PATENT AGENT EXAMINATION

Paper B

Wednesday       -        April 25, 2012       -       9:00 am to 1:00 pm

INSTRUCTIONS TO CANDIDATES

1. You have been provided with a copy of the examination paper, answer book(s), an envelope, and a copy of the Patent Act and Patent Rules. The only other text you are permitted to bring to the examination is one of the following: English dictionary; French dictionary; or bilingual (French/English) dictionary.

2. You must provide your own pen with which to write the paper.

3. Cellular phones or any other types of wireless communication devices are not permitted in the examination room.

4. Write your assigned candidate number on the examination paper, the answer book(s), and the envelope. No other form of identification may be used on any material submitted.

5. Identify your answers by question number. Write legibly, using double spacing, on the right side of the answer booklet, staying within the margins of the book pages. Markers are not obliged to consider anything that is written on the left hand pages, nor anything that is indecipherable. You may use the left hand pages for your notes and drafts.

6. You may refer to, incorporate and use portions of the examination paper in your answers. Any matter so incorporated must be clearly indicated in the answer booklet. Because the answer booklet will be scanned into digital format, you must not use staples, sticky notes or highlighters. If a portion of the examination paper is to be incorporated into the answer book, it must be held firmly in place with adhesive tape. You are responsible for providing your own adhesive tape, and scissors.
7. Salutations, signatures and other formalities of correspondence are not required in your answers; substance is what is important. Give reasons for your choices and alternatives. Skeleton and outline answers will be considered if they appear on the right hand pages.

8. Total marks available in this paper are 100. Each question should be read carefully and answered fully. Take note of the marks allotted to each question or part of a question, as a guide to budgeting your time.

9. You have four (4) hours to complete the examination. At the conclusion of the examination period, put down your pen. The Presiding Officer will note the candidate number of anyone not following this rule, and markers may take this into consideration when marking the papers.

10. Upon completion of the paper, insert the examination paper, whether used or not to form part of the answers, together with the answer book(s), into the envelope provided to you and thereafter seal the envelope. Only those responses appearing in the answer book(s) will be considered when awarding marks. No envelope, answer book or examination paper may bear any identification other than your assigned candidate number.

PART A

The following ten documents are provided:

1. Canadian Patent No. 2,xxx,666 (Jong-II et al.)

2. B1: International PCT Application No. WO 03/xxx497
   B3: Canadian Patent Application No. 2,xxx,555
   B4: Canadian Patent No. 2,xxx,985

3. B5: Filing Certificate
   B6: Assignment Registration Certificate
   B7: Requisition from CIPO
   B8: Response to Requisition
   B9: Techsource Printout of Case History for Ca 2,xxx,666

INSTRUCTIONS TO CANDIDATES

Review the following background and provided documents and provide an appropriate response to each question. Do not provide extraneous commentary if not directly relevant to the question. For example, if the question requires a determination as to novelty, do not comment on other criteria such as utility, obviousness, etc. Note that statements of authorities or pertinent law (which may include case law and statutory and regulatory provisions), analysis and argument are always required to adequately address each issue.

BACKGROUND

Your client is Mr. J. Ballsy. You meet him bright and early on a Monday morning. He presents you with CA Patent 2,xxx,666 and tells you he acquired it in a business transaction last week from a Mr. Jong-Un, who was waiting until his father passed away before getting rid of some of the IP they co-owned. Your client initially thought he made a good deal but now he’s not so sure anymore. He did a quick search using Google Patents and came up with some prior art (B1-B4) which he hands over to you. He also
hands you some other additional documents obtained from the previous owner (B5-B9), which appear to be part of the file wrapper from CA Patent 2,xxx,666.

QUESTION 1
Evaluate the citability of B1-B4 in view of anticipation and obviousness. Apply the appropriate sections of the *Patent Act*. [4 marks]

QUESTION 2:
i) Name the two leading cases pertaining to claim construction. [1 mark]
ii) Construe the following selected claim terms of CA Patent No. 2,xxx,666 [14 marks]:
   a) “displaceable” (claim 1)
   b) “first keypad” (claim 1)
   c) “second keypad” (claim 1)
   d) “adjacent to the display device” (claim 1)
   e) “expose and hide at least a part of the display device” (claim 1)
   f) “overlapping” (claim 1)
   g) “slidable” (claim 6)

QUESTION 3:
Is claim 1 anticipated by anyone of B1-B4? Provide supporting arguments and apply the appropriate case law and sections of the *Patent Act*. [17 marks]

QUESTION 4:
Is claim 6 obvious in view of B1-B4? Provide supporting arguments and apply the appropriate case law and sections of the *Patent Act*. [34 marks]

QUESTION 5:
Based on documents B5-B9, identify one potential issue with regards to validity of the patent. Can this issue be addressed to correct the situation? Apply any appropriate case law and sections of the *Patent Act* and the *Patent Rules*. [5 marks]
QUESTION 6:
Based on documents B5-B9, identify one potential issue with regards to your client’s ability to enforce the patent other than a validity issue. Apply any appropriate case law and sections of the Patent Act and the Patent Rules. [5 marks]

END OF QUESTIONS IN PART A
PORTABLE TERMINAL HAVING MOVABLE KEYPAD

Filing Date: May 30, 2006
Publication Date: Nov. 30, 2007
Priority Data: None

Inventors: Kim Jong-II, Kim Jong-Un
Applicant: Kim Jong-II, Kim Jong-Un

TECHNICAL FIELD OF THE INVENTION

The present invention generally relates to a portable terminal, and more particularly to a portable terminal having a movable keypad for making the terminal in a compact size for storage.

DESCRIPTION OF RELATED ART

In general, "portable terminals" are electronic devices for providing wireless communication between users or between a user and a service provider via telecommunication base stations. They may be classified into bar-type terminals, flip-type terminals, and folder-type terminals based on their appearance. Sliding-type and swing-type terminals have recently appeared to meet diversified tastes and demands of users.

Portable terminals have an input device to input or transmit information and an output device for outputting inputted or received information. The input devices of portable terminals include a microphone for inputting a user's voice, a keypad for inputting character information, and a camera lens for inputting video information. The output devices include a speaker for outputting the partner's voice and sound and a display device for outputting character information and video information.

However, there is a limitation in reducing the area occupied by input and output devices, particularly a keypad and a display device, on a portable terminal when considering the ease of operation and the size of the display screen for displaying
information. Therefore, it is difficult to make the terminal in a compact size for storage. Furthermore, a display device for providing a larger screen makes it even more difficult to make the terminal in a compact size together with the keypad and degrades the portability of the terminal.

