

Feb. 27, 1934.

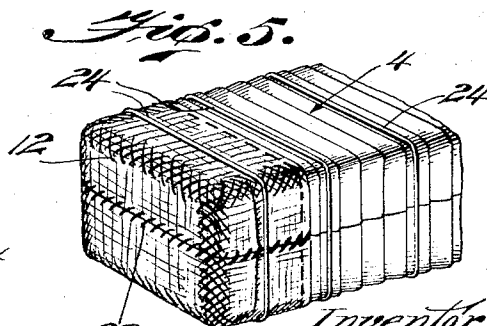
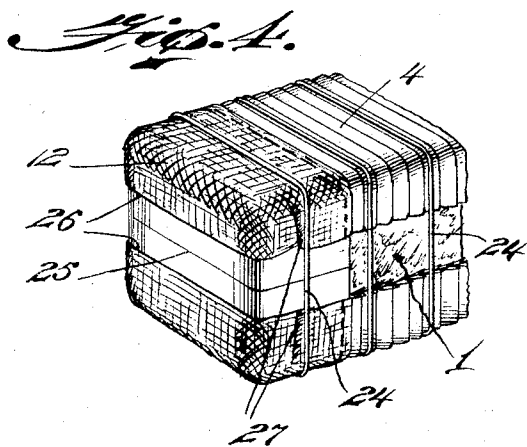
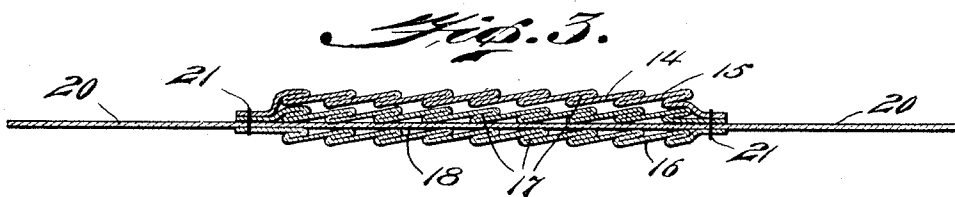
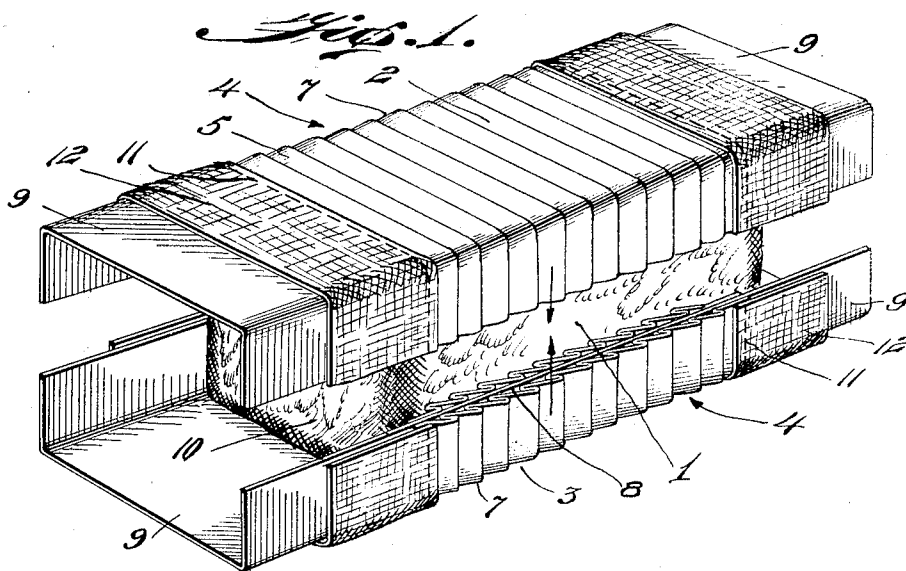
J. W. CLARK

1,948,615

PACKAGE OF EXPANSIBLE MATERIAL AND WRAPPER THEREFOR

Filed Dec. 9, 1930

3 Sheets-Sheet 1



Inventor
John W. Clark
By Peuley H. Plant
Attorney

Feb. 27, 1934.

