support de données portable ont une fente (24) sur ladite paroi avant (4) du terminal (1) et dans lequel la deuxième position du cache (9) est une position pour protéger des regards lesdits moyens de lecture d’un support de données portable.

Revdnancements

1. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel le premier bord (13) de la paroi frontale (12) du cache (9) est prévu pour être positionné sur ladite deuxième partie (6b) de la face supérieure (6) du terminal (1) en vue de former un écran autour de ladite première partie (6a).

2. Terminal de saisie de données (1) selon la revendication 1, dans lequel ledit cache est prévu pour pivoter d’un angle de plus de 145°.

3. Terminal de saisie de données (1) selon la revendication 1 ou 2, dans lequel ledit cache est prévu pour pivoter d’un angle d’environ 180°.

4. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel le premier bord (13) de la paroi frontale (12) du cache (9) est prévu pour être positionné sur ladite deuxième partie (6b) de la face supérieure (6) du terminal (1) en vue de former un écran autour de ladite première partie (6a).

5. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel les moyens de lecture d’un support de données portable ont une fente (24) sur ladite paroi avant (4) du terminal (1) et dans lequel la deuxième position du cache (9) est une position pour protéger des regards lesdits moyens de lecture d’un support de données portable.
6. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel lesdits deux premiers moyens d’engagement (15, 16) sont respectivement situés dans une partie supérieure la plus haute des côtés latéraux (2, 3, 10, 11) du cache (9) et du terminal (1).

7. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel au moins un desdits premiers moyens d’engagement (15) est une rainure (18) destinée à permettre un mouvement de translation mutuel entre le cache (9) et le terminal (1).

8. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel au moins un desdits deuxièmes moyens d’engagement (16) est une rainure (18) destinée à permettre un mouvement de translation mutuel entre le cache (9) et le terminal (1).

9. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel une protubérance (22) est prévue sur une face interne de la paroi frontale (12) dudit cache (9), ladite protubérance (22) étant prévue pour être insérée dans ladite fente (24) quand le cache (9) est dans ladite deuxième position.

10. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel la distance entre les premiers moyens d’engagement (15) et la paroi frontale (12) du cache (9), est au moins la ½ de la distance entre la paroi avant (4) du terminal (1) et une extrémité arrière (6c) de la première partie (6a) du terminal.

11. Terminal de saisie de données (1) selon la revendication 10, dans lequel la distance entre les premiers moyens d’engagement (15) et la paroi frontale (12) du cache (9) est exactement la ½ de la distance entre la paroi avant (4) du terminal (1) et une extrémité arrière (6c) de la première partie (6a) du terminal.

12. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel les côtés latéraux (10, 11) du cache (9) comprennent chacun un bord avant connecté à ladite paroi frontale (12) et un bord arrière (25) décrivant un quart de cercle, ledit quart de cercle étant prévu pour permettre la rotation du cache (9) de la première position dans la deuxième position et inversement sans buter contre une surface sur laquelle ledit terminal (1) est placé.

13. Terminal de saisie de données (1) selon la revendication 12, dans lequel ledit bord arrière (25) décrivant un quart de cercle est prévu pour être engagé dans une rainure (26) ayant une forme correspondante et étant prévue sur ledit côté latéral (2, 3) dudit terminal (1).

14. Terminal de saisie de données (1) selon l’une quelconque des revendications précédentes, dans lequel un élément ressort est connecté auxdits moyens d’engagement, ledit élément ressort étant prévu pour permettre au cache (9) de rester engagé soit dans ladite première position soit dans ladite deuxième position.

15. Terminal de saisie de données (1) à validation manuelle selon l’une quelconque des revendications 1 à 12, dans lequel un mécanisme d’ouverture est en outre prévu pour permettre au cache (9) de rester engagé soit dans ladite première position ouverte soit dans ladite deuxième position fermée.

16. Utilisation du terminal de saisie de données (1) à validation manuelle selon l’une quelconque des revendications précédentes, le terminal étant utilisé comme terminal de comptoir.

17. Utilisation du terminal de saisie de données (1) à validation manuelle selon l’une quelconque des revendications précédentes, le terminal étant utilisé comme terminal portable.