SUMMARY OF THE INVENTION

Accordingly, the present invention has been made to solve the above-mentioned problems occurring in the prior art, and an object of the present invention is to provide a portable terminal having a movable keypad for making the terminal in a compact size for storage.

In order to accomplish this object, there is provided a portable terminal including a main housing having a display device and a second keypad positioned adjacent to the display device and a first keypad displaceable on the main housing to expose and hide at least a part of the display device, the first keypad and the second keypad being in an overlapping relation when the display device is exposed.

Contrary to previous sliding-type terminals, the portable terminal described herein provides a firm support for pressure on the keys of the moveable keypad.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view showing a portable terminal having a movable keypad according to a preferred embodiment of the present invention, in which the movable keypad is exposed;

FIG. 2 is a perspective view of the portable terminal shown in FIG. 1, in which the movable keypad is hidden;

FIG. 3 is a front view of the portable terminal shown in FIG. 1;
FIG. 4 is a rear view of the portable terminal shown in FIG. 1; and
FIG. 5 is a partially-broken lateral sectional view of the portable terminal shown in FIG. 1.

DETAILED DESCRIPTION
As shown in FIGS. 1 to 5, a portable terminal 100 having a movable keypad according to an embodiment of the present invention includes a main housing 101, a keypad bracket 102 adapted to slide on the main housing 101, and a first keypad 121 positioned on the keypad bracket 102.

The main housing 101 has a display device 111 positioned on the front surface 101a thereof, a receiver unit 113 positioned next to a side of the display device 111 while containing a speaker therein, and a bracket reception unit 103 positioned next to the other side of the display device 111. The bracket reception unit 103 has a reception space 139 (shown in FIG. 5) formed in the lower portion thereof disposed adjacent to the display device 111. The bracket reception unit 103 is provided with, on the front surface 103a thereof, a second keypad 131 separate from the display device having at least two keys, preferably in form of an array of function keys, and a transmitter unit 133 containing a microphone therein. In one embodiment, the second keypad 131 is positioned on an outer peripheral surface of the bracket reception unit 103. Referring to FIG. 4, the main housing 101 may be provided with, on the rear surface 101b thereof, a battery pack 115 and a reception hole 117 to receive a stylus pen 119. The reception hole 117 extends along the longitudinal direction from a position adjacent to the upper end of the rear surface 101b of the main housing 101. The display device 111 may be made up of a touch screen.

In one embodiment, the keypad bracket 102 is coupled in such a manner that it can slide on the main housing 101. The keypad bracket 102 has the first keypad 121 made up of a number of keys 121a positioned in a 3 by 4 array on the top surface thereof. As the keypad bracket 102 slides on the main housing 101 in one direction, the first keypad 121 is hidden in the reception space 139 of the bracket reception unit 103 or is exposed on the main housing 101 when the keypad bracket 102 slides in the other direction. The keypad bracket 102 slides between the display device 111 and the second keypad 131 while being in a parallel plane to them.

When the keypad bracket 102 slides along arrow {circle around (1)} as shown in FIG. 1, the display device 111 is partially hidden by the keypad bracket 102. The user then can use the first keypad 121 to input character information or a desired telephone
number to make a call. The display device 111 is protected by the keypad bracket 102 while in the standby mode.

When the keypad bracket 102 slides along arrow \( \{ \text{circle around (2)} \} \) and is positioned in the reception space 139 of the bracket reception unit 103 as shown in FIG. 2, the display device 111 is completely exposed and provides a large screen. The user then can receive a call or use the second keypad 131 to perform menu selection/movement, perform information searches, and so on.

The user also can use the stylus pen 119 to directly input data or perform an information search through the display device 111.

The keypad bracket 102 has a handle 122 partially protruding from the upper end thereof so that the user can conveniently grasp the handle 122 to slide the keypad bracket 102, and is provided with guide ribs 129 formed on both lateral ends thereof, respectively, to guide the sliding movement of the keypad bracket 102.

Referring to FIG. 5, a flexible print circuit 123 extends from the keypad bracket 102 and is connected to a main board 109 within the main housing 101 to transmit input signals generated from the first keypad 121 to the main board 109. The flexible printed circuit 123 must have a sufficient length considering the range of sliding of the keypad bracket 102.

As mentioned above, the portable terminal having a movable keypad according to the present invention can expose a part of the movable keypad, which is adapted to slide, and to position it in such a manner that it overlaps with another keypad when not in use, to provide a large screen. The movable keypad does not independently occupy a space on the terminal but can selectively overlap with the other keypad or a display device, which is advantageous in making the terminal in a compact size for storage and in providing the firm support for pressure on the keys.

While the invention has been shown and described with reference to certain embodiments thereof, it will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the spirit and scope of the invention as defined by the appended claims. For examples, the moveable keypad may be a flip-type or swing-type, thereby providing movement via rotational or pivot means.
CLAIMS:

1. A portable terminal comprising:
   a main housing having a display device and a second keypad positioned adjacent to the display device; and
   a first keypad displaceable with respect to the main housing to expose and hide at least part of the display device, the first keypad and the second keypad being in an overlapping relation with each other when the display device is completely exposed.

2. The portable terminal as claimed in claim 1, further comprising a keypad bracket slidable in a plane parallel to the display device and the second keypad, the first keypad being positioned on a surface of the keypad bracket.

3. The portable terminal as claimed in claim 2, further comprising a bracket reception unit positioned adjacent to an end of the display device to receive the keypad bracket as the bracket slides.

4. The portable terminal as claimed in claim 1, wherein the main housing has an aperture formed on a rear surface thereof and extending along a longitudinal direction of the main housing to receive a stylus pen.

5. The portable terminal as claimed in claim 1, wherein the first keypad is completely hidden when the second keypad is overlapping the first keypad.

6. A portable terminal comprising:
   a main housing having a display device and a second keypad positioned adjacent to the display device; and
   a first keypad slidable with respect to the main housing to expose and hide at least part of the display device, the first keypad and the second keypad being in an overlapping relation with each other when the display device is completely exposed.
A PORTABLE COMMUNICATION TERMINAL

TECHNICAL FIELD OF THE INVENTION

The present invention relates to a portable communication terminal having a keypad for a first set of functions and a touch sensitive display screen for a second set of functions.

DESCRIPTION OF RELATED ART

Some models of mobile telephones disclosed in the prior art provide the possibility to use the same unit for mobile telephone communication, and for editing text messages using an alphabetic keyboard. A problem with certain designs is that the keypad is not usable in the open position of the keyboard member, since it is then located on the side of the keyboard member that is faced away from the user. This means that entries made using the keypad cannot be done or has to be done with alternative means when the unit is in the open position.