J. W. CLARK

1,948,615

PACKAGE OF EXPANSIBLE MATERIAL AND WRAPPER THEREFOR

Filed Dec. 9, 1930

3 Sheets-Sheet 2

Fig. 6.

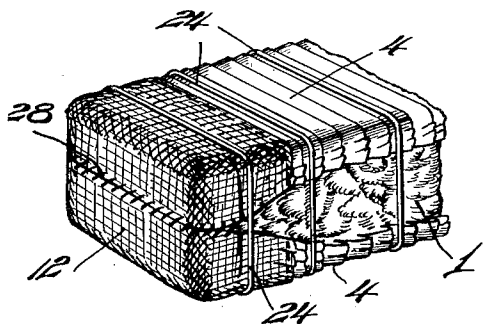


Fig. 7.

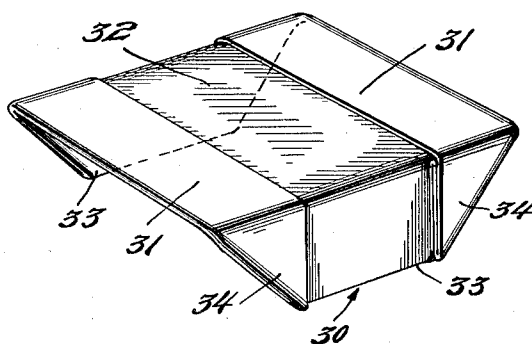


Fig. 8.

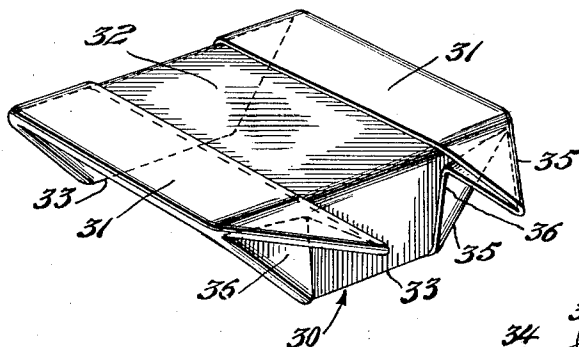


Fig. 9.

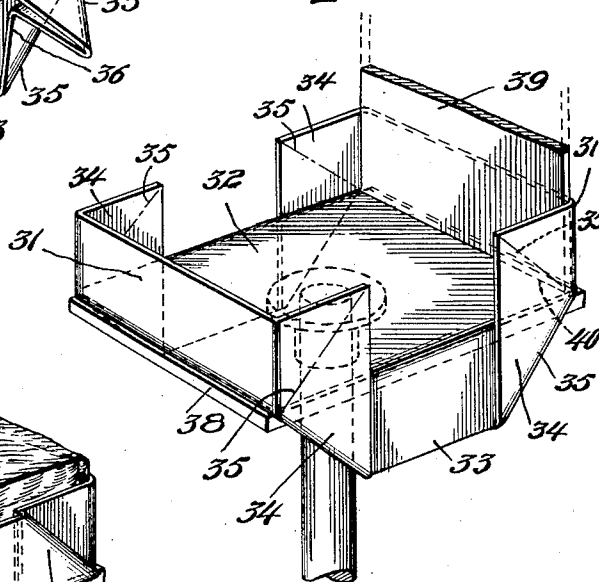
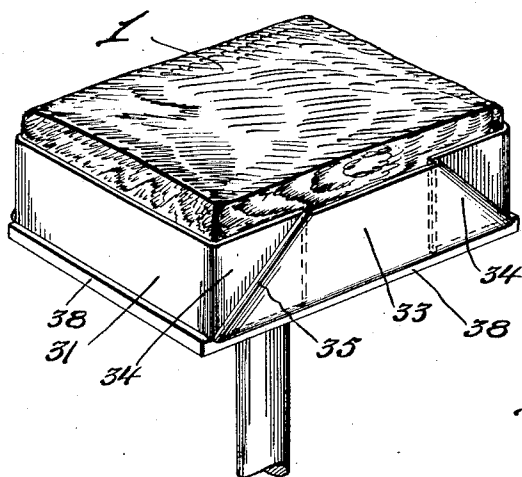


Fig. 10.



