US 20090200841A1

(19) **United States**

(12) **Patent Application Publication**

Rhoten

(10) **Pub. No.: US 2009/0200841 A1**

(43) **Pub. Date: Aug. 13, 2009**

(54) **DUAL INFANT ACTIVITY CENTER**

(76) Inventor: **Mae J. Rhoten**, Los Angeles, CA (US)

Correspondence Address:
ANDREW C. AITKEN, ESQ.
AITKEN LAW OFFICES
P.O. BOX 1810
WHEATON, MD 20915 (US)

(21) Appl. No.: **12/379,182**

(22) Filed: **Feb. 13, 2009**

Related U.S. Application Data

(60) Provisional application No. 61/064,046, filed on Feb. 13, 2008.

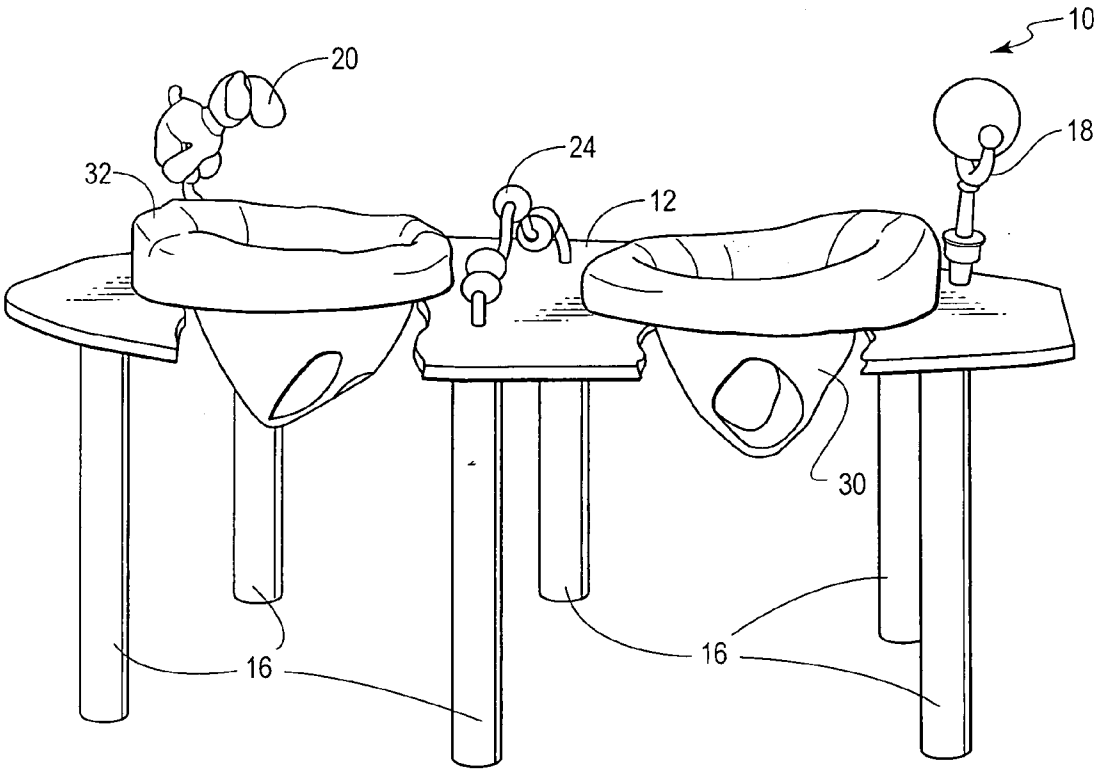
Publication Classification

(51) **Int. Cl.**
A47B 83/02 (2006.01)

(52) **U.S. Cl.** **297/157.1**

(57) **ABSTRACT**

An infant activity device is disclosed which includes a tray mounted on a vertical elevation member to support the tray in a horizontal orientation above a support surface. The tray has two openings for two seats to supporting an infant and allow the infants to sit above the support surface to allow their legs to engage the support surface. The seats are positioned a predetermined distance away from each other to impede an infant is sitting in the first seat from reaching the head or torso of a second infant sitting in the second seat.