SUMMARY

There is described a portable communication terminal comprising a base part, a display screen located on the base part, and a movable part comprising a keypad for a first set of functions of the portable communication terminal, whereby the movable part is connected to the base part and is adapted to undergo a movement in relation to the latter, at which the movement of the movable part is limited between a closed position and an open position, the movable part being adapted to, at the closed position, cover at least a part of the display screen, the display screen being touch sensitive for user control of a second set of functions of the portable communication terminal, characterized in that the movement that the movable part is adapted to undergo is a sliding movement within a
plane being essentially parallel to the display screen, in that the movable part is adapted so that, as it is moved towards the open position, the area of the display screen covered by the movable part decreases, and in that the movable part is adapted to be electrically connected to the base part in at least two positions of the movable part in relation to the base part.

By having the keypad for functions of the portable telephone located on the movable part, which is slidably connected to the base part, the keypad can be used together with the screen in any position thereof.

In other words, the first set of control functions can be accessed through the keypad in the closed position and also in the open position of the movable part, whereby a complementary set of functions are available through the display screen together with the keypad functions, in the open position of the movable part.

BRIEF DESCRIPTION OF THE DRAWINGS
- fig. 1 shows a front view of a portable communication terminal according to one embodiment of the invention,
- fig. 2 shows a side view of the portable communication terminal in fig. 1,
- fig. 3 shows a front view of the portable communication terminal in fig. 1,
- fig. 4 shows a side view of the portable communication terminal in fig. 1,
- fig. 5 shows a front view of a portable communication terminal according to an other embodiment of the invention,
- fig. 6 shows a side view of a portable communication terminal according to yet another embodiment of the invention,
- fig. 7 shows a front view of a portable communication terminal according to a further embodiment of the invention, and
- fig. 8 shows another front view of the portable communication terminal in fig. 7.

DETAILED DESCRIPTION
Fig. 1 and 2 show a portable communication terminal 1. At a front face 2 a speaker 3 and a microphone 4 are located. Alternatively the speaker 3 and/or microphone 4 could be located at some other face of the terminal 1.
The terminal 1 has an extended shape and comprises a base part 5 on which a display screen 6 is located. The base part 5 comprises radio electronic circuits and an antenna for transmission and reception of communication signals. Fig. 1 shows the antenna as protruding from the rest of the terminal, but of course a built in antenna can also be arranged. Preferably the display screen is parallel to and positioned by the front face 2 of the terminal 1. A movable part 7 has an essentially planar shape and is oriented essentially parallel to the display screen 6. It comprises a keypad 8 for a first set of functions of the terminal 1. The first set of functions relate to speech connections and controls thereof, whereby the keypad 8 comprises buttons for entries of numerical values for e.g. dialing a telephone number.

As can be seen in fig. 3 and 4 the movable part 7 is connected to the base part 5 and is slidable in relation to the latter. Thereby the movable part 7 can be moved essentially in its plane and essentially in a direction defined by a longitudinal axis of the terminal 1. The movement of the movable part 7 is substantially a pure translation, i.e. no rotational component is present.

The movement of the movable part is obtained with the use of guide means 9, located on the movable part 7 and the base part 5, on both sides of the front face 2 of the terminal 1. The guide means 9 extend in the direction of the movement of the movable part 7. The guide means 9, which can be in the form of rails, are arranged to, by means of internal engagement, guide the movement of the movable part 7 between a closed position and an open position. In fig. 1 and 2 the movable part is shown in the closed position and in fig. 3 and 4 it is shown in the open position. The guide means 9 are arranged so that signals from the keypad 8 on the movable part 7 can be transmitted through the guide means. Thus, the guide means 9 are electrically conductive and provide two leads for currents, one on either side of the front face 2.

As is known to the person skilled in the art, the connections to the buttons of the keypad 8 could be arranged so that each button correspond to a specific voltage level of the connection between the movable part 7 and the base part 5.

The guide means 9 can comprise two rails, located on the base part 5 on each side of the display screen 6. Two rails, each adapted to co-act with one of the rails on the base
part 5, can be located along the sides of the movable part. Instead of rails, shoes, suitable to engage a guide rail or the like, can be used.

The interface between the base part 5 and the movable part 7 is adapted so that signals from the keypad 8 can be transferred to the base part 5 in any position of the movable part 7. To conduct signals from the keypad 8 on the movable part 7 the guide means 9 can be made in or be covered by a conductive material, such as copper. In a special embodiment parts of the guide means 9 are formed by the sides of the glass of the display screen 6. Thereby the sides of the display glass are exposed in the mounted condition of the screen 6, and copper plated to form conductive rails co-acting with rails or shoes on the movable part.

As can be seen in fig. 3 the display screen 6 has an extended shape, and is extended in the longitudinal direction of the terminal 1. In the closed position (shown in fig. 1) the movable part 7 is adapted to cover at least a part of the display screen 6. Thereby information normally displayed when the terminal is used for speech connections is displayed on the visible part of the screen 6.

As the movable part is moved towards the open position, the area of the display screen covered by the movable part decreases. The display screen is touch sensitive and can be used to display a set of touch screen control buttons forming an alphabetic keyboard. Thus the display screen 6 can be used to control a second set of functions, which can comprise entries of alphabetical symbols and editing text messages, to be sent, e. g. as e-mails or SMS-messages.

As can be seen in fig. 3 the keypad 8 comprises a navigation button set 10 comprising five control buttons for navigation on the display screen 6 provided on the movable part 7. This means that navigation functions can be operated by one hand in the open position of the movable part 7 as well as in the closed position thereof.

According to an alternative embodiment of the invention the terminal 1 is fully operable in any position of the movable part 7, between the closed and open position, whereby an infinite amount of screen areas can be visible. Alternative the movable part 7 can be adapted to be positioned in a limited number of locations between the closed and open position. This allows the user to choose the amount of visible screen area from at least three alternatives.
As can be seen in fig. 5, in the open position of the movable part 7 the touch controls and information can be presented in a landscape mode on the display screen 6. This provides for an alphabetic keyboard to be displayed in a manner that makes editing of messages and documents easier for the user. The alphabetic keyboard can be displayed similarly to the arrangement on a traditional type writing machine. The display screen 6 could be in portrait mode in the closed position of the movable part 7 (as shown in fig. 1) and be adapted to shift automatically to a landscape mode when the movable part is slid into the open position. The terminal could also be adapted so that the user could control shifts between portrait and landscape modes in the open position of the movable part 7.