Inventor
John W. Clark.
By Perley H. Plaut.
Attorney.

Feb. 27, 1934.

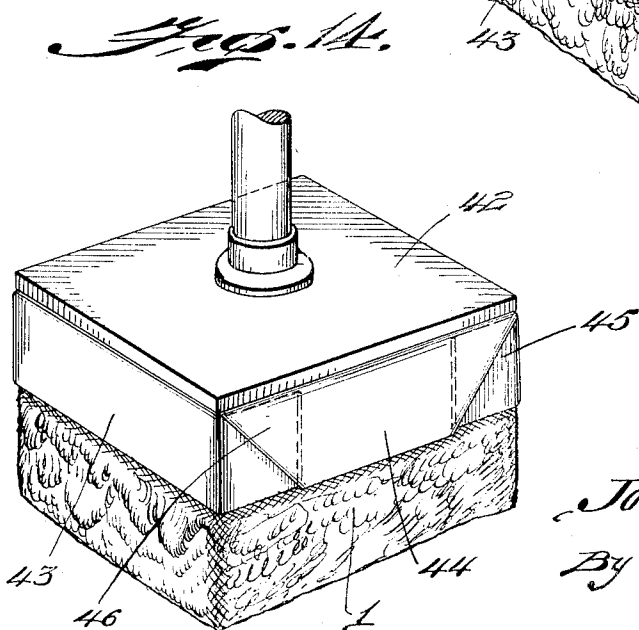
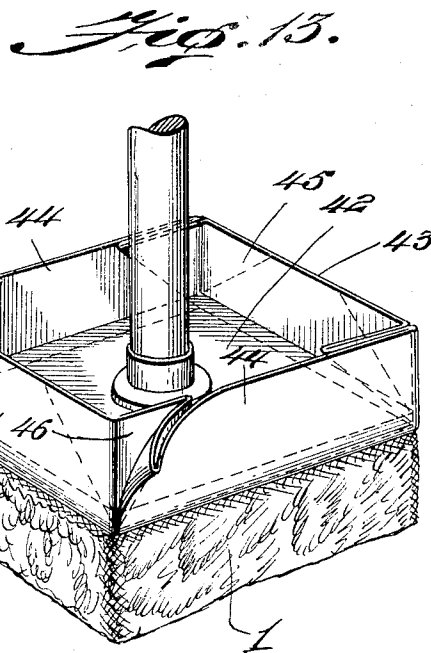
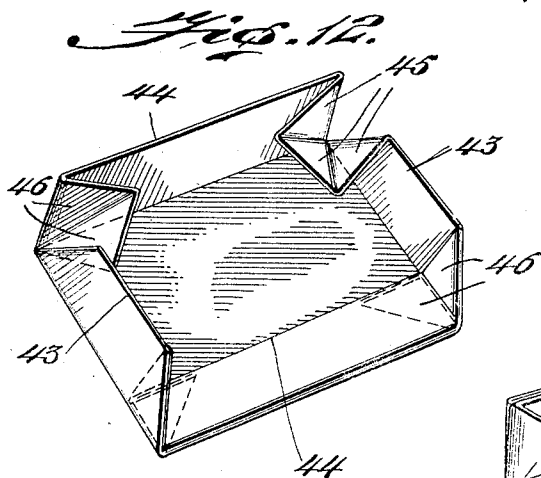
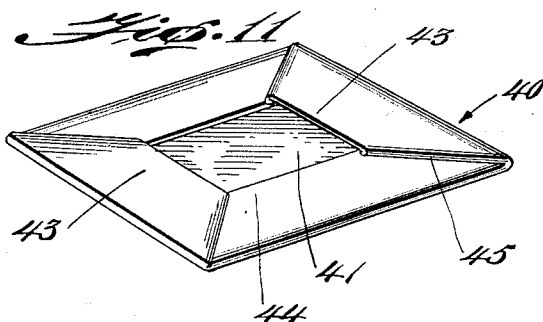
J. W. CLARK

1,948,615

PACKAGE OF EXPANSIBLE MATERIAL AND WRAPPER THEREFOR

Filed Dec. 9, 1930

3 Sheets-Sheet 3



Inventor
John W. Clark
By Percy H. Beant,
Attorney

UNITED STATES PATENT OFFICE

1,948,615

PACKAGE OF EXPANSIBLE MATERIAL AND WRAPPER THEREFOR

John W. Clark, New York, N. Y.

