Feb. 28, 1967 L. J. ARP 3,306,287

INFANT SUPPORTING APPARATUS

Filed Jan. 2, 1964

FIG. 1.

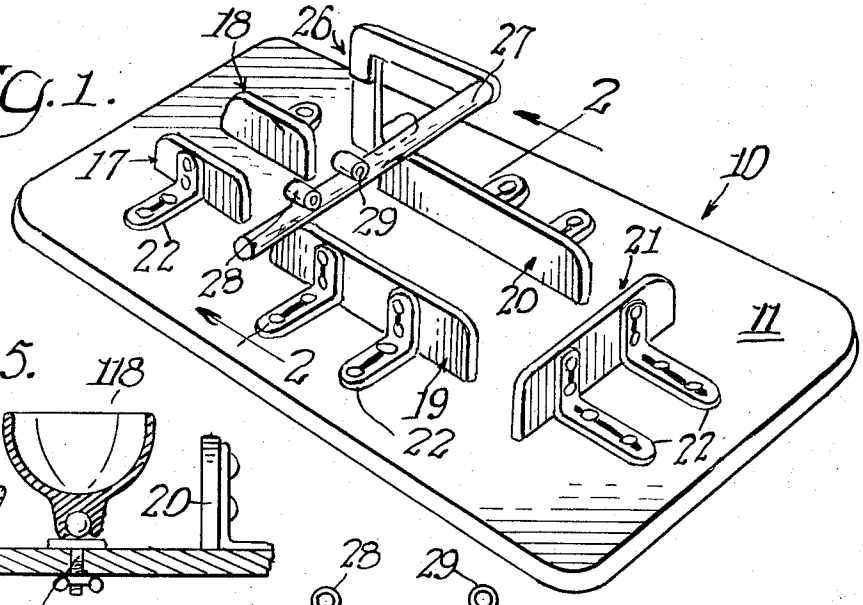


FIG. 5.

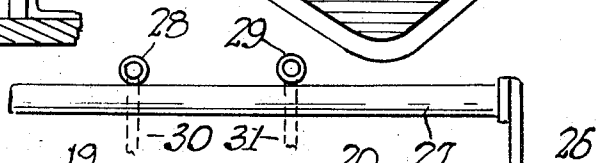
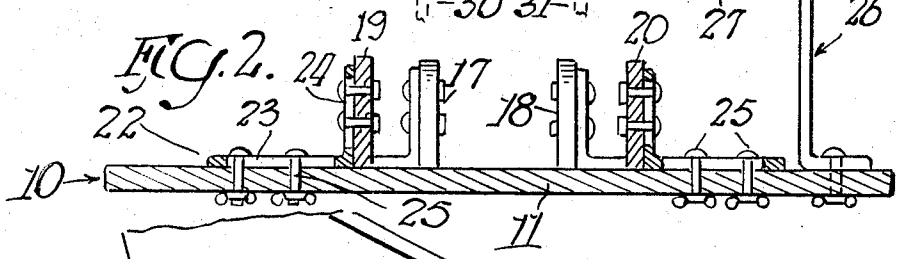


FIG. 2.



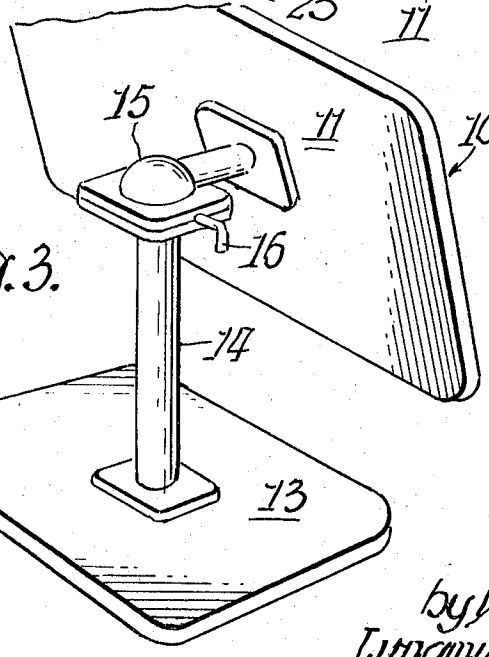


FIG. 3.

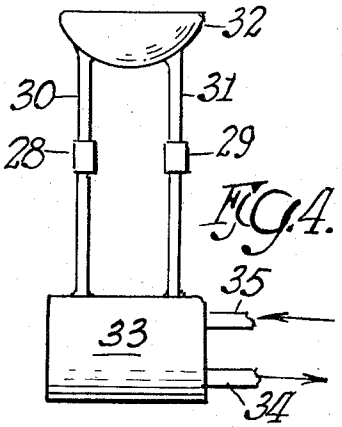


FIG. 4.