Fig. 6 shows an embodiment of the invention which is similar to the embodiments described above, but it presents a movable part 7 having the shape of a case which has an opening 11 in one end. At the opening 11 the base part 5 can be moved in and out of the movable part 7 between a closed and open position, respectively, of the movable part 7, at which guide means 9 could be provided on the exterior sides of the base part 5 and on the interior of the movable part 7. Thus, the movable part 7 presents a closed tube-like cross-section. This makes holding the terminal 1 more comfortable in the open position of the movable part 7, since it provides a smooth back face all the way to the free end of the movable part 7. Alternatively, the movable part can present an open cross-section, which partly surrounds the cross-section of the base part 5.

In the embodiments described above the microphone 4 is mounted on the movable part 7. Fig. 7 and 8 shows an embodiment in which a microphone 4 is located on the base part 5 and behind the movable part 7. For using the microphone in all positions of the movable part 7, the latter is provided with a slot 12 extending in the direction of movement of the movable part 7. The slot 12 provides for the microphone 4 to be exposed in any position of the movable part 7.

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SLIDING MODULE FOR PORTABLE TERMINAL

FIELD OF THE INVENTION

The present invention relates to a sliding module for a portable terminal having at least one sub-housing, which can slide along a main housing.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view showing a portable terminal having a sliding module; FIG. 2 is a perspective view of the portable terminal shown in FIG. 1 wherein its display device is exposed when the sub-housings are opened; FIG. 3 is an exploded perspective view showing the sliding module; FIG. 4 is a top plan view showing the sliding module wherein the display device is completely covered; and FIG. 5 is a top plan view showing the sliding module wherein the display device is completely exposed.

DETAILED DESCRIPTION

The portable terminal 100 has a sliding module 200 (FIG. 3) and includes a main housing 101 and first and second sub-housings 102a and 102b, which are mounted on an upper surface of the main housing 101 and can move towards (FIG. 1) or away from each other (FIG. 2). The first and second sub-housings 102a and 102b open and close to expose and cover the display device 111 by means of a semi-automatic sliding motion along the main housing 101; i.e., when the display device 111 is closed, it starts to be opened by a user's manipulation. After that, it is automatically opened by the driving force of the sliding module. Such a motion can be repeated in reverse to close the opened display device 111. Guide holes 115 are formed at the opposite sides of the display.
device 111 and extend through the interior and exterior portion of the main housing 101 (FIG. 3).

The first and second sub-housings 102a and 102b are provided with keypads 121, a receiver unit 123 having a speaker device, and a transmitter unit 125 having a microphone. The terminal 100 can be used to play a game or chat after exposing the display device 111 by sliding the first and second sub-housings 102a and 102b away from each other. A window 127 exposes part of the display device 111 even when closed to enable the user to check the time and battery.

The first and second sub-housings 102a and 102b are mounted on the main housing 101 through the sliding module 200 (FIGS. 3-5). The sliding module 200 includes a disc 201, links 202, and an elastic means 239. In a first interval, the first and second sub-housings 102a and 102b are subjected to an elastic force applied in such a manner as to move them towards each other. In a second interval, they are subjected to an elastic force applied in such a manner as to move them away from each other.

The disc 201 is rotatably coupled upon the main housing 101 which is provided with a dummy plate 203 having a rotating hole 231 and being fastened to the inside of the main housing 101 by fastening projections 117. One side of the disc 201 is coupled with the links 202 and the other side of the disc 201 is coupled with the elastic means 239 which has one end supported on the disc 201 and the other end supported on the inside of the main housing 101 or the dummy plate 203.

Each of the links 202 has a first end inserted in the driving hole 211 on disc 201 and a second end inserted through the guide hole 115 in one of driven holes 129. The first ends of the links 202 rotate about the center of rotation of the disc 201, and the second ends of the links 202 perform a rectilinear reciprocating motion along the guide holes 115.

Referring to FIG. 4, the elastic force of the elastic means 239 applies a driving force for rotating the disc 201 clockwise. However, since the opposite ends of the links 202 are held by the disc 201 and the first and second sub-housings 102a and 102b, respectively, the movement of the other ends of the links 202 is limited by the guide holes 115, and the disc 201 will not rotate and remain in a stopped state. At this time, the display device 111 will be closed by the first and second sub-housings 102a and 102b as
shown in FIG. 1. Even though there is no limitation to the motion of the other ends of the links 202 by means of the guide holes 115, when the first and second sub-housings 102a and 102b are in contact with each other, the disc 201 will not rotate and remain in a stopped state.

When a user moves one of the first and second sub-housings 102a and 102b to open the display device, the disc 201 will move either one of them while rotating. At this time, if the elastic means 239 is positioned at the first interval, its driving force rotates the disc 201 clockwise. Therefore, the first and second sub-housings 102a and 102b will be subjected to a driving force, which is oriented in the direction to close the display device 111, while the elastic means 239 is positioned in the first interval.

FIG. 5 shows the elastic means 239 positioned in the second interval. At this time, the display device 111 is opened by the first and second sub-housings 102a and 102b as shown in FIG. 2. When positioned in the second interval, the elastic means 239 supplies a driving force, which is adapted to rotate the disc 201 counterclockwise. Therefore, in the state in which the elastic means 239 is located in the second interval, the elastic means 239 applies a driving force for moving the first and second sub-housings 102a and 102b away from each other.

When the display device 111 is completely opened, the disc 201 will not rotate anymore and remain in a stopped state, regardless of the driving force of the elastic means 239. This is because the links 202 provide a counteractive force, which is oriented in the opposite direction to that of the driving force of the elastic means 239.

In order to close the display device 111 again, when the elastic means 239 is positioned at the first interval after passing over the center of rotation of the disc 201, the disc 201 will rotate clockwise and close the display device 111 without further force applied by the user to move the sub-housings 102a and 102b.

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SLIDE TYPE MOBILE COMMUNICATION TERMINAL

10 TECHNICAL FIELD OF THE INVENTION

The invention relates to a mobile communication terminal, and more particularly to a slide type mobile communication terminal capable of switching a stand-by mode into communication and specific function modes by allowing a part of a terminal main body to be slingly moved upward and downward.

15 BACKGROUND ART

In recent years, as mobile communication technologies have made rapid progress, personal mobile communication devices including a mobile communication terminal have been widely spread as individual daily necessaries. The mobile communication terminal can be classified into bar, flip, folder, slide types and the like. The slide type terminal is advantageous to entertainment environments such as game and diverse multimedia environments such as digital multimedia broadcasting, camera, moving picture and the like.