Application December 9, 1930. Serial No. 501,065

12 Claims. (Cl. 100—14)

This invention relates to a package of expansible material and wrapper therefor, the wrapper being particularly adapted for use in connection with expansible material such as cotton, wool, fabric materials or the like, when put up in the form of rectangular bales and packaged under pressure to provide a wrapper which is capable of expansion upon the sides of the bale to accommodate those portions of the bale which tend to expand after being wrapped, and at the same time provide a suitable covering for those portions of the bale which are subject to little or no expansion after being formed.

One object of the invention is to provide an improved wrapper for expansible material which comprises a plurality of superposed paper sheets, certain of which sheets are provided with transverse pleats, folds or gathers, or which are otherwise formed or constructed to permit a limited degree of longitudinal expansion whereby expansion of the expansible material is permitted in localized areas, as between the bale ties, and upon those sides of the bale which are subjected to the highest degree of pressure in forming the bale.

Another object of the invention is the provision of a wrapper of the character described having several thicknesses of paper overlying those sides of the package which are subject to the greatest expansion, and a single sheet, or a lesser number of sheets, of sufficient length to extend over the ends of the package which are relatively free from the tendency to expand after being formed.

Another object of the invention is to provide a wrapper for expansible material formed from expansible and non-expansible paper sheets, the non-expansible sheets being of greater length than the expansible sheets to form a covering for the relatively non-expansible end portion of a package of expansible material.

A further object of the invention is to provide reinforcing sections forming portions of an expansible wrapper and adapted to overlie portions of the wrapper at points adjacent to the end edges of the package in order to protect the wrapper from excessive wear at the corners and end edges of the package.

Another object of the invention is the provision of a wrapper for expansible material which is made up of a plurality of separate sheets, one of which sheets is of materially greater length than the others of said sheets and extends beyond the opposite ends of said remaining sheets to cover portions of said expansible material.

A further object of the invention is to provide a bale or package of expansible material of sub-

stantially rectangular form having a wrapper covering portions of the sides and ends of said package, those portions of the wrapper covering the sides of said package having a greater number of layers than those portions covering the ends thereof and bale ties surrounding said package transversely thereof and overlying said wrapper in such manner as to permit localized expansion of portions of the wrapper covering the bale sides between the bale ties.

Another object of the invention is the provision of a folded wrapper so formed as to facilitate handling the same prior to its application to a bale of expansible material and folded in such a manner that an unfolded portion substantially coincides in extent with the area of a gin press platen and having the folds so formed as to permit the disposition of the side and end portions of the wrapper adjacent to the edges of the platen when forming the bale and out of the way of the operating parts while permitting such side and end portions of the wrapper to be readily applied to the bale after the completion of the pressing operation.

Other objects and advantages of the invention relate to various improved details of construction and novel methods of arranging and combining the paper sheets making up the wrapper sections and the wrapper sections relative to the expansible material, as well as certain novel features inherent in the paper sheets as will be more fully set forth in the detailed description to follow:—

Referring to the drawings:

Fig. 1 is a perspective view of a package or bale of expansible material of rectangular shape illustrating the theoretical position and arrangement of opposite wrapper sections as applied thereto before the ends of the wrapper sections have been folded over the bale ends or the bale ties applied to the bale.

Fig. 2 is a longitudinal sectional view through one of the composite wrapper sections as shown in Fig. 1,

Fig. 3 is a longitudinal sectional view taken through a slightly modified form of wrapper section,

Fig. 4 is a perspective view of a portion of a bale of expansible material, such as cotton and the like, as the same appears after its initial compression to form a gin bale and with the wrapper section and bale ties in place thereon,

Fig. 5 is a perspective view of a portion of a bale of expansible material, such as cotton or the like, as the same appears after its compression

sion to form a domestic bale, and with the wrapper sections and bale ties in place thereon,

Fig. 6 is a perspective view of a bale of expandable material, such as cotton or the like, as the same appears after its compression to form what is known as a high density bale, showing the wrapper sections and bale ties in place thereon,

