brane **250** to connect and close the switch, which completes the connection to enter the character. As shown in FIG. **2**, the membrane **250** is secured to a base plate or PCB **270**.

[0050] According to an embodiment, the support lever **220** has a thickness of about 0.5 mm. In other embodiments, the support lever may have a thickness that is less than 0.5 mm. In some embodiments, the elastomeric spacer can have a thickness in a range of about 0.3 to 1 mm. In other embodiments, the elastomeric spacer can have a thickness in a range of about 0.5 to 1 mm. The metal dome **240** can have a height in a range of about 0.3 mm to about 0.7 mm. According to another embodiment, the metal dome **240** has a height in a range of about 0.3 mm to about 0.5 mm. In still another embodiment, the metal dome **240** has a height in a range of about 0.5 mm to about 0.7 mm.

[0051] In an embodiment, the metal dome **240** has a thickness in a range of about 0.03 mm to about 0.1 mm. It will be understood that the metal dome **240** typically has a uniform thickness if it is formed from a sheet of metal. The skilled artisan will appreciate that the thicknesses of the dome **240** and elastomeric spacer **225** can be adjusted and/or varied to obtain the desired force drop. The base diameter of the dome **240** can be in the range of about 3 mm to 7 mm.

[0052] According to an embodiment, as shown in FIG. **2**, the metal dome **240** can be secured, at its base in its non-concave portions, to the membrane **250** by means of adhesive, including pressure-sensitive adhesive tape. In an alternative embodiment, the metal dome **240** is not adhered to the membrane **250**, but is instead encapsulated by an additional membrane sheet that extends over the metal dome **240** and is adhered to the membrane **250**.

[0053] FIG. **4** is a simplified top perspective view of a key cap **210** positioned in an embodiment of the topcase **260**. For simplicity, FIG. **4** shows only a single key cap **210** and only a portion of the topcase **260**. As illustrated, keys are positioned in the topcase **260** of this embodiment in a staggered manner. That is, the rows of keys can be slightly shifted so that keys in one row are not positioned directly below the keys in the row above. The skilled artisan will appreciate that the keys can be arranged in any manner that is desired.

[0054] FIG. **5** is a bottom plan view of an embodiment of a keyboard arrangement. FIG. **6** is a detailed perspective view of the bottom of the keyboard arrangement shown in FIG. **5**. As shown in FIG. **5**, the base plate **270** is arranged in rows across the keyboard. The base plate **270** can be a rigid printed circuit board (PCB). As shown in the embodiments of FIGS. **5** and **6**, the base plate **270** and the support levers **220** can be interwoven. It will be understood that the keys **200** of the keyboard can be arranged in any manner that is desired and that the components of the keys **200** can similarly be arranged in any manner such that they fit in the available space. For example, the support lever **220** for some keys can be curved, as illustrated in FIG. **5**, to accommodate the different positions of the keys and to conform to an existing keyboard arrangement.

[0055] FIG. **7** is a detailed perspective view of an embodiment of the membrane **250**. According to an embodiment, the membrane **250** can have three layers, including a top layer **252**, a bottom layer **256**, and a spacer layer **254** positioned between the top layer **252** and the bottom layer **256**. The top layer **252** and the bottom layer **256** can include conductive traces and their contact pads **258** on the underside of the top layer **252** and on the top side of the bottom layer **256**, as shown in FIG. **7**. The conductive traces and contact pads **258** can be formed of a metal, such as silver or copper. As illustrated in FIG. **7**, the membrane sheet of the spacer layer **254** includes voids **260** to allow the top layer **252** to contact the bottom layer **256** when the metal dome **240** is collapsed. According to an embodiment, the top layer **252** and bottom layer **256** can each have a thickness of about 0.075 μm. The spacer layer **254** can have a thickness of about 0.05 μm. The membrane sheets forming the layers of the membrane **250** can be formed of a plastic material, such as polyethylene terephthalate (PET) polymer sheets. According to an embodiment, each PET polymer sheet can have a thickness in the range of about 0.025 mm to about 0.1 mm.

[0056] Under "normal" conditions when the key pad is not depressed by a user (as shown on the left side of FIG. **7**), the switch is open because the contact pads **258** of the conductive traces are not in contact. However, when the top layer **252** is pressed down by the metal dome **240** in the direction of arrow A (as shown on the right side of FIG. **7**), the top layer **252** makes contact with the bottom layer **256**. The contact pad **258** on the underside of the top layer **252** can then contact the contact pad **258** on the bottom layer **256**, thereby allowing the current to flow. The switch is now "closed", and the computing device can then register a key press, and input a character or perform some other operation. It will be understood that other types of switch circuitry can be used instead of the three-layer membrane **250** described above.

[0057] A process for assembling the key switch **200**, such as the one shown in FIG. **2**, will be described with reference to FIG. **8**. A process for assembling the components of the key switch **200** will be described below with reference to steps **800-870**. In step **800**, a base plate **270** is provided for mechanical support for the PCB as well as the entire key switch **200**. In one embodiment, the base plate **270** is formed of stainless steel. In other embodiments, the base plate **270** can be formed of aluminum. According to an embodiment, the base plate **270** has a thickness in a range of about 0.2 mm to about 0.5 mm.

[0058] A process for forming the three-layer membrane **250** on the base plate **270** will be described below with reference to steps **810-830**. In step **810**, the bottom layer **256** of the membrane **250** can be positioned over the base plate **270**. Next, in step **820**, the spacer layer **254** can be positioned over the bottom layer **256** such that the voids **260** are in the areas of the contact pads **258**. In step **830**, the top layer **252** can be positioned over the spacer layer **254** such that the contact pads **258** on the underside of the top layer **252** are positioned directly over the contact pads **258** on top side of the bottom layer **256** so that they can contact each other when the metal dome **240** is deformed. The layers **252**, **254**, **256** can be laminated together with adhesive. It will be understood that steps **810-830** can be combined into a single step by providing a three-layer membrane **250** that is pre-assembled or pre-laminated. The membrane **250** is positioned over the base plate **270** and held in place by one or more other components of the key switch **200**, such as the scissor mechanism **230**.

[0059] According to this embodiment, in step **840**, the metal dome **240** can be attached to the top side of the top layer **252** of the membrane **250** such that the concave dome portion is positioned over the contact pads **258** and the void **260**. In step **850**, the support lever **220** is positioned over the metal dome such that the elastomeric spacer **225** is positioned directly over the center of the metal dome **240**. In step **860**, the support lever **220** is coupled to the topcase **260** at a point at a distance from the key switch **200**. In an embodiment, the