However, according to the slide type mobile communication terminal, since the upper main body is just able to move upward and return to its original position relative to the lower main body when the terminal is switched between the normal stand-by mode and the communication mode, a usable space of the terminal for allotting the functions is limited to an upper surface of the upper main body and a downstream keypad section of an upper surface of the lower main body, which the keypad section is exposed when the upper main body is slid upward. Accordingly, there is limitation in arrangements of structures for embodying the multimedia supplementary functions such as game, DMB, camera, moving picture and the like.

BRIEF DESCRIPTION OF THE DRAWINGS
FIG. 1 is a front view of a slide type mobile communication terminal under standby mode according to an embodiment of the invention;

FIG. 2 is a front view of a slide type mobile communication terminal under communication mode, in which an upper main body of the terminal is slid upward relative to a lower main body, according to an embodiment of the invention;

FIG. 3 is a front view of a slide type mobile communication terminal under supplementary function mode, in which an upper main body of the terminal is slid downward relative to a lower main body, according to an embodiment of the invention;

FIG. 4 is a schematic exploded perspective view of a slide type mobile communication terminal according to an embodiment of the invention;

FIG. 5 is a schematic view sequentially showing sliding operations when a slide type mobile communication terminal according to an embodiment of the invention is switched into communication and supplementary function modes from a standby mode;

FIG. 6 is an exemplary view illustrating a convenience of a user's grip operation when a slide type mobile communication terminal according to an embodiment of the invention is under game mode.

DETAILED DESCRIPTION

Referring to FIGS. 1 to 5, a slide type mobile communication terminal according to an embodiment of the invention comprises an upper main body 10, a lower main body 20 and a slide engagement member 17, 18 connecting the upper and lower main bodies to be slidable upstream and downstream relative to each other.

The upper main body 10 comprises a display section 11 and a first function key pad section on upstream and downstream parts of an upper surface 10a thereof, respectively, and may further comprise an additional function key 15 on a side thereof.

The first function key pad section includes direction keys 13a, a selection key 13b and additional function keys 14a, 14b, 14c, 14d for switching menu, mail, navigation, search, supplementary functions and the like. According to an embodiment of the invention, the first function key pad section can serve as game function keys, i.e., game buttons when the mobile communication terminal of the invention is switched into a game mode.
The lower main body 20 is connected to the upper main body 10 to be slidable upward and downward relative to the upper main body and comprises an input key pad section 21 having a plurality of number buttons and other input keys, and a second function key pad section 23. The lower main body 20 may further comprise an additional function key 22 on a side thereof.

The input key pad section 21 which is provided to a typical mobile communication terminal is used to input a telephone number, a character and the like.

The second function key pad section 23 may comprise direction keys and a selection key and is structured such that a user can easily manipulate supplementary functions using both hands with the display section being located at the middle of the terminal when a supplementary function mode such as game, camera, DMB and the like is selected. According to a preferred embodiment of the invention, the second function key pad section 23 may be used as game function keys under game mode, like the first function key pad section.

According to an embodiment of the invention, the second function key pad section 23 is located at an upstream part of the lower main body opposite to the first function key pad section so that it is exposed to an exterior when the upper main body is slid downstream relative to the lower main body. The second function key pad section is structured as described above, so that when the terminal of the invention is switched into a game mode, a user can use a variety of supplementary functions with an easier interface.

The slide engagement member connecting the upper and lower main bodies to be slidable relative to each other comprises a slide rail 18 provided on a lower surface 10b of the upper main body 10 and extending over about a whole length of an upstream and downstream direction of the upper main body, and slide protrusions 17 located at a middle point of an upstream and downstream direction of an upper surface 20a of the lower main body 20 and inserted into the slide rail 18.

By the slide engagement member, the upper main body 10 can slide upstream and downstream relative to the lower main body 20.

This has such an advantage that it is possible to use upstream and downstream spaces of the lower main body, compared that the prior slide type terminal uses only the
downstream space of the lower main body because the upper main body can reciprocally move to the upstream only, relative to the lower main body.

Specifically, according to the invention, since the second function key pad section is provided to the upstream space of the lower main body, contrary to the prior slide type mobile communication terminal, it is possible to use the first and second function key pad sections in the upstream and downstream spaces at the same time with the display section being located at the center. Accordingly, when the supplementary function modes such as game, camera, DMB and the like are selected, a user can manipulate the function keys with both hands while holding both ends of the terminal with both hands and seeing the wide display screen at the same time, under state that the terminal is horizontally arranged. Therefore, when the mobile communication terminal is used as a game machine, very useful functionality and convenience can be secured.

Fixing elements 18a, 18b, 18c for local engagement with the slide protrusion 17 are formed at upstream, middle and downstream portions of the slide rail 18, respectively. Accordingly, when the upper and lower main bodies are slidingly moved relative to each other, the upper and lower main bodies are releasably fixed to each other at positions of the stand-by, communication and supplementary function modes of the terminal. At this time, the slide protrusions 17 are arranged such that the display section 11 is located at the center when the slide protrusions are engaged with the upstream fixing element 18a. Since the slide protrusions 17 are arranged as described above, the upper and lower main bodies are extended upward and downward to the utmost when the terminal is switched into the supplementary mode such as game, so that the user can play a game more conveniently.

Examples of mode switch positions of the terminal as the terminal slides are shown in FIG. 5. An initial position at which the upper and lower main bodies 10, 20 are correspondingly overlapped with each other is a stand-by mode. When the upper main body is slid upstream and downstream relative to the lower main body, the terminal is switched into the communication and supplementary function modes, respectively.

The mode switch may be carried out by, for example, arranging diverse sensors such as position sensor, contact sensor and the like in the main body and detecting a
relative position between the upper and lower main bodies. Since these structures have been already known in the art, a detailed description thereof is omitted.

When the supplementary function mode such as game, DMB, camera and the like is selected as the game mode, both the first and second function key pad sections are activated, thereby allowing a user to play a game with the two function key pad sections.

FIG. 6 is an exemplary view illustrating a convenience of a user's grip operation when a slide type mobile communication terminal according to an embodiment of the invention is under game mode.

***
ELECTRONIC DEVICE WITH A VARIABLE KEYBOARD

FIELD OF THE INVENTION

The present invention relates to an electronic device with a main side having user connection means such as a keyboard with keys and a display.

BACKGROUND OF THE INVENTION

Portable electronic devices can be held in hand such as calculators, pagers, organizers and other calculation or communication devices, such as mobile telephones or cordless telephones. Such devices are ever smaller and lighter and the functions and services they provide increase. It thus becomes possible to combine various devices. However, the size reduction notably of present-day mobile telephones is restricted by several components whose size is not easy to reduce, such as the keyboard or the display. It is possible to use a device with a sliding or tilting keyboard, but in open position the keys on the sliding or tilting part are not easy to handle: only the main part is held in hand and there is no firm support for a pressure on this or that key on the sliding or tilting flap that supports the keys of the keyboard.