Fig. 7 is a perspective view of a folded wrapper showing a sheet of rectangular shape having the ends folded over one side thereof and the side edges folded over that side of the sheet opposite to that over which the end portions are folded, and having angular folds formed in the corners of the folded end and side portions,

Fig. 8 is a view similar to Fig. 7, showing the adjacent portions of the folded ends and sides of the wrapper partially opened to illustrate one method of making the diagonal folds,

Fig. 9 is a perspective view of a gin press platen showing the position of a folded wrapper thereon when the wrapper is partially unfolded and placed in position to receive the cotton to be compressed,

Fig. 10 is a view similar to Fig. 9, illustrating one manner in which the lower wrapper section may be folded up over the sides and end portions of the bale after the cotton has been compressed and the bale is in condition for the application of the bale ties,

Fig. 11 is a top plan view of a folded wrapper section which is folded somewhat differently than the wrapper section shown in Figs. 7 to 10, in that the side edges and end portions are both folded over upon the same side of the central portion of the wrapper,

Fig. 12 is a perspective view of the folded wrapper section shown in Fig. 11, certain of the folds being partially opened to show more clearly the manner of arranging the parts,

Fig. 13 is a perspective view illustrating the manner of applying the folded wrapper section shown in Figs. 11 and 12 to the movable platen of a gin press so that the central portion of the wrapper section will be positioned between the platen and a bale of expandable material while the end portions and side edges are upturned about the ends and sides of the platen, and,

Fig. 14 is a perspective view illustrating the position of the end portions and side edges of the wrapper section after the cotton or other expandable material has been compressed and the end portions and side edges of the wrapper section reversed so that they are folded over the ends and sides of the bale.

In the packaging of cotton, wool and other expandable materials of that character it has been the practice heretofore to employ sheets or strips of burlap or other coarse woven fabric for covering or partially covering the bales or packages after they are compressed and to serve in a measure as a protection for the material, the bales being held against undue expansion by means of a plurality of bale ties passed around the bale or package and over the fabric cover.

This method of packaging has been found to be open to various objections, such, for example, that dirt, oil, stencil ink and other foreign matter readily penetrates the fabric cover and enters the material with consequent injury to a portion thereof, and that such material as cotton or wool adheres to the fabric so strongly as to make its complete removal exceedingly difficult.

In order to overcome these and other disadvantages resulting from the former practice I

have found that greater protection may be given to the packaged material and an improved bale produced by employing a wrapper formed from two or more sheets of paper, some of which sheets are provided with pleats, folds or gathers extending substantially parallel with the bale ties as described in my U. S. Patents Nos. 1,846,584 and 1,846,949 granted February 23, 1932, and 1,920,841 granted August 1, 1933, and having one or more sheets, but less than the total number thereof, of greater length than the remaining sheets to provide a covering for the bale ends of less thickness than the covering provided for the bale sides.

In the embodiment of the invention illustrated herewith 1 represents a rectangular bale of expandable material, such as cotton or the like, as it would appear after being compressed in a standard gin press, wherein the pressure is principally exerted in the direction indicated by the arrows upon Fig. 1 of the drawings to force the side 2 of the bale downwardly and towards the opposite side 3 thereof. As a result of the pressure upon the bale being exerted mainly in the direction of the arrows as shown in Fig. 1 to force the sides of the bale 2 and 3 towards each other it follows that after the formation of the bale the expansible tendency of the expansible material is exerted principally against the covering of the sides 2 and 3 and in a direction opposite to that which the pressure was applied in compressing the bale. It follows from the above that in providing an efficient wrapper for bales of this character it is desirable to provide a wrapper so constructed that the portions thereof covering the sides 2 and 3 are capable of a limited degree of expansion between the bale ties without becoming ruptured by the force exerted by the expansible material, while on the contrary the covering for the end portions of the bale may well be capable of a less degree of expansion since the tendency of the expansible material to expand at the bale ends is materially less than its tendency to expand in directions perpendicular to the side surfaces 2 and 3 of the bale. It is also an important consideration in providing wrappers of this character that the space for manipulating the end portions of the wrapper in the usual gin press is more or less limited and a great number of thicknesses of wrapper material at the ends of the bales results in an awkward and cumbersome covering for the bale end when the wrapper section is folded thereover. In view of these considerations I have provided similar upper and lower wrapper sections 4, which as shown in Fig. 1 are positioned upon and overlies the sides 2 and 3 of the bale. As illustrated in Fig. 1 the wrapper sections 4 are shown for the purpose of clearness as they would appear before the end portions thereof are folded over the bale end and prior to the application of the bale ties. Each of the wrapper sections 4 comprises two paper sheets 5 and 6 each of which is provided as shown with a plurality of parallel pleats 7 extending transversely of the sheet, the pleats formed in each sheet being arranged substantially parallel with each other and with the pleats in the other sheet when the sheets are in assembled position ready for application to a bale. A plain unpleated paper sheet 8 is shown as interposed between the pleated sheets 5 and 6 and the sheet 8 is of considerably greater length than the sheets 5 and 6 whereby both ends of the sheet 8 extend materially beyond the ends of the sheets 5 and 6. Preferably those portions 9 of the sheet 8 which