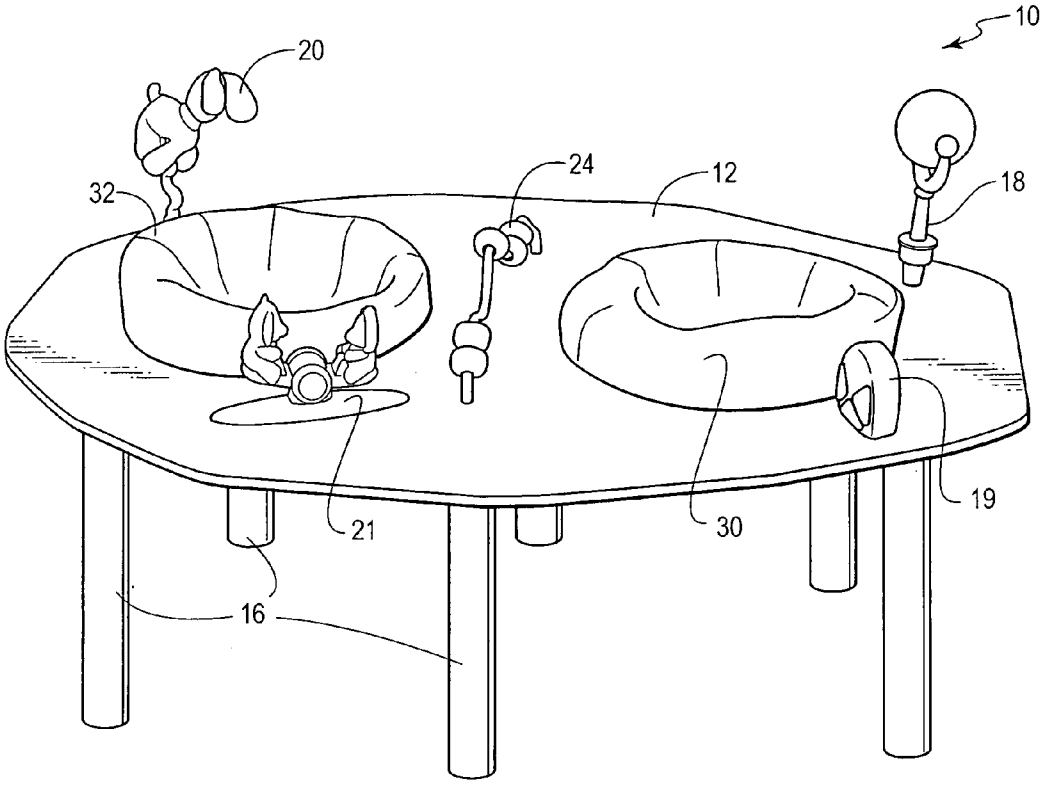


FIG. 1

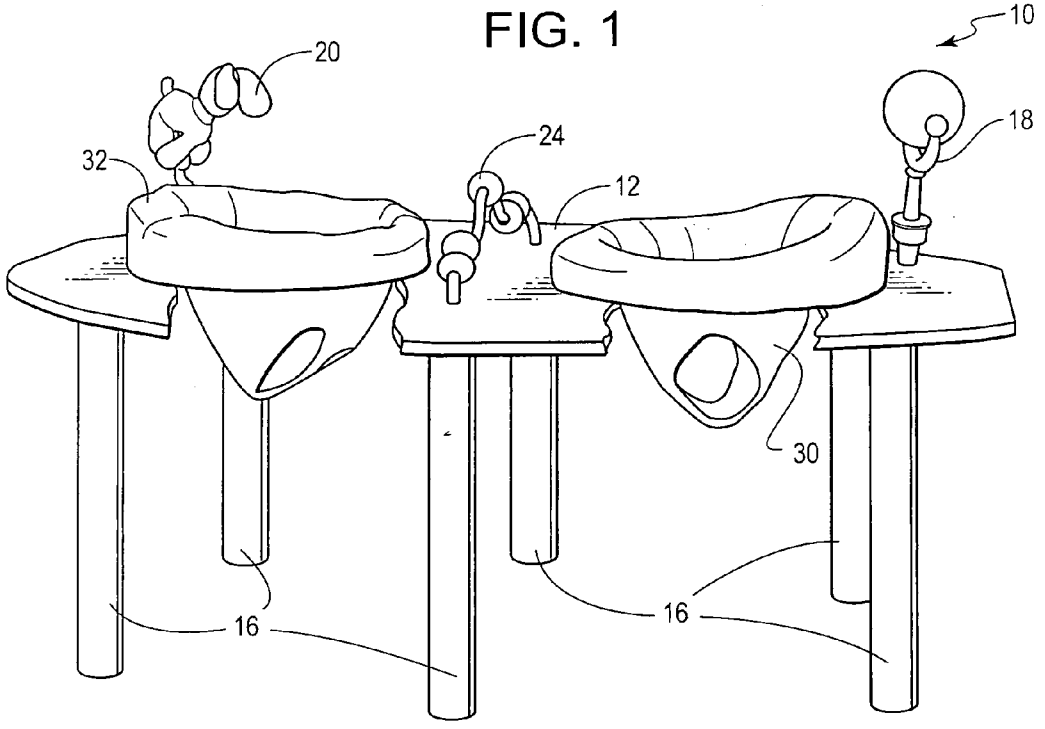


FIG. 2

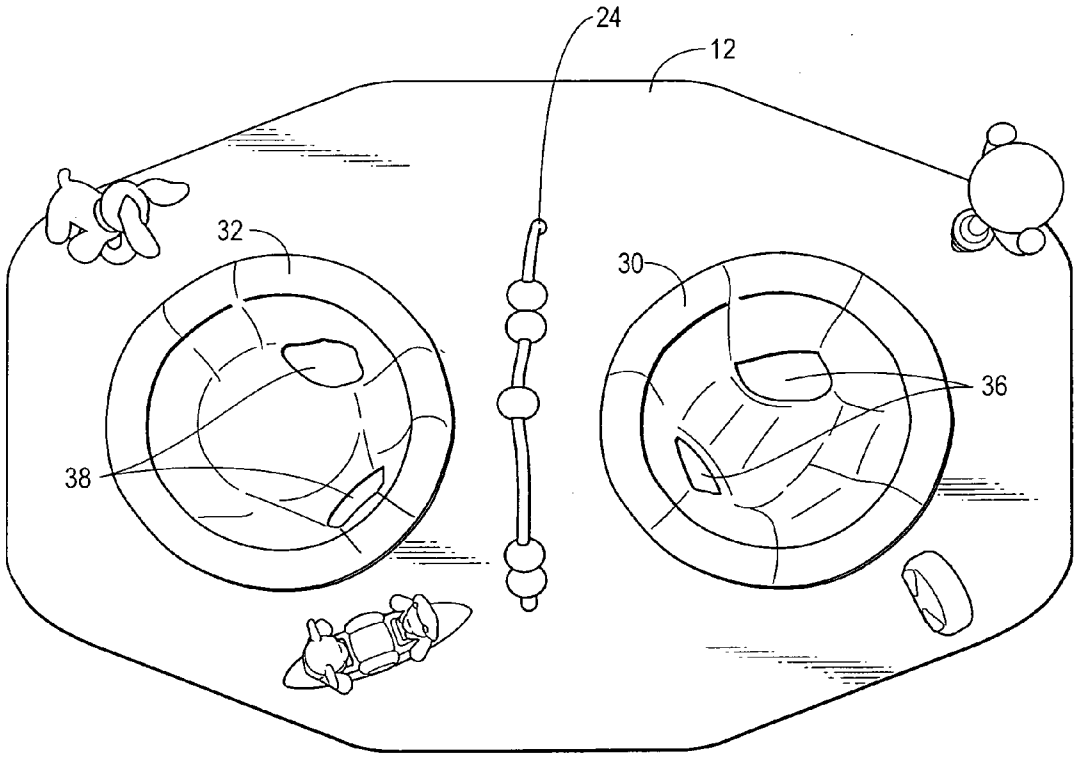


FIG. 3