From European patent EP-A-0 472 361 is notably known a portable workstation comprising a personal computer and a mobile telephone in one and the same construction. This device comprises a pivoting keyboard part that enables to change from a mobile telephone keyboard to a keyboard of a personal computer, which change is accompanied with the change from a small display to a large display. During this movement, however, the size of the device is notably increased and the keys of the mobile telephone keyboard remain accessible, not protected, and may be operated inadvertently.
SUMMARY OF THE INVENTION

According to the invention, the drawbacks of the prior art are diminished or suppressed thanks to the fact that the electronic device indicated in the first paragraph is characterized in that a first part of the keyboard is fixed and that a second part, permanently firmly attached to said device, comprises positioning means so that it is movable between two operational positions for which said device retains an invariable size, a first position in which said keyboard is called reduced and a second position in which said keyboard is called extended, and such that the change from one position to the other renders the keys of the keyboard accessible to said user for the end position and keys of the keyboard inaccessible for the starting position.

In this manner, the change from an electronic device to a device of another configuration but having the same size is complete and exclusive and a correct push on the keys of the keyboard is ensured for both configurations.

Preferably, in the second position, with the keyboard extended, the movable part of the keyboard masks part of said display. Thus, the change from an extended keyboard to a reduced keyboard is accompanied with an enlargement of the display.

A preferred embodiment of the invention is characterized in that said movable part of the keyboard comprises pivoting means for pivoting from one to the other around a hinge located on said main side, between an edge of the display and an edge of the first fixed part of the keyboard, and in that this movable part of the keyboard comprises a key configuration on each of its main sides, and connection means for connecting to electronic elements located inside the housing of the device.

Advantageously, the connection means are formed by a flat cable of conducting wires which run across the main side of the device through a recess made at the level of said hinge. The device according to the invention, realized thus, is well adapted notably for forming a mobile telephone in its first extended-keyboard position and an organizer in its reduced-keyboard position. The combination of a mobile telephone with another device, notably an organizer, is interesting because, for example, the organizer enables to immediately register pieces of information obtained by telephone.
BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 represents in A a front view and in B a side view of a device according to the invention in its second position; in C a front view and in D a side view, of the same device in its first position.

FIG. 2 diagrammatically represents in A a front view and in B a side view of the main fixed part of the device of FIG. 1; in C a front view and in D a side view of the second movable part of the keyboard of the device of FIG. 1.

FIG. 3 represents in A a side view and in B a front view of the detail of the immobilizing means of the second movable part of the keyboard and of means establishing electrical contact, and

FIG. 4 shows in a side view a preferred embodiment of the second movable part of the keyboard.

DESCRIPTION OF PREFERRED EMBODIMENTS

The device 10 represented in FIGS. 1A and 1B has the appearance and functionalities of a conventional mobile telephone. On a main side, FIG. 1A, it comprises an antenna 1 and means for connection to a user such as an earphone 2, a microphone 3, a keyboard with keys formed in two parts 4 and 5 and a display 6 which is preferably a liquid crystal display called LCD. In known manner, a first part 5 of the keyboard, which is in this case the lower part, is fixed and preferably comprises in the form of keys 5A the part reserved for dialing, that is, the ten digits and the asterisk and square buttons. The second part 4 of the keyboard is movable according to the invention. In the embodiment of FIG. 1 and as represented in the FIGS. 1A and 1B, the part 4 has been handled by pivoting it around a hinge 7 so as to have it occupy a high position called second position, in which it features keys 4A and which enables to obtain a large keyboard called extended keyboard. The parts 4 and 5 of the keyboard are substantially square and of equal size. This is necessary and is linked with the fact that in its first position represented in FIGS. 1C and 1D, the keys 4A and 5A are situated opposite one another and nearly in contact with one another, thus being rendered inaccessible and protected.

For a use as a mobile telephone, the number of keys 4A may be reduced to about 6 which, added to the 12 keys 5A, form a sufficient number. However, it will be noted
that the keys 4A could be brought to the number of 12, like for the keys 5A, which enables to transform the device of FIGS. 1A and 1B into a pocket calculator by means of an appropriate supplementary programming of the device and an electric switch-over, for example, by means of a key 8 capable of occupying two lateral positions among the keys 4A to enable the change from mobile to calculator or vice versa, these two perfections being within the scope of a person of ordinary skill in the art. It will be noted that in the FIGS. 1A and 1B the mobile keyboard 4 masks the greater lower part of the display, whose upper part 6A, only visible in these Figures, and only the upper part, is designed for being programmable when the device functions as a mobile or as a calculator. If the miniaturization of the device is much advanced, the number of the keys 5A or 4A is reduced to a maximum of 9 and it becomes difficult if not impossible to transform the device into a calculator in its configuration of the FIGS. 1A and 1B.

In the FIGS. 1C and 1D, the device described above is represented with its second movable part 4 of the keyboard in its first position, that is, in its low position, in which it masks the keys 5A and features keys 4C whose number is equal or substantially equal to that of the keys 4A or 5A. This is a reduced keyboard compared to the keyboard of FIGS. 1A and 1B which is called extended. In the embodiment of FIG. 1, the change from the second to the first position has been obtained by pivoting the part 4 of the keyboard through 180 degrees around the hinge 7. It will be noted that at the start of this manoeuvre the keys 4A and 5A of the extended keyboard, which were only accessible, have all become inaccessible and replaced, as regards the keyboard, by the keys 4C which, in the embodiment of FIGS. 1A and 1B, are inaccessible as they are situated on the main side of the mobile part 4 opposite the main side that supports the keys 4A. It will also be noted that the manoeuvre indicated above has not changed the size of the device.

The device of FIGS. 1C and 1D may be either the same device as that of FIGS. 1A and 1B, in essence, advantageously a mobile telephone, or another device, advantageously a personal organizer. If it is a question of a mobile telephone in the two configurations, no electric switching is necessary when a change is made from the configuration 1A to the configuration 1C. In that case, the device that has a reduced keyboard and a notably enlarged display because there is no masking of the keyboard by the movable part, may advantageously be used for scrolling the menu for the purpose of data or modifications, a
large screen being useful for this purpose and a keyboard that no longer needs keys for the digits can be reduced (an incoming call always remains possible during this use).

