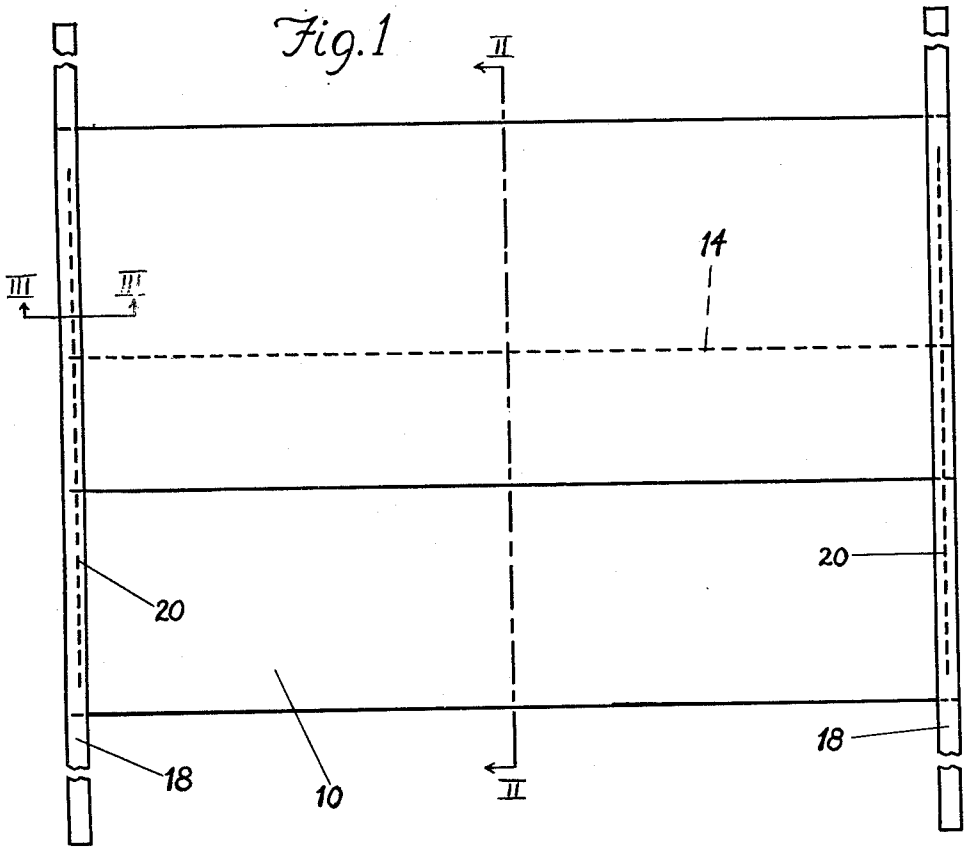
Aug. 6, 1935. W. T. LANE 2,010,433

ABSORBENT DISPOSABLE PAD

Filed Sept. 18, 1933

Fig. 1



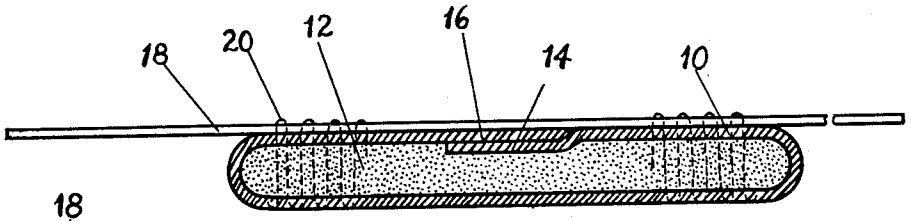


Fig. 2

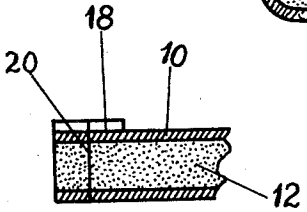


Fig. 3

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ABSORBENT DISPOSABLE PAD

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Application September 18, 1933, Serial No. 689,833

1 Claim. (Cl. 128—284)

This invention relates to improvements in disposable, absorbent pads and methods of making the same. The invention is illustrated herein as applied to a diaper for infants.

An object of the present invention is to provide an absorbent pad which is convenient to use and which may be readily disposed of upon being wet or soiled. As illustrated, the absorbent pad is in the form of a diaper, having an absorbent layer of cellulosic material covered by a sheet of paper or other relatively thin, strong fabric. The three layers of material are held together at each end by lines of stitching which also pass through pieces of tape which are utilized to secure the diaper to an infant. Although the invention is disclosed herein as provided with a paper covering for a cellulosic material, it is to be understood that other materials, such, for example, as surgical gauze, may be used.