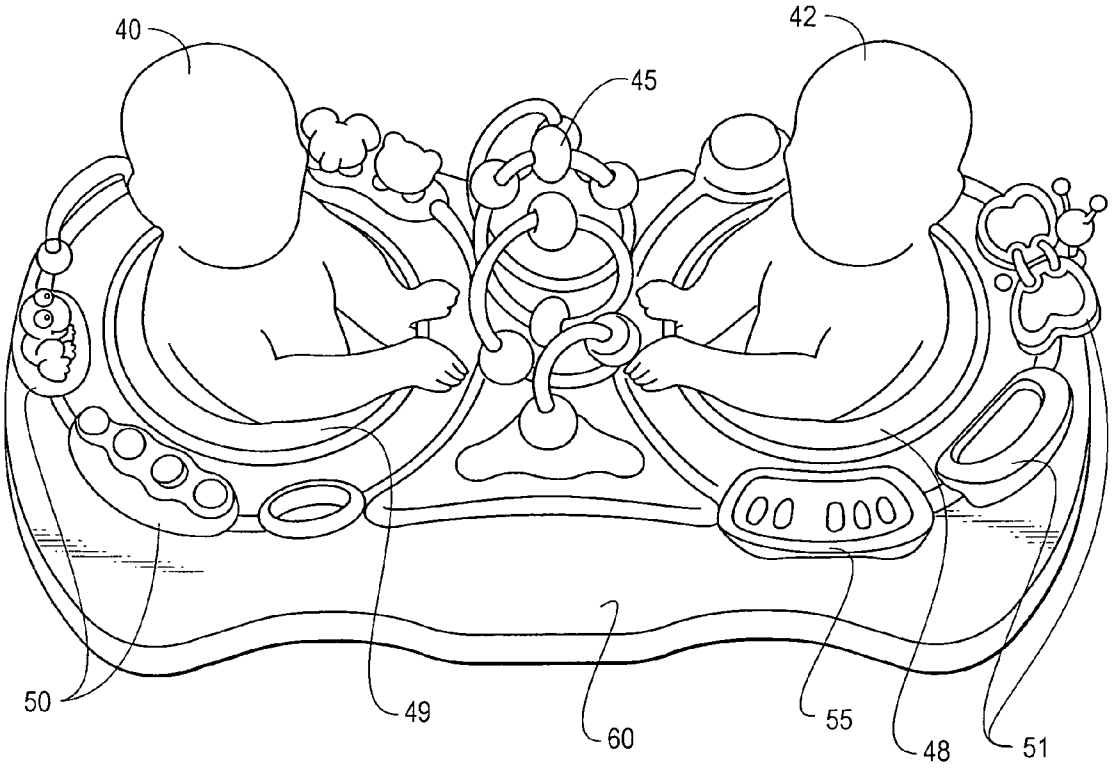


FIG. 4

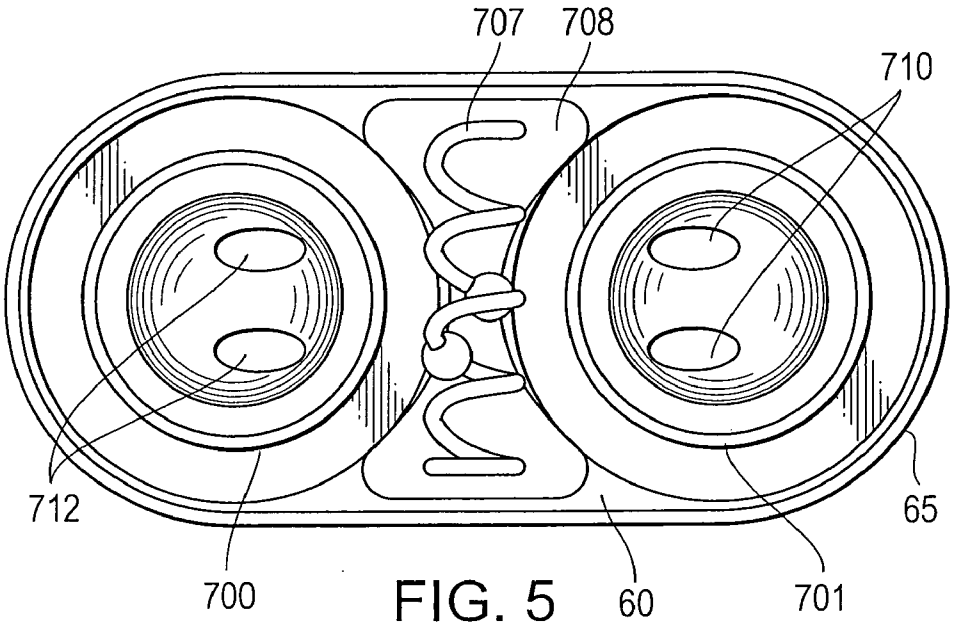


FIG. 5

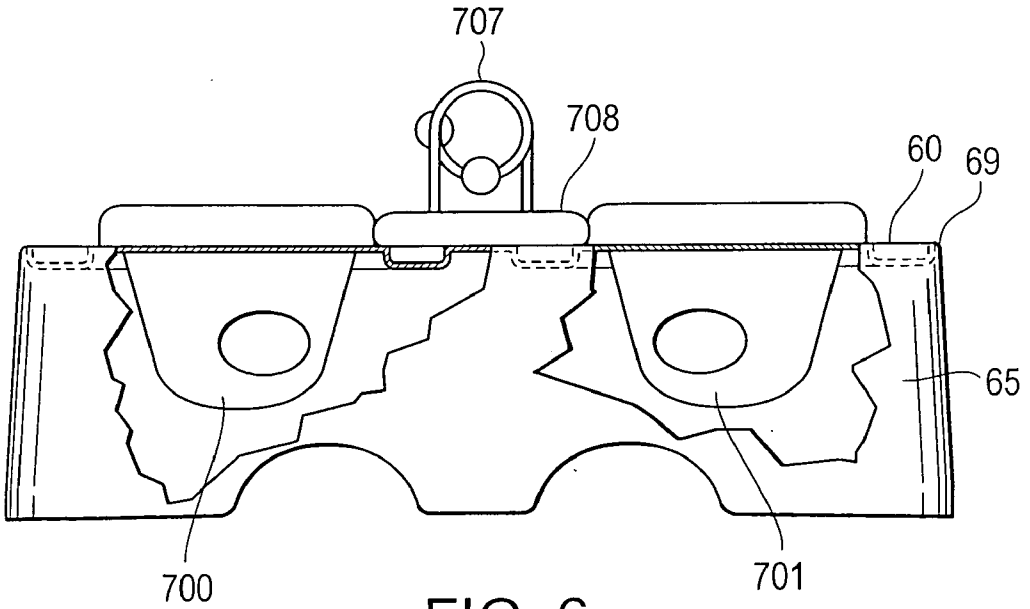


FIG. 6

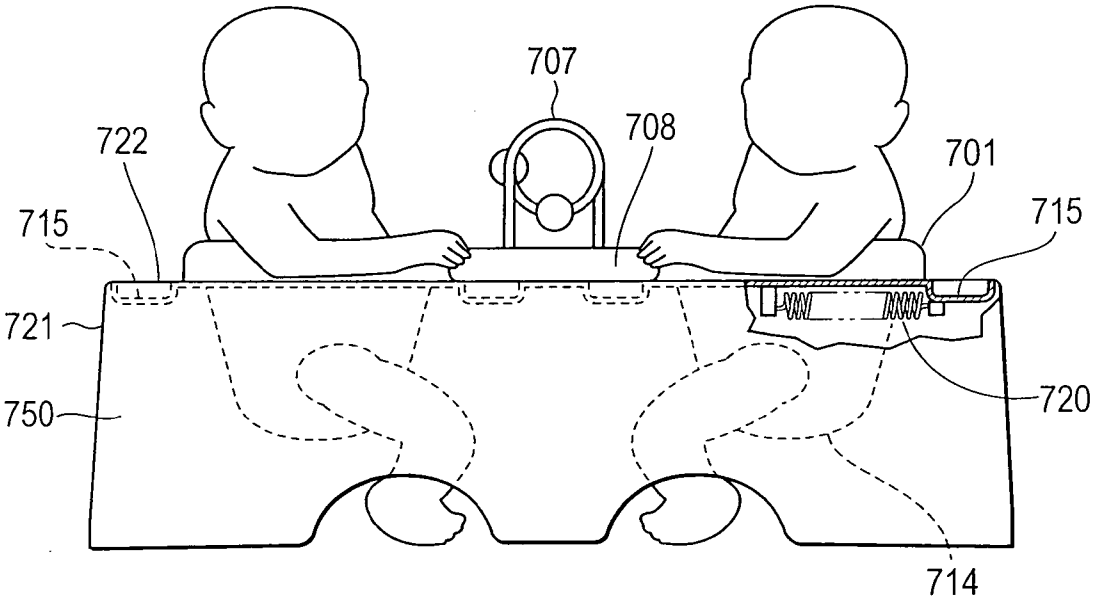