The device of FIGS. 1C and 1D may advantageously also be a personal organizer, the change of functionalities being obtained either automatically by any known means during the handling discussed above for the movable part 4, or manually by means of a key 4C (not shown) similar to the key 8 of FIG. 1A. The latter option is interesting in that it permits an operation either as a mobile telephone as described above, or as an organizer in its configuration with a reduced keyboard. If the device is a personal organizer, in the configuration 1C, the display screen 6 may have sensitive areas enabling the user to enter data by touching the screen, and the keys 4C may comprise a pointer element 11 of the trackball type.

For realizing the necessary electrical connection between the movable part 4 of the keyboard and a printed circuit (not shown) inside the housing of the device 10, connection means are provided which, in the embodiment of FIG. 1, are formed by a flat cable of conducting wires 12, which crosses the main side of the device through a slot 13 made at the level of the hinge (see FIG. 1).

FIG. 2 represents in C and D the movable part of the keyboard 4 disengaged from the rest of the device referenced 20, which enables to better appreciate the the composition of the hinge 7 that connects these two elements (the keys 4A, 5A and 4C have not been represented so as not to overload the drawings). FIG. 2 represents neither the microphone nor the earphone and the antenna 1 is represented in a broken line, all this to indicate that the device 20 could not be a mobile telephone or even a radio communication device, but another type of electronic device such as a pocket calculator, for example, in its configuration according to which the keyboard is in its second, extended, position.

The embodiment of FIG. 2 comprises stop means to stop the movable part 4 of the keyboard in the first or second position. These means comprise a magnet 21 fixed to the part 4 of the keyboard, and a magnetic part 22, 23 respectively, correspondingly fixed to the main side of the device 20. It is also possible to replace the magnetic parts 22 and 23 by magnets and the magnet 21 by a corresponding magnetic part.
As indicated above, establishing an electrical contact inside the device may be necessary when the change from one to the other position of part 4 of the keyboard is accompanied with a modification of the functionalities of the device. Establishing this contact could be realized (in a manner not shown) at the level of the hinge 7 by using the 180-degree movement effected during the displacement of part 4. Advantageously, this contact can also be established at the level of the stop means 21, 22, 23 of the movable part 4, as described below with reference to FIG. 3.

FIG. 3 shows a portion of part 4 of the keyboard that includes a magnet 21. Opposite occurs the magnetic part 22 or 23 of the device 20, which is formed by two stubs 25 and 26, each connected to an electrical conductor 27, 28 inside the device. When the magnet 21 arrives at the contact of the stubs 25 and 26, it ensures the desired mechanical locking and at the same time realizes the electrical connection between the conductors 27 and 28, which, inside the device 20, leads to a polarization or the flowing of an electric current which in its turn causes the change of the type of operation of the device.

When the movable part 4 of the keyboard is put in place in its first or second position, one should see to it that the keys 4A or 4C do not come into contact with parts of the main side of the device 10 or 20, that is to say, with the screen 6 or with the keys 5A. For this purpose, an advantageous embodiment of the invention comprises giving each face of the part 4 a slightly reflex curve as represented in FIG. 4, and the same measure may be taken as regards part 5 of the fixed keyboard or display screen 6. Thus, although projecting, the keys remain slightly retracted relative to the area of the parts of the keyboard supporting them and the contacts of the main side with the part 4 are positioned at the level of these areas, which provides both a good support for the useful keys and a good protection for the hidden, inaccessible, keys.

***
Application No./N° de demande: 2,XXX,666
Filing Date/Date de dépôt: 2006/05/30
Expected Laid-Open Date/Date prévue de mise à la disposition du public: 2007-11-30
Title of Invention/Titre de l'invention: PORTABLE TERMINAL HAVING MOBILE KEYPAD
TERMINAL PORTATIF MUNI D’UN CLAVIER MOBILE

Applicant(s)/Demandeur(s): KIM JONG-II, KIM JONG-UN
Inventor(s)/Inventeur(s): KIM JONG-II, KIM JONG-UN

Special Notice
You are reminded that annual fees to maintain your application are needed for each one-year period between the 2nd and 20th anniversaries and must be paid on or before each anniversary. Failure to pay within the prescribed time limit will lead to abandonment of your application.

Avis spécial
Nous vous rappelons que des taxes annuelles de maintien de la demande en état doivent être versées pour chaque période d’un an entre les 2e et 20e anniversaire, et que le paiement doit être fait au plus tard à chaque anniversaire. Votre demande sera abandonnée si vous omettez de payer dans le délai prescrit.

Commissioner of Patents
Commissaire aux brevets

2012 Paper B - Validity
PERFECT PATENTS LLP
CANADA

Date: 2006/06/06

ENREGISTREMENT/REGISTRATION 05428744
CESSION DROIT EXCLUSIF
ASSIGNMENT FULL INTEREST

DE/FROM KIM JONG-II, KIM JONG-UN
A/TO SAMSUNG

A document has been registered in the Patent Office, against the following patent(s) and/or application(s) for patent.

DEMENDE(S)/APPLICATION(S)
2,XXX,666

Ms. C. Po
Commis aux cessions de brevets/Patent Assignment Clerk
This application has been examined taking into account the:

- Description, as originally filed; and
- Claims, 1-6 as originally filed.

A search of the prior art has thus far failed to reveal any pertinent references.

The examiner has identified the following defect in the application:

Claim 4 is indefinite and does not comply with Subsection 27(4) of the Patent Act. It is unclear what “stylish” is.

In view of the foregoing defects, the applicant is requisitioned, under subsection 30(2) of the Patent Rules, to amend the application in order to comply with the Patent Act and the Patent Rules or to provide arguments as to why the application does comply.

Under section 34 of the Patent Rules, any amendment made in response to this requisition must be accompanied by a statement explaining the nature thereof, and how it corrects each of the above identified defects.
Under section 29 of the Patent Rules, the applicant is requisitioned to provide an identification of any prior art cited in respect of the US and EP patent applications describing the same invention on behalf of the applicant or on behalf of any other person claiming under an inventor named in the present application, and if granted, the patent numbers; particulars of conflict, opposition, re-examination or similar proceedings; and where a document is not in English or French, a translation of the document, or a part of the document, into English or French; and copies of the related non-patent documents cited during the prosecution of these applications. To satisfy this requisition, applicant should provide all the preceding information or documents, or provide in accordance with subsection 29(3) of the Patent Rules a statement of reasons why any information or document is not available or known.

Guy Tough, Patent Examiner, 819-999-OPIC
AMENDMENTS/REMARKS AFTER EXAMINER’S REQUISITION

November 19, 2011

Dear Sir:

This is responsive to the Examiner’s Requisition dated May 19, 2011. Please amend the application as follows:

In the Claims:

Please substitute the enclosed replacement claims 1-6 for the claims currently on file.

