[0106] The fingers curve around the 'grip' portion of the device. The index finger **108** and middle finger **112** are positioned in grip-like shallow troughs or channels that orient the device properly in the hand and position the pads of those fingers over the 'mouse button' like switches. These mouse-button switches, or components thereof, may be constructed to slide a short distance within each channel to accommodate variations in finger length. The remaining two fingers (ring finger **116** and little finger **120**) gently wrap around the device to support it against the palm leaving the index finger **108**, middle finger **112** and thumb **104** free to operate the controls.

[0107] In the preferred embodiment of the present invention, the housing or shell of the device comprises an upright or vertical, rectangular x-y input portion **206** that extends upward from a horizontal, somewhat grip-shaped main body portion **214**.

[0108] The x-y input portion of the device **206** is a flat, rectangular box rimmed on the front with a rectangular bezel that frames a rectangular touchpad. The overall width and height of the x-y input portion **206** are governed by the dimensions of the touchpad used. The touchpad is oriented with its x-axis horizontal and its y-axis vertical. The x-y input portion **206** is between 0.5 cm. and 3 cm. thick depending on the range of position adjustment provided for the touchpad. Extending through the back of the x-y input portion **206** are three adjustment screws positioned in a triangular arrangement. (see **FIG. 18**) These screws provide the user with some fine adjustment to orient the touchpad to the user's thumb.

[0109] The x-y input portion **206** is approximately 8-cm. wide and 7 cm. tall including the contiguous lower back end of the main body. The size and shape of the x-y input portion may be varied to accommodate different touchpad sizes and may be concave to hold a curved or flexible touchpad used to better fit the arc of thumb-travel.

[0110] As viewed from the front, the main body **214** extends forward from the bottom of the bezel; conversely, the x-y input portion **206** extends vertically from the back end of the main body. The main body **214** is shaped to fit the contours of the user's right hand with the fingers curved together into a the open grip position shown in **FIG. 1**. In this position, the thumb is at the top and extends straight roughly 1.5 cm. above, and perpendicular to, the second bone of the index finger **110** (See **FIG. 1**). Also in this position, the thumb rests on the top surface of the main body **214** with the thumb tip **124** touching the bottom center of the touchpad. The bottom surface of the main body has a grip shape that bulges in the middle and that has channels defined by ridges. There is a molded channel **216** to position the index finger **108** and a molded channel **220** to position the middle finger **112** in a grip-like fashion. These finger channels are roughly 5 cm. long and lie nearly perpendicular to the length of the main body **214**.

[0111] As viewed from above, the main body extends from the touchpad at an angle to the left of between 90 degrees and 115 degrees from the direction of the x-axis. As viewed from the right, the top surface of the main body **214** extends horizontally from the bezel approximately 4 cm., providing a surface for the thumb to rest on. It then gently arcs downward to blend with the lower front end of the main body **214**. Overall, the middle of the main body **214** is approximately 5 cm. to 8 cm. wide with an average vertical thickness of approximately 3.5 cm., and the overall length is at least 10 cm. These dimensions may be varied to fit a wider range of hand sizes if needed.

[0112] In a highly preferred embodiment, there is also a prominent, narrow fin protruding vertically from the upper right edge of the main body. (see **FIGS. 11, 12**, and **13**) The fin **210** rises above the main body reaching an apex at the front end of the device. The palm fin **210** is shaped to fit against the palm beneath the arc of the "life line" or major crease in the palm where the thumb folds down over the palm.

[0113] This fin **210** helps to position the device properly in the hand and prevents the device from rolling out of position toward the palm. For this reason, the fin **210** provides stability so that the hand may remain relaxed, yet hold the device steady with the thumb and first two fingers remaining free to operate the controls.

[0114] A second function of the palm fin **210** is to accommodate varying hand sizes. The tapered shape of the palm fin **210** allows a larger size hand to obtain the preferred open-grip posture. The wider hand will cover more of the taller portion of the fin thereby keeping the hand open enough so the longer fingers will not wrap too far around the main body. Conversely, a smaller, narrower hand will not extend as far up the tapered fin. The smaller hand will close sufficiently around a shorter portion of the palm fin **210** thereby retaining the desirable open grip as well. Thus, the fingers of various sized hands will wrap around the bottom of the main body **214** with fingertips positioned properly in the channels **216**, **220** and with thumb tip **124** properly reaching the touchpad for comfortable navigation.

[0115] In this preferred embodiment, the fin **210** emerges from the upper right edge of the main body approximately 6 cm. forward of the touchpad and gently curves upward at an average angle of 60 to 80 degrees from the direction of the x-axis. This curved, top edge is at least 6 cm. long. The apex of the fin **210** is rounded with the 4.5-cm-long front edge turned downward to blend with the lower front edge of the main body. As viewed from the top, the fin **210** appears generally straight, but slightly convex on the right side, and it appears congruent with the right edge of the main body **214**.

[0116] The size and position of the palm fin **210** or any other portion of the housing can be designed to be adjustable to better fit a variety of hand sizes, or the entire housing may be constructed in varying sizes to better accommodate the range in hand size and shape of the user population.

[0117] The pointing device is operated in a stationary position, which is in contrast to the way a mouse is moved in order to provide the x-y movement input. Thus, the user may position the pointing device where confortable. The preferred method of use would place the user's hand in a comfortable position on the lap so that the weight of the hand is supported on a soft surface close to the user's body. Note that the pointing device would be useable in situations that would not work well with a mouse such as an airplane seat or standing during a presentation where a mouse and mouse pad would be difficult or impossible to use.