FIG. 7

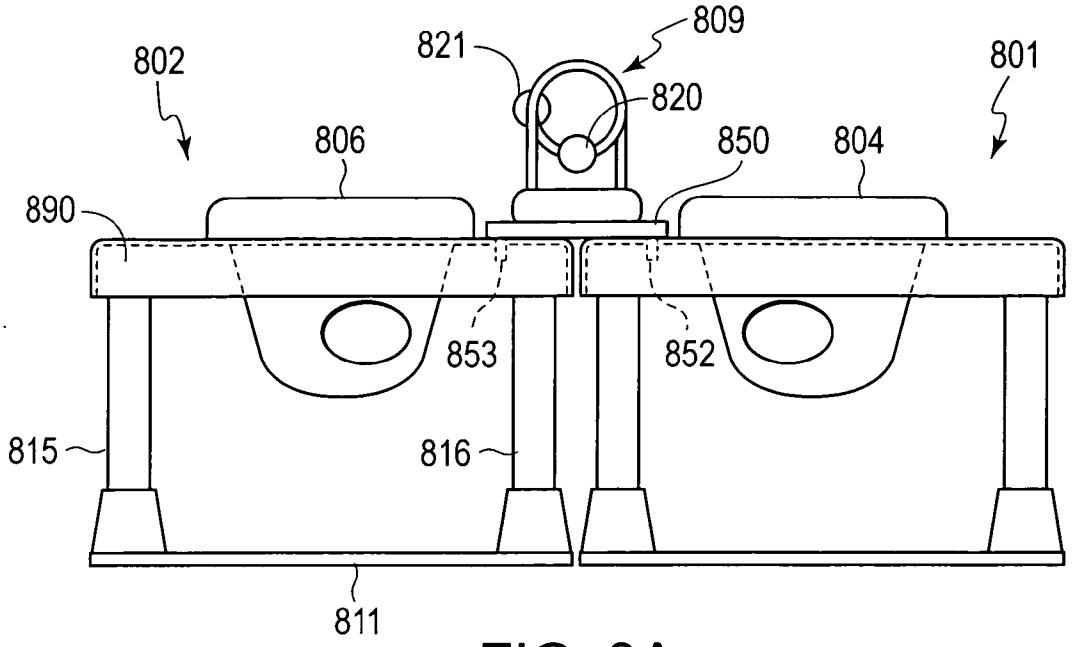

809
821
802
801
820
806
850
804
890
853
852
815
816
811

FIG. 8A

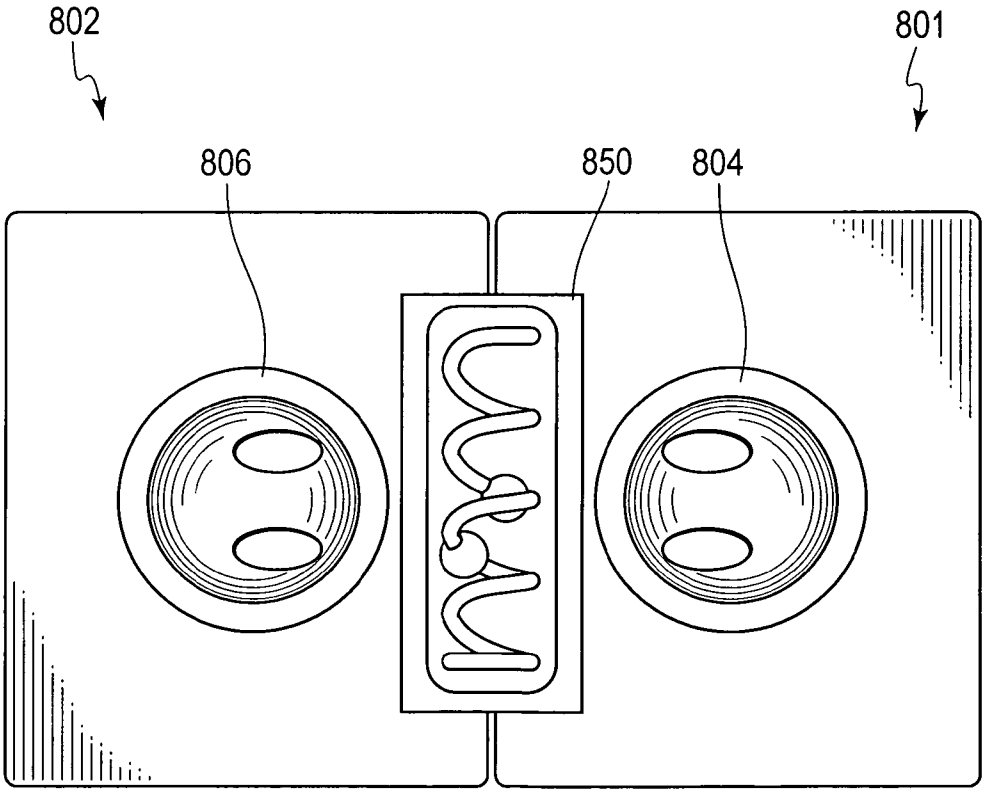

802