Remarks

Claims 1-6 are currently under examination. Claim 4 has been rejected as being indefinite under Subsection 27(4) of the Patent Act for the reasons provided in the Examiner’s Requisition.

In the interest of advancing prosecution but without acquiescing to these rejections, Applicant has amended claim 4 to correct an inadvertent typographical error by replacing “stylish” with “stylus.”

Support for this amendment resides in the as-filed specification and claims. The amendment does not constitute new matter. Accordingly, Applicant respectfully requests the 27(4) rejection be withdrawn.

The amendment is believed to put this application in condition for allowance which is respectfully requested. It is believed that no fees are payable in connection with this submission. If this is incorrect, please charge any requisite fees to deposit account number 11191970.

Respectfully submitted,

Perfect Patents LLP
PERFECT PATENTS LLP
CANADA
Replacement Claims:

1. A portable terminal comprising:
   a main housing having a display device and a second keypad positioned adjacent to the display device; and
   a first keypad displaceable with respect to the main housing to expose and hide at least part of the display device, the first keypad and the second keypad being in an overlapping relation with each other when the display device is completely exposed.

2. The portable terminal as claimed in claim 1, further comprising a keypad bracket slidable in a plane parallel to the display device and the second keypad, the first keypad being positioned on a surface of the keypad bracket.

3. The portable terminal as claimed in claim 2, further comprising a bracket reception unit positioned adjacent to an end of the display device to receive the keypad bracket as the bracket slides.

4. The portable terminal as claimed in claim 1, wherein the main housing has an aperture formed on a rear surface thereof and extending along a longitudinal direction of the main housing to receive a stylus pen.

5. The portable terminal as claimed in claim 1, wherein the first keypad is completely hidden when the second keypad is overlapping the first keypad.

6. A portable terminal comprising:
   a main housing having a display device and a second keypad positioned adjacent to the display device; and
   a first keypad slidable with respect to the main housing to expose and hide at least part of the display device, the first keypad and the second keypad being in an overlapping relation with each other when the display device is completely exposed.
TECHSOURCE – CANADIAN INTELLECTUAL PROPERTY OFFICE
CASE HISTORY FOR APPLICATION/PATENT
PATENT/APPLICATION NUMBER: 2,XXX,666

SUMMARY INFORMATION

TITLE : PORTABLE TERMINAL HAVING MOVABLE KEYPAD
FILING DATE : 2006-05-30
REQUEST FOR EXAMINATION : 2008-10-30
LAID-OPEN DATE : 2007-11-30
GRANT DATE : 2012-04-01
CURRENT STATE : GOOD STANDING
NATIONAL ENTRY DATE : NOT APPLICABLE
PCT.IN.AP.NUMBER : NOT APPLICABLE
PCT PUBLICATION DATE : NOT APPLICABLE
PRIORITY : NONE
AGENT'S NAME : PERFECT PATENTS LLP
AGENT'S FILE NUMBER : PP#1
AGENT'S DEPOSIT ACCOUNT NO. : 11191970

INCOMING CORRESPONDENCE DESCRIPTION :
REQUEST FOR EXAMINATION : RECEIVED DATE: 2008-10-30
AMENDMENT : RECEIVED DATE: 2011-11-19

OUTGOING CORRESPONDENCE DESCRIPTION :
FORMALITIES : LETTER DATE: 2006-06-06
ACKNOWLEDGEMENT REQUEST FOR EXAMINATION : LETTER DATE: 2008-11-30
EXAMINER'S REQUISITION : LETTER DATE: 2011-05-19
NOTICE OF ALLOWANCE : LETTER DATE: 2011-12-01

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PART B – Short Answer Questions

INSTRUCTIONS TO CANDIDATES
Provide an appropriate response to each question. Do not provide extraneous commentary if not directly relevant to the question. Note that statements of authorities or pertinent law (which may include case law and statutory and regulatory provisions) and analysis are required to adequately address each issue unless the question expressly states that it is not necessary.

QUESTION 7:
(a) What information must be provided to the Commissioner to have a valid priority claim? [4 marks]
(b) What is the deadline to provide this information? [1 mark]

QUESTION 8:
Draft three (3) different categories of claims acceptable in Canada directed to known compound X for the treatment of disease Y (new indication). [3 marks]

QUESTION 9:
Which of the following steps can be taken by someone other than the agent of record or the applicant (i.e. a third party) and which ones are exclusive to the agent of record or the applicant? [3 marks]
   i. filing request for examination
   ii. paying maintenance fee of an issued patent
   iii. paying maintenance fee of a pending application
   iv. filing re-examination request
   v. amendment of an application to correct a clerical error
   vi. requesting recordal of an assignment

QUESTION 10:
Your client is interested in licensing CA 2,xxx,123 that issued May 21, 2011. On reviewing the file history, you notice that in one office action, the examiner objected to a
numbering error in claim 10. The text of the response did not address the examiner’s objection, although the numbering was fixed in the replacement pages submitted. A subsequent office action did not bring up the oversight. The patent application went on to allowance and grant. Is the patent vulnerable to a challenge of deemed abandonment for the numbering error? [2 marks]

**QUESTION 11:**
In CA 2,XXX,915, an office action was issued on January 14, 2010 with a six-month response window. All your reminders to the client went unanswered, so no response was filed. The client calls you on March 13, 2012 saying that money is available now, and they want to proceed with the application. You notice in looking at the file that no Notice of Abandonment was ever received from CIPO.

(a) Is the patent application abandoned? [2 marks]

(b) If abandoned, what can be done to restore the application to good standing? [1 mark]

**QUESTION 12:**
Your client has obtained roses deprived of spines by using various crossbreeding techniques. Which form of protection would be available for the new roses in Canada? [1 mark]

**QUESTION 13**
A litigator from your office asks you to look at the following claim issued in a Canadian patent:

1. A method of beautifying a waste hillside, comprising the steps of:
   - identifying by study a natural grass and wildflower composition of the local area;
   - developing a seed mixture that approximates the natural grass and wildflower composition;
   - pelletizing the seed mixture with a particulated straw base into relatively small pellets;
disseminating the pelletized seed mixture onto a surface within the hillside area in an aesthetically pleasing arrangement using a seed drill activated by perpetual motion; and periodically watering the pelletized seed mixture, while watching for signs of germination.

Identify a potential validity attack based only on the wording of the claim and having regards to

(a) Statutory Subject matter
(b) Indefiniteness
(c) Utility

Be specific about the wording that is objectionable, but there is no need to cite authority.

[3.0 marks]

END OF QUESTIONS IN PART B

END OF PAPER B