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INFANT SUPPORTING APPARATUS

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This invention relates to apparatus for supporting an infant, and, more particularly, to apparatus for supporting an infant during medical treatment.

It is an object of the invention to provide novel apparatus for supporting an infant during therapeusis such as respiratory augmentation. As such, this application is related to the co-owned, copending application of David L. Carlson, Serial No. 332,369, filed December 23, 1963.

Another object is to provide apparatus especially adapted to confine and support an infant in a plurality of different positions for medical treatment.

Other objects and advantages of the invention may be seen in the details of construction and operation set down in this specification.

The invention is explained in conjunction with the accompanying drawing, in which—

FIG. 1 is a perspective view of a platform employed to support and confine an infant;

FIG. 2 is an enlarged sectional view such as would be seen along the sight line 2—2 of FIG. 1;

FIG. 3 is a fragmentary perspective view of the platform of FIG. 1 but viewed from the underside and showing a pedestal mount therefor;

FIG. 4 is a schematic view of apparatus for augmenting the breathing of an infant, used in conjunction with the platform of FIGS. 1–3; and

FIG. 5 is a fragmentary sectional view of a modified form of the invention.

In the illustration given and with particular reference to the drawing, the numeral **10** designates generally a platform which includes a 16" x 24" flat panel **11** which may advantageously be constructed of a non-porous material such as metal or plastic for ready autoclaving. As seen in FIG. 3, the platform is equipped with a pedestal generally designated **12** which includes a base **13** and standard **14**. Intersecting the standard **14** and the panel **11** is a ball and socket connection **15** equipped with suitable lock means **16** for maintaining the platform **10** in a desired angular position such as that seen in FIG. 3.

Upstanding from the platform panel **11** are a number of barriers employed to support and confine an infant lying on the platform **10**. These barriers include the members **17** and **18** which are arranged to be on opposite sides of the infant's head. Alternatively, a molded barrier may be employed for this purpose. Other barriers **19** and **20** provide the same function relative to the torso, while the transverse barrier element **21** serves, in effect, as a foot rest or stop. Each barrier element **17–21** is advantageously coupled to the panel **11** by means of brackets **22**. Each bracket **22** includes a right-angled clip having a pair of elongated slots as at **23** and **24** to facilitate adjustment when secured in place by means of bolts **25** (see FIG. 2).

Additionally, the panel **11** is equipped with an upstanding bracket generally designated **26** which supports in pivotal cantilever fashion an L-shaped transverse rod **27** positioned so as to be above an infant supported on the panel **11**. The rod **27** may be equipped with hose supports **28** and **29** which serve to support the hoses **30** and **31** connected to the nose mask **32** of the infant. A nose mask useful in connection with this apparatus can be seen in the co-owned, copending application of John B. Buck, Serial No. 351,182, filed March 11, 1964, and now abandoned.

In operation, the barriers **17–21** are adjusted, i.e., positioned so as to substantially immobilize an infant and the hoses **30** and **31** are immobilized in the supports **28** and **29**. As such, the hoses provide inhalation and exhalation paths to an augmentor **33** which is more fully described in the above-mentioned application of David L. Carlson. In FIG. 4, the augmentor **33** is seen to be coupled to an air or oxygen supply means as at **35** and an exhalation exhaust means at **34**. The augmentor **33** is responsive to the initial inhalation of the infant to supply air under positive displacement to do the work of breathing and thus compensates for respiratory distress. This is not infrequent in premature infants who lack the strength to breathe when affected with a malady such as respiratory distress syndrome.

It will be appreciated that although one environmental use of the inventive platform has been outlined in detail, other therapeutic uses are available to the medical profession. Infants in particular are difficult to support and confine, and the inventive construction thus can be utilized in other medical treatment such as X-rays. In the latter case, it is advantageous to cover the platform with lead.

In FIG. 5, it is seen that the platform **111** is equipped with an upstanding post **117** cooperating with a resilient cup-shaped member **118** to define a ball and socket joint to support and confine the infant's head in place of the barriers **17** and **18**. The cup **118** may advantageously be made of latex material and formed to fit the size and shape of the head of a particular infant.

While in the foregoing specification a detailed description of an embodiment of the invention has been set down for the purpose of explanation thereof, many variations in the details herein given may be made by those skilled in the art without departing from the spirit and scope of the invention.

I claim:

1. In apparatus for use with infants, a platform equipped with upstanding barriers for confining the infant, said barriers including parallel members to support and confine the head of the infant and including separate members to confine the torso of the infant, bracket means upstanding from said platform, gas conduits supported by said bracket means for conveying gas to and from the nose of an infant on said platform, and pedestal means for supporting said platform, said pedestal means including adjustable connection means attached to said platform and selectively adjustable for tilting said platform.

2. The structure of claim 1 in which said barriers include a flexible head-holding member of general cup shape pivotally secured to said platform.

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