801
806
850
804

FIG. 8B

FIG. 9

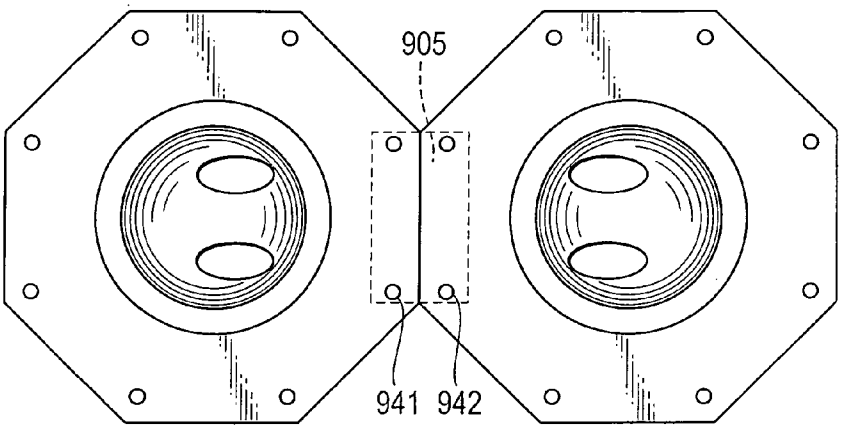


FIG. 10

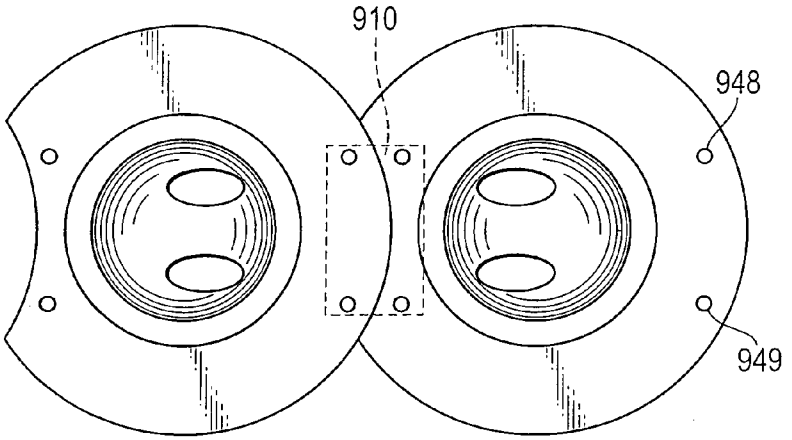
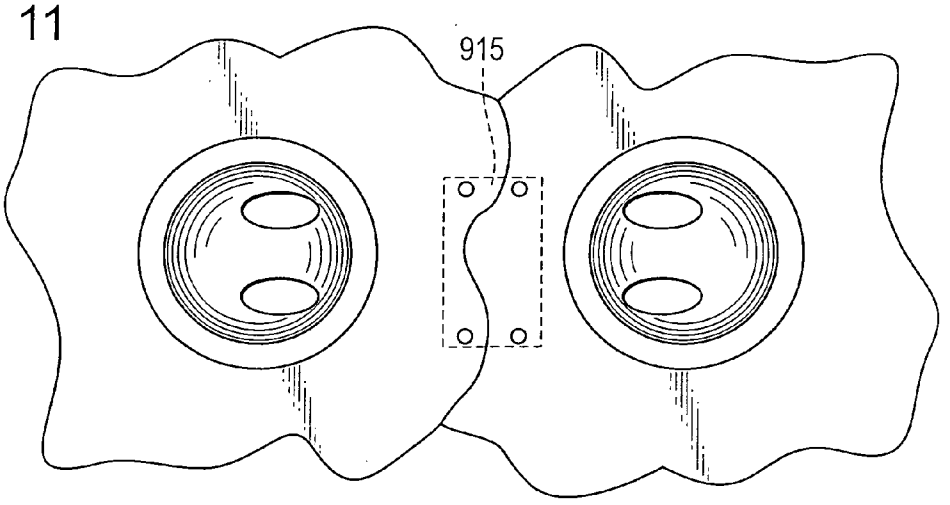