extend beyond the ends of the sheets 5 and 6 at opposite ends of the wrapper are of substantially equal extent and are sufficient to cover a substantial portion of one of the ends 10 of the

5 bale.

In that form of the invention shown in Figs. 1 and 2 the paper sheets 5 and 6 are of sufficient length to cover substantially the opposite sides 2 and 3 of the bale or package of expansible material. These several sheets 5, 6 and 8 may or may not be secured together at intervals throughout their extent in order to facilitate handling the same and make them more readily applicable to a bale of expansible material, but in the present instance I have shown them as being secured together by rows of stitches 11 which also serve to secure reinforcing sections 12 of fabric or other suitable material to the outer surface of the wrapper sections at points adjacent to the bale ends and in such position as to extend over the end edges of the bale and thus protect the wrapper sections from injury through abrasion or otherwise. The sides of the reinforcing sections 12 opposite to those sides which are secured to the other portions of the wrapper sections by the line of stitches 11 may or may not be stitched or otherwise secured to the end portions 9 of the intermediate sheet 8 as may be found most desirable in practice.

In that form of the invention illustrated in Fig. 3 of the drawings I have shown three pleated paper sheets 14, 15 and 16 each of which is provided with a plurality of parallel pleats 17 arranged to extend transversely of the bale or package, and all of the pleats being positioned so as to be substantially parallel with each other and with the bale ties after their application to the package, as is the case in the form shown in Fig. 2. In the form shown in Fig. 3 of the drawings I also provide a plain unpleated paper sheet 18 which is of considerably greater length than the sheets 14, 15 and 16, and which has end portions 20 projecting outwardly beyond the ends of the sheets 14, 15 and 16 at each end of the wrapper section. In this form of the invention the reinforcing sections 12, formed of fabric or other suitable material, have been omitted, but the ends of the sheets 14, 15 and 16 are shown as secured to the plain unpleated paper sheet 18 as by rows of stitches 21.

In the forms of the invention illustrated in Figs. 1 to 3 inclusive the paper sheets 5, 6, 14, 15 and 16, while shown as provided with closely folded parallel pleats may be provided with closely folded pleats or with more or less loose folds or gathers formed in any desired manner such, for instance, as the loose folds or gathers which are formed in making crepe paper, or if desired these layers of the paper sheet material may be formed from an unpleated paper sheet which is inherently expansible to a limited degree sufficient to permit bulging of the expansible material between the bale ties without rupturing these sheets. In these forms of the invention the plain unpleated sheets 8 and 18 may be formed from any ordinary non-stretchable paper in which case upon expansion of the expansible material between the bale ties the sheets 8 and 18 serve to resist to a certain degree the tendency of the expansible material to expand and form enlargements between the bale ties, but any continued pressure of such expansible material tends to rupture the sheets 8 and 18, but the initial resistance of these sheets is sufficient to slow up the movement of the expansible material and thus

