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are attracted to and positioned adjacent said first and second poles; and

a touch pin having a longitudinal axis transverse to said reference surface and including a follower end engageable with said cam means and a tip end distant from said follower end, said pin being movable on said cam means between a first position raised above said reference surface when said cam means is in said active position and a second position not projecting beyond said reference surface when said cam means is in said inactive position.

2. Tactile display apparatus as set forth in claim 1 wherein said reference surface is substantially planar; and wherein said axis of rotation of said cam means and said longitudinal axis of said pin are both perpendicular to said reference surface.

3. Tactile display apparatus as set forth in claim 2 wherein said cam means is generally disk-shaped, has a planar base surface which is substantially parallel to said reference surface, and has an opposed contoured operative surface which ranges between an elevated region of maximum height above said base plane and a nominal region of minimum height above said base plane; and wherein said pin assumes said first position when said follower end is engaged with said elevated region and assumes said second position when said follower end is engaged with said nominal region.

4. Tactile display apparatus as set forth in claim 3 including:  
means biasing said follower end into engagement with said operative surface.

5. Tactile display apparatus comprising:  
a housing having a cavity therein and defining a reference surface and having an aperture therein for communication between the cavity and said reference surface, the aperture being sized and positioned to freely receive a touch pin therethrough;  
an electromagnet fixed to said housing within the cavity distant from said reference surface, said electromagnet having first and second spaced poles of opposite, selectively reversible, polarity;  
rotatable cam means proximate to said electromagnet having an axis of rotation transverse to said reference surface and including an integral permanent magnet with third and fourth spaced poles of opposite polarity equidistant from said axis of rotation, said cam means being rotatable between an active position at which said third and fourth poles, respectively, are attracted to and positioned adjacent said first and second poles and an inactive position at which said fourth and third poles, respectively, are attracted to and positioned adjacent said first and second poles; and  
said touch pin having a longitudinal axis transverse to said reference surface and including a follower end engageable with said cam means and a tip end distant from said follower end, said touch pin being movable on said cam means between a first position raised above said reference surface when said cam means is in said active position and a second position no higher than said reference surface when said cam means is in said inactive position.

6. Tactile display apparatus as set forth in claim 5 wherein said housing includes:  
an integral roof positioned so as to overlie the cavity, said roof defining said reference surface and having

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therein the aperture for communication between the cavity and said reference surface;  
wherein said reference surface is substantially planar; and  
wherein said axis of rotation of said cam means and said longitudinal axis of said pin are both perpendicular to said reference surface.

7. Tactile display apparatus as set forth in claim 6 wherein said cam means is generally disk-shaped, has a planar base surface which is substantially parallel to said reference surface, and has an opposed contoured operative surface which ranges between an elevated region of maximum height above said base surface and a nominal region of minimum height above said base surface; and wherein said pin assumes said first position when said follower end is engaged with said elevated region and assumes said second position when said follower end is engaged with said nominal region.

8. Tactile display apparatus as set forth in claim 7 including:  
means biasing said follower end into engagement with said operative surface.

9. Tactile display apparatus as set forth in claim 8 wherein said biasing means includes:  
an annular shoulder on said pin intermediate said follower end and said tip end and lying in a plane substantially perpendicular to said longitudinal axis; and  
a compression spring encircling said pin and extending between said annular shoulder and said cover.

10. Tactile display apparatus as set forth in claim 7 wherein said housing includes positioning means freely engageable with said cam means for maintaining the spacing between said cam means and said reference surface and for defining a center for rotation of said cam means.

11. Tactile display apparatus as set forth in claim 7 wherein said operative surface has a centrally disposed depression formed therein; and wherein said housing includes a positioning finger integral therewith and freely engageable with said depression for maintaining the spacing between said cam means and said reference surface and for defining a center of rotation for said cam means.

12. Tactile display apparatus as set forth in claim 5 wherein said cam means is generally disk-shaped, has a planar base surface which is substantially parallel to said reference surface, has a centrally disposed projection extending from said base surface, and has a contoured operative surface which ranges between an elevated region of maximum height above said base surface and a nominal region of minimum height above said base surface; wherein said pin assumes said first position when said follower end is engaged with said elevated region and assumes said second position when said follower end is engaged with said nominal region; and wherein said electromagnet lies generally in a plane parallel to that of said reference surface; and including:  
a planar bearing member mounted on said electromagnet and lying in a plane parallel to that of said reference surface, said bearing member having a surface facing said reference surface and having a centrally positioned dimple therein to freely receive said projection;