FIG. 11



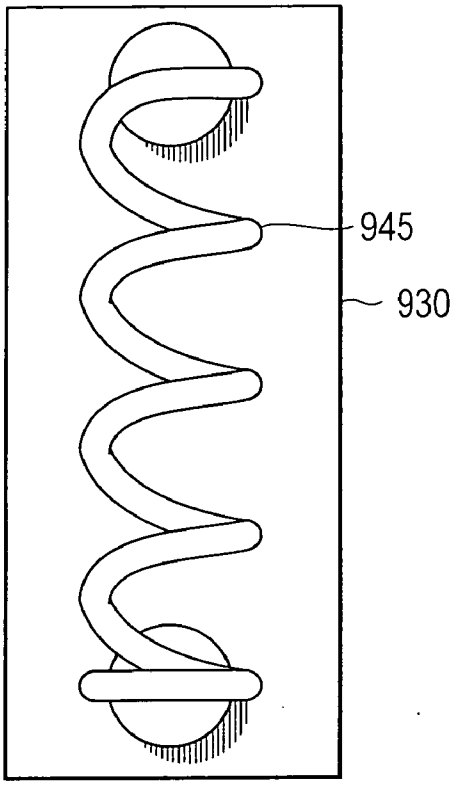


FIG. 12

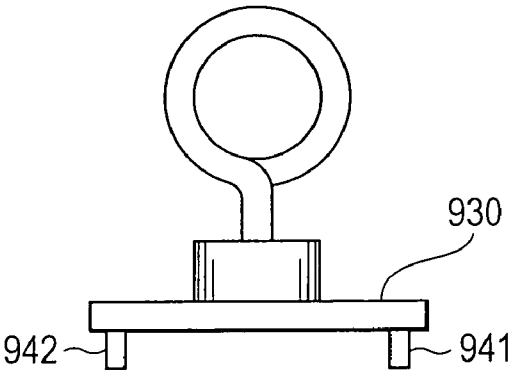


FIG. 13

DUAL INFANT ACTIVITY CENTER

[0001] The Applicant claims the benefit of U.S. Provisional Application No. 61/064,046 entitled Dual Activity Center filed on Feb. 13, 2008 and which is incorporated by reference in its entirety.

BACKGROUND

[0002] Infant activity centers or child entertainment centers typically involve a tray or tabletop through which an opening is provided to allow a small child or infant to sit and interact with items that may be provided on the tray. The trays are elevated from a support member such as a floor by a plurality of legs or pylons. Many of the prior art devices are stationary devices and cannot be moved by the infant.

SUMMARY

[0003] The present invention is directed to a unit that is designed to holds two infants, such as twins, in separate seats in a manner that allows them to interact and play with one another. The arrangement of the seats in the device encourages early socialization among twins or children of approximately the same age and allows for them to safely play with one another in a secure environment. Further aspects of the disclosure are directed to an infant activity center wherein more than one infant can interact with one another and share items on a single tray. In a preferred embodiment, the tray is supported from the floor by a plurality of legs. Two passages are provided through the tray in which seats for infants are situated. The seats are designed to support the weight of the infant and each seat includes openings through which the infant's legs may be received. The seat is made from a flexible fabric or other material such as molded synthetic resin. In one embodiment the seats allow for the infant to rotate 360° using their legs or arms for mobility. The rotation of the seat with respect to the tray may be facilitated by the provision of an annular bearing assembly or rollers (not shown) which are received in a complementary annular ring on the tabletop around the seats. This arrangement provides some exercise for the infant and allows the children to conveniently access the entire tabletop that surrounds the seating area, including areas that are provided with secured toys as well as areas on the tabletop that are empty.

[0004] In an alternative contemplated embodiment, toys are provided that are located and secured on the tabletop between the infants as well as at locations secured around the tabletop of the unit. In a preferred embodiment a toy is positioned in a secured location that is accessible by both infants when they are seated in their respective seats. Providing toys that are secured in place prevents the toys from being dropped from the tabletop or, with respect to the toy in the location between the infants, to be moved by one of the infants from the location. This arranged allows simultaneous play by more than one infant with a single toy and prevents one infant from keeping the toy to oneself. The infants are spaced apart from one another in a manner that allows them to share a toy, but they are not able to directly interact with each other, with the exception of their extended hands. This arrangement allows the infants to explore playing with one another as well as individually. Toys secured to the tabletop may include abacus like wire toys, spinning toys, light-up toys, mirrors and musical or noisemaking toys.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIG. **1** is a view in elevation of a first embodiment of the invention.

[0006] FIG. **2** is a fragmented section view in elevation of the first embodiment of the invention depicting the infant seats.