permit the pleats, folds or gathers, in the sheets 5, 6, 14, 15 and 16 to open slowly and thus accommodate themselves to the expanded portions of the expansible material, or if the sheets 5, 6, 14, 15 and 16 are formed of unpleated but inherently expansible paper, this resistance initially offered by the sheets 8 and 18 tends in a similar manner to slow up the expansion of the expansible material sufficiently to enable the sheets 5, 6, 14, 15 and 16 to expand and accommodate themselves to the shape of the expanded material. In both cases the pleats, folds or gathers formed in the sheets 5, 6, 14, 15 and 16 are arranged substantially parallel with the bale ties which are located transversely of the bale, and the bale ties tend to supplement the unpleated sheets 8 and 18 in preventing a too rapid expansion of the expansible material and also, from their pressure upon the outer surface of the wrapper, retard the opening of the pleats, folds, or gathers and localize or limit the expansion of the expansible material to those portions of the wrapper sections located intermediate the bale ties.

If desired, however, the plain unpleated sheets 8 and 18 instead of being formed of ordinary relatively non-stretchable paper may themselves be formed of paper which possesses a limited degree of inherent expansibility in which case the extent to which these sheets are ruptured by the expansion of the expansible material will be materially diminished, while at the same time these sheets will exert an initial retarding action upon the expansion of the expansible material and thus protect the sheets 5, 6, 14, 15 and 16 against rupture.

After the formation of the bale of expansible material, such as a bale of cotton in a gin press, and the application of the wrapper sections thereto as illustrated herein, the end sections 9 or 20 of the sheets 8 and 18 are folded over each bale end 10 and bale ties 24 are applied thereto and arranged substantially parallel with the pleats formed in the pleated paper sheets. In the case of the form of wrapper shown in Fig. 2, the reinforcing sections 12 are folded over with the ends 9 of the paper sheet 8 and occupy the position substantially as shown in Fig. 4 of the drawings. The free end of the end sections 9 may be folded together across the bale end as indicated at 25 while the free ends of the reinforcing sections terminate at 26 and are therefore spaced from each other a materail distance. The end bale tie 24 is so positioned as to engage the reinforcing strips 12 at one end of the bale and also secure the folded in corner 27 of each wrapper section in place.

Upon the further compression of the gin bale to form a domestic bale or high density bale the free edges 26 of the reinforcing section 12 are forced into substantial engagement at each bale end and may be secured together as by stitches 28, as shown in Figs. 5 and 6 of the drawings wherein are shown a domestic bale and high density bale substantially as they appear after the second compression and with the free edges of the reinforcing sections stitched together.

While for purpose of illustration the paper sheets 5, 6, 14, 15 and 16 are shown as provided with closely folded parallel pleats it is to be understood that my invention comprehends the construction of these sheets with loose folds or gathers arranged in substantial parallelism instead of the closely folded pleats, and also com-

prehends the use of plain unpleated sheets of inherently stretchable paper as substitutes for such closely folded or gathered sheets, which inherently expansible paper sheets are capable of longitudinal expansion by reason of the special character of the paper itself to a sufficient extent to accommodate the normal expansion of the expansible material between the bale ties.

It is to be understood also that while I have defined the paper sheets 8 and 18 as being of plain or unpleated ordinary paper, my invention comprehends in its broader aspect the use in this connection of either ordinary unstretchable paper sheets or sheets formed from specially processed paper which possess inherent characteristics of expansion to such an extent as to render them adaptable for use as a covering which must be capable of limited expansion at intervals to enable it to accommodate itself to the surface of an expansible material.

In Figs. 7 to 10 of the drawings there is shown a folded wrapper section so formed as to be capable of being readily folded and when folded to be transported from place to place for use as a covering for compressed cotton bales, the folds being so arranged that the wrapper may be easily applied to the usual stationary platen of a gin press so that the ends and side portions will be positioned in such a manner as to not interfere with the placing of the cotton to be compressed on the platen or obstruct the movement of any of the operating parts of the press, while such side and end portions are capable of being fitted closely and smoothly about the sides and ends of the compressed bale quickly and expeditiously when the cotton bale is compressed and ready for the application of the bale ties thereto.