The invention in another aspect resides in an improved method of manufacturing absorbent, disposable pads. As disclosed herein the method comprises folding a sheet of paper or other fabric over a layer or pad of cellulosic material, glueing the overlapped portions of the sheet, severing a length of material from the composite pad, and closing the ends of the pad by stitches which also extend through strips of material which in the finished garment are utilized to hold the garment in place on the wearer.

The novel features of the invention will now be more particularly described with reference to the accompanying drawing which shows a preferred embodiment of the invention and thereafter pointed out in the claims.

In the drawing,

Fig. 1 is a plan view of a preferred embodiment of the invention,

Fig. 2 is a cross-sectional view taken along the line II—II of Fig. 1, and

Fig. 3 is a cross-sectional view taken along the line III—III of Fig. 1.

According to the present invention a sheet of paper 10 is folded about an absorbent pad 12 formed of alpha cellulose or any other suitable absorbent cellulosic substance. Preferably a long strip of cellulosic material is covered by a strip of paper of substantially the same length as the cellulosic strip and pads of suitable length are cut from the continuous strip. It is to be understood that the overlapping portion 14 of the sheet of paper 10 overlaps the subjacent portion of the sheet. This overlapping portion 14 is coated with glue or other suitable adhesive and pressed against the subjacent or underlying portion of the sheet 12. The ends of the cut length of material are stitched to hold the cellulosic pad in place within the pocket formed by the sheet 10. At the same time that the ends of the pad are stitched a tape 18 is secured to the ends of the pad in a manner which will hereinafter be more fully described.

Although other materials could be used to form an outer or protective layer for the cellulosic pad 12, it has been found preferable both from ease of manufacture and low cost to use paper having certain desirable characteristics. Such a paper must be smooth, sterilized, must have substantial strength when wet, and must not chafe or otherwise injure the body of the wearer.

The tapes 18 are secured to the ends of the pad by lines of stitches 20. It is to be understood that these lines of stitches do not go from edge to edge but begin at a point approximately an inch from the edge of the pad and terminate about an inch from the other edge of the pad. This is done for the purpose of providing for adjustment. For example, if the pad is too large for the infant the ends of the diaper may be overlapped, thus decreasing the effective width of the pad by as much as two inches.

In use the pad or diaper is folded mid-way of its length and this portion is placed between the legs of the infant and the two portions are then folded upwardly and the tapes 18 are tied substantially at the waist of the infant.

In the manufacture of a diaper or other absorbent pad the cellulosic material is fed from a roll located above a roll carrying the paper 10. The paper 10 is then progressively folded about the pad of cellulosic material 12 as the cellulosic material is fed forwardly, for example, by means of feed rolls. As the paper is being folded glue or other suitable adhesive 16 is applied to one edge of the sheet, and this glued portion is passed beneath a pressing member, for example press rolls, to cause the glued portion of the paper 10 to adhere to the subjacent or underlying portion of the paper 10. In this manner the cellulosic material 12 is enclosed in a long, continuous pocket of paper.

From this long continuous composite pad is cut, in suitable lengths, pads which are then ready for the stitching operation. The pads may be cut automatically by the machine which is used to fold the paper 10 about the cellulosic material 12, or it may be cut manually. The cut lengths of composite material are then passed to a stitching machine which is provided with a tape guide in order that the tapes 18 may be secured to the pad

at the same time that the ends of the pad are closed by the line of stitches 20. In this manner diapers are conveniently and economically formed with a minimum expenditure of labor and materials.

It is to be understood that the materials used in the construction of the diaper and the steps used in the manufacture of the same are merely for the purposes of illustration and are not to be taken as limiting applicant's invention. Other materials and/or other steps or sequence of steps could be utilized without departing from the spirit of the present invention.

Having thus described by invention, what I desire to claim as new and secure by Letters Patent of the United States is:

A disposable absorbent diaper, comprising a pad of absorbent disposable material, a sheet of paper folded about said pad with the opposite longitudinal edges of said sheet overlapping, tapes secured to the opposite ends of said pad for reinforcing said pad and said sheet along the points of greatest strain, and a single line of stitches for securing each tape to the end of the pad, said line of stitches being effective also to close each end of the pocket formed by folding said sheet about said pad.

WILLIAM T. LANE.