[0007] FIG. **3** is a top view of the first embodiment of the invention.

[0008] FIG. **4** is a view in elevation of a second embodiment of the invention.

[0009] FIG. **5** is a top view of the second embodiment of the invention.

[0010] FIG. **6** is a side fragmented view of the second embodiment of the invention depicting the infant's seats.

[0011] FIG. **7** is a side fragmented view of the second embodiment of the invention showing the seats and infant's legs in phantom.

[0012] FIG. **8** depicts a side view of another embodiment of the invention wherein the respective infant seats are provided on separate units that may be joined together.

[0013] FIG. **8**A is a top view of the embodiment depicted in FIG. **8**.

[0014] FIG. **9** depicts a top view of yet another embodiment of the invention wherein two separate seat units having octagonal tabletops in position adjacent and abutting one another.

[0015] FIG. **10** depicts a top view of another embodiment of the invention wherein two separate seat units are positioned in adjacent tabletops with a concave actuate sections removed from the side in position adjacent and abutting one another.

[0016] FIG. **11** depicts a top view of yet another embodiment depicting two separate seat units having complementary surfaces in a position near one another.

[0017] FIG. **12** is a top view of a pallet structure, including a base **122** and a toy **125** that can be used to join the units depicted in FIGS. **9-11**.

[0018] FIG. **13** is a side view in elevation of the pallet structure showing extensions **130** and **131** which extend from the bottom of the base of the pallet and may be received in an opening provided on adjacent tabletops.

DETAILED DESCRIPTION OF EMBODIMENTS

[0019] Referring now to FIGS. **1** and **2**, an infant entertainment center **10** has a tabletop or tray **12** which is arranged in a substantially horizontal orientation relative to the floor or other support surface. The tabletop or tray **12** is supported by a plurality of legs **16**. Each leg may is equipped a non-skid pads to inhibit the inadvertent movement of the entertainment center **10** across the floor or other support surface. In a contemplated embodiment the legs may be adjustable to accommodate different sized infants to allow their feet to touch the floor or other support surface. Preferably, the legs are attached in a manner to allow for the removal and reattachment to allow for ease of shipping and storage.

[0020] Tray **12** is provided with a plurality of toys **18-21** secured to the tray that can be manipulated by the infants when seated. One of the toys **24** is positioned directly between opposite seats **30** and **32**.

[0021] As best seen in FIG. **3**, each of the seats **30** and **32**, has openings **36** and **38** respectively to receive the infant's legs. The seats are mounted on the tray **12** to allow for rotational movement.

[0022] Referring now to FIG. **4**, in a second embodiment, two infants **40** and **45** are depicted seated in two respective seats **48** and **49** and are both engaging a shared toy **45**. Additional toys **50** and **51** or other such a tray items are also positioned within reach of the infants and secured to the tabletop **60**. As seen in FIGS. **5** and **6**, a vertical sidewall member **65** supports the tray member **60**. In this embodiment the seats and tabletop are made from a single piece of synthetic resin. Also seen from this view are openings **710** and **712** in seats **700** and **701** which are provided to receive the infant's legs. As best seen in FIG. **6**, rather than providing a plurality of legs, the tray is elevated by sidewall **65** which extends around the device. In this embodiment the tabletop **60** includes a raised edge **69** around the periphery of the unit to keep items on the tabletop. A toy **707** is provided between the two seats **700** and **701** that are adapted to receive the infants. In this embodiment, the toy **707** is secured to the device by a frictional engagement of pallet **708** to allow for different toys to be easily interchanged in the position between the two seats.

[0023] Referring now to FIG. **7**, tabletop **722** and supporting sidewall **721** are also comprised of a single piece of synthetic resin **750**. In this embodiment, the shared toy **707** is provided on a removable pallet **708** that allows the toys to be removed or altered. A recession **715** is provided around the exterior of the tabletop which helps maintain items on the table (including liquids). Also shown is spring member **720** that has one end attached to seat **701** and the opposite end attached to the underside of tabletop **715**. In the event that an infant rotates the seat with respect to the tabletop, the spring member **720** will be put in tension. When the infant relieves the tension on the spring, seat **701** will rotate back to a home position. An opposite biasing element, not shown, on the opposite side of the seat, can exert a biasing force on the seat in the opposite direction. This second spring member (not shown) it is attached at one end on the opposite side of the seat from the first spring member **720** and the opposite end of the second spring member is attached at a location under the pallet **708**. The home position may be set by the user depending upon the location of the desired home position with respect to the tabletop by altering the position of attachment of the spring or other biasing elements.

[0024] Now referring to FIG. **8**, in an alternative embodiment of the invention two separate units **801** and **802** may be joined together or brought in close proximity to one another along an abutting surface. FIG. **8** depicts a first unit using having seat **806** that is provide through tray **890**. The tray is elevated from base member **811** by legs **815** and **816**. The unit **800** is connected to second unit **801** by pallet **850** that also incorporates toy **809**. Thus, one contemplated manner in which to secure the adjacent complementary units together is to use a removable pallet **850**, similar to that depicted in FIGS. **5-7** wherein downward extensions **852** and **853** are received in corresponding openings are provided in the adjacent tabletops. As illustrated in FIGS. **9-11**, pallets **905**, **910** or **915** attached trays having different shapes but include sides adapted for abutting one another and related attachment means. As illustrated in FIG. **13**, a pallet **930** is provide with pins **940** and **942** that can be received in openings such as **941**, **942**, **948**, **949** that are depicted in FIGS. **9-11**. As can be appreciated by the FIGS. **9-11** multiple units may be attached together in different arrangements. FIG. **12** depicts a top view of palate **930** which incorporates toy **945**.

