[0068] Using a detector of the type illustrated in **FIG. 1**, it is possible to measure current flow, which could also be considered as contact resistance, in order to identify an additional mechanical property of the interaction. As illustrated in **FIG. 5**, this other mechanical property is related to the area of contact between the sheets, determined by the amount of force applied to the sheets, and to the total area over which the force is applied; or a combination of these two properties. Thus, data relating to force and area may give useful information relating to the interaction, separate from the position at which the interaction takes place.

[0069] In some situations, such as when using a stylus or similar implement, the area of applied force remains substantially constant therefore a measurement of current will enable calculations to be made in terms of stylus pressure. Pressure sensitive styli are known but in known configurations the pressure detection is determined within the stylus itself, leading to the stylus being mechanically connected to operational equipment or requiring sophisticated wireless transmission within the stylus itself. The present embodiment allows stylus pressure to be determined using any non-sophisticated stylus, given that the pressure detection is made by the co-operating fabric detector, arranged to detect stylus position (with reference to voltage) in combination with stylus pressure, with reference to current.

[0070] An alternative construction for the conducting fabric planes is illustrated in **FIG. 6**. The detector includes a first conducting plane **601** and a second conducting plane **602**. In addition, woven into each of the conducting planes **601** and **602**, there are a plurality of non-conducting nodes **605** arranged to mutually interfere and thereby separate the two conducting planes. Between the nodes, the fabrics of the first and second planes may be brought into contact relatively easily such that the application of force, illustrated by arrow **611** would tend to cause a finite number of regions interspersed between nodes **605** to be brought into contact. Thus, for a particular region, contact either is taking place or is not taking place as illustrated by curve **621**.

[0071] With a number of such regions brought into contact, the overall level of current flow will tend to vary with the area of contact as illustrated by curve **631**. Thus, using a construction of the type shown in **FIG. 6**, it is possible to obtain a more linear relationship, compared to that shown in **FIG. 5**, in which the level of current flow gives a very good indication of the area of coverage as distinct from the level of force applied to the mechanical interaction.

[0072] Given a construction of the type shown in **FIG. 6**, an indication of applied force or pressure may be obtained, in addition to an accurate determination of area, by providing an incremental switching operation. In the configuration shown in **FIG. 7**, there is provided a first conducting plane **701** which interacts with a second conducting plane **702**. Furthermore, conducting plane **702** interacts with a third conducting plane **704**. Conducting plane **701** is separated from conducting plane **702** by non-conducting portions **705**. Similarly, plane **702** is separated from plane **704** by non-conducting portions **706**. More non-conducting portions **706** are provided than similar non-conducting portions **705**. Consequently, less force is required to produce electrical contact between planes **701** and **702** than is required to produce an electrical contact between planes **702** and **704**. In this way, it is possible to provide an incremental measurement of force, given that a low force will only cause contact between plane **701** and plane **702** whereas a larger force will also provide electrical contact between plane **702** and **704**.

[0073] An alternative configuration is shown in **FIG. 8** in which it is possible to obtain enhanced substantially continuous variations in current flow with respect to applied force. A first conducting plane **801** interacts with a second conducting plane **802**. The planes are woven in such a way as to produce very uneven surfaces such that, under light load, the level of interaction is relatively low. As load increases, as illustrated generally at **805**, a greater level of surface contact shown at **806** is created thereby increasing the level of current flow in a substantially continuous way. It should also be noted that this configuration does not include an insulating layer as such and that a level of current flow will always take place even under conditions of zero load. Alternatively, a very thin insulating layer could be provided, having a relatively low threshold, thereby resulting in a zero current flow when no load is applied.

[0074] As shown by curve **811**, the output current varies with respect to variations in applied force for a constant load area. Similarly, as shown by curve **821**, output current varies with respect to load area for a substantially constant applied force.

[0075] A composite configuration is shown in **FIG. 9**, in which a detector **901**, substantially similar to that shown in **FIG. 6**, is combined with a detector **902**, substantially similar to that shown in **FIG. 9**. Detector **901** provides an accurate measurement of applied area and it is relatively unaffected by applied force. Detector **902**, as shown in **FIG. 8**, provides an output which varies with respect to area and force. Thus, by processing the output of these two detectors in combination, it is possible to compensate the output from detector **902** in order to produce values representing force, such that the two currents provide indications of both force and area.

[0076] The operation of the control circuit **121** is such as to apply a first voltage across diagonals **107** and **108** with a similar voltage being applied across diagonals **111** and **112**. The nature of the voltage distribution is therefore asymmetric, but this does not result in difficulties provided that the area of contact between the two planes is relatively symmetric. However, should an asymmetric area of contact be made, as illustrated in **FIG. 10**, differences will occur in terms of current measurements when considering calculations made in the two directions.

[0077] An asymmetric object **1001** is shown applied to the surface of a detector **1002**. When a voltage is applied between contact **107** and **108**, paths over which current may flow, illustrated generally at **1003** are relatively large and the object is perceived as having a large area or is perceived as applying a large force. In the opposite dimension, when a voltage is applied between **111** and **112**, the regions over which current flow takes place illustrated generally at **1005**, become relatively smaller therefore the object would be perceived as having a relatively smaller area or would be perceived as providing a relatively smaller force.

[0078] If the system is programmed to the effect that the object has a constant area and applies a constant force, these differences in terms of current flow may be processed in order to give an indication as to the orientation of the object.