[0025] In the embodiment depicted in FIG. **8** a wire abacus puzzle device **809** is provided with a plurality of beads **820-821**. This type of structure, which extends upward from the surface of the table, also provides a barrier between the infants. The barrier may be advantageous for some infants that are reluctant to engage other infants. Further in this regard, the seats are position so that an infant seated in the first seat is unable to reach and contact the head or torso region of an infant seated in the opposite second seat.

[0026] In an alternative contemplated embodiment such as depicted in FIG. **8**, two separate units, each including at least one infant seat, may be brought together in close proximity to one another and, preferably, secured together with a fastener that can be easily be used to join or disassociate the two units. In this contemplated embodiment, at least one lateral side of the individual units should be formed to complement the other so that they will fit together and the trays will be aligned on the same plane. For example, one side of the tabletop of both of the units may comprise a substantially straight edge which allows the two tabletops to abut one another and be joined together as depicted in FIG. **9**. The location of complementary sides must be free from other lateral side obstructions, such as legs, or leg support members that may extend beyond a perpendicular line or plane extending from the top of the tabletop surfaces that are to be joined together. The fastener that is used to attach the units may comprise a velcro® brand or similar type hook and fabric device provided on abutting surfaces, clamps, latches, or integral parts that may snap fit together and may be taken apart. In yet further contemplated embodiments, multiple units could be fitted together in a sequential arrangement or be clustered at different angular locations. These alternative arrangements have the advantage of allowing the devices to be used together or individually depending on the need of the parents or child caregiver. The devices are particularly useful for twins and for applications where a caregiver is responsible for the care of multiple young children.

[0027] While the tabletop having a straight side that may be joined to an adjacent tabletop is one of the preferred embodiments, as illustrated in FIGS. **10** and **11**, other complementary arrangements may also be advantageously used with the invention such as an arcuate convex edge and corresponding arcuate concave edge, an undulating edge with a complementary undulating edge surface. It is preferred that the two units are joined in such a fashion to allow the infants in the units to access opposite sides of a single toy. The joining together of the multiple units also contributes to greater stability as devices that are joined together are less likely to be tuned over.

[0028] In yet a further embodiment, the method of securing the toys in place may be provided in such manner as to allow the parent to easily change the locations of the toys that have been secured to the tabletop. Such techniques are well known in the art and may include snap fitting securing techniques, or the use of bolts and wing nuts. Preferably all the parts that are used in the construction of the devices are sized in a manner to obviate any choking hazards. In yet a further contemplated embodiment of the invention, a portion of the tabletop or tray is comprised of Lucite, plexi-glass or other transparent material. In this embodiment the infant may be able to look downward though the table to see objects on the floor. While in the preferred embodiment the seat structure is attached to the

tabletop to allow for 360° rotation, less than complete rotation may also advance the objectives.

[0029] It will be understood that the embodiments described herein are merely exemplary and that a person skilled in the art may make many variations and modifications without departing from the spirit and scope of the invention. For example, the seat assemblies **30** and **32** could be modified so that the seat is adapted for reciprocating movement in a vertical direction, whereby the infant seated in the seat **30** and **32** would be able to bounce up and down. All such variations and modifications are intended to be included within the scope of the invention as defined in the appended claims.

What is claimed is:

1. An infant activity device adapted for use in a substantially stationary location on a support surface, comprising

a tray mounted on a vertical elevation member so that said tray is maintained in a substantially horizontal orientation and above said support surface,

said tray having a plurality of positions for mounting a plurality of seats within said tray, said plurality of seats including a first seat and second seat,

said plurality of seats provided for supporting an infant, said seat sized and shaped so as to permit an infant to sit thereon and suspend said infant above said support surface to allow said infant to engage said support surface, and wherein each said seat has a central axis and the central axis of said first seat is a predetermined distance away the central axis of a second adjacent seats, and said predetermined distance is selected to be sufficient to impede an infant that is sitting in said first seat from reaching the head or torso of a second infant sitting in said second seat.

2. The device recited in claim **1** wherein said vertical member comprises a sidewall.

3. The device recited in claim **1** wherein said vertical member comprises legs.

4. The device recited in claim **3** further comprising a base and said base being immovably positioned relative to the support surface, wherein said legs extend from said base to said tray.

5. The device recited in claim **1** wherein at least one seat is mounted in a circular opening in said tray.

6. The device recited in claim **5** wherein said seat can pivot about an axis.

7. The device recited in claim **5** wherein said seats further comprise an annular bearing to allow said seats to rotate about an axis.

8. The device recited in claim **5** wherein said seats further comprise a plurality of rollers attached to said seats, each of said rollers riding along an annular groove provided on said tray.

9. A infant activity center adapted for use in a substantially stationary location on a support surface, comprising

a tray mounted on a vertical elevation member so that said tray is maintained in a substantially horizontal orientation and above said support surface,

said tray having openings for receiving seats within said tray,

said seats provided for supporting an infant, said seat sized and shaped so as to permit an infant to sit thereon and suspend said infant above said support surface to allow said infant to engage said support surface, and wherein said seat has central axis, and

wherein said tray has a surface adapted for abutting a second infant activity center, wherein said trays of said first activity center and said second infant activity center will be positioned in substantially the same horizontal plane, and

an attachment device, for securing said first infant activity center to said second infant activity center.

10. The infant activity center recited in claim **9** wherein said attachment device comprises a pallet.

11. The infant activity center recited in claim **10** wherein said pallet further comprises a toy located between the seats provided in said first and said second infant activity centers.

12. The infant activity center as recited in claim **10** wherein a first seat in said first activity center and a second seat in said second activity center have a central axis and said plurality of seats provided for supporting an infant, said seats sized and shaped so as to permit an infant to sit thereon and suspend said infant above said support surface to allow said infant to engage said support surface, and wherein each said seat has a central axis and the central axis of said first seat is a predetermined distance away from the central axis of a second adjacent seat, and said predetermined distance is selected to be sufficient to impede an infant that is sitting in said first seat from reaching the head or torso of a second infant sitting in said second seat.

* * * * *