In Figs. 7 to 10 inclusive there is shown a wrapper section 30 of substantially rectangular shape, which in its application to bales of compressed cotton or other expansible material is so formed that its length materially exceeds its width, and in which the end portions 31 are folded back over the central portion 32 of the wrapper section a distance sufficient to make the length of the folded section correspond substantially with the length of a gin press platen. The side edges 33 of the wrapper section may then be folded over preferably upon that side of the central portion 32 of the wrapper which is opposite to that upon which the end portions 31 have been folded, although the side edges 33 may, if desired, be folded over upon the same side of the wrapper as that upon which the end portions 31 are folded. The side edges of the wrapper section are folded over a sufficient distance to make the width of the folded wrapper section correspond approximately with the width of the gin press platen. The corners 34 of the wrapper section located adjacent to the junction of the folded end portions 31 and side edges 33 are provided with a plurality of angular folds 35 which divide each corner of the wrapper roughly into triangular portions 36, certain of which triangular portions may be folded inwardly between the overlying ends of the folded in portions and the side edges 31 and 33.

In applying the folded wrapper sections to a bale of compressed expansible material, such as cotton or the like, a wrapper section 30 may be first placed upon the platen 38 of a gin press in such a manner that the folded end portions 31 are located adjacent to the ends of the platen, and the folded side edges 33 are opened sufficiently so that they will extend downwardly along the

sides of the platen 38. The folded end portions 31 may then be partially opened and the end boards 39 of the press placed in position, after the manner shown in Fig. 9, so as to form ends for the bale press and have their lower edges fit into shallow grooves 40' located in the face of the platen. It will be seen upon reference to Fig. 9 of the drawings that the folds of the wrapper are so formed that when the wrapper is placed on the press platen as above described the opposite side edges 33 may assume the position shown in Fig. 9 where they extend downwardly on each side of the platen and entirely out of the way of the operating mechanism and the material to be compressed, and the end portions 31 and corners 34 when partially open are located in an upright position, parts of the end portions lying against the outer surfaces of the end boards 39, and being so positioned as to permit the cotton or other material to be deposited on the press platen without interference with and without being in position to be torn or distorted by being caught under the material to be compressed.

After the press has been filled with cotton or other expansible material to be compressed, and before pressure is applied to the material, a second wrapper section 40, which comprises a central portion 41, the area of which corresponds substantially with that of the press platen 42, is placed over the cotton or other expansible material and beneath the upper or movable press platen 42. The wrapper section 40 has end portions 43 and side edges 44 which are initially folded over the central portion 41 thereof. The wrapper section 40, when folded as shown in Fig. 11 of the drawings, is of a size which corresponds substantially with the area of the press platen with which it is associated. In forming the folded wrapper section a plurality of angular folds 45 are formed in each corner thereof which are so arranged as to radiate from each corner of the central portion 41, and certain of the folds 45 are reversible, that is, so formed that the triangular portions 46 of the wrapper which are bounded in part by the angular folds may be turned in either of two directions along the lines of fold for properly positioning the triangular portions 46 relative to the end portions and side edges of the wrapper.

While the triangular corner portions of the wrapper section may be folded in various different ways in applying the wrapper to a bale of expansible material, whether the wrapper section is to be applied to the fixed or movable platen of the press, I have shown in Figures 9 and 10 one manner of forming the angular folds and arranging the triangular corner sections when the wrapper is to be applied to the stationary platen of a gin press, and in Figs. 12 to 14 I have shown an arrangement of the folds and a manner of positioning the triangular corner portions in applying a wrapper-section to the movable platen of a gin press, it being assumed in showing and describing these applications of the folded wrapper section that the lower platen of the gin press is stationary and that the upper platen is movable, but the manner of positioning the wrapper sections on the platens of a gin press is equally applicable when the lower platen is movable and the upper platen stationary, it being only necessary in such case to apply the form of folded wrapper section shown in Figs. 7 to 10 to the upper platen and the form shown in Figs. 11 to 14 to the lower platen.

As shown in Figs. 9 and 10 of the drawings, the

folded wrapper section is so applied to the stationary platen 38 that the ends and a portion of the corners extend upwardly from the plane of the body portion of the wrapper, as initially applied, while in the form shown in Figs. 12 to 14, the wrapper section 40 as applied to the upper or movable press platen 42 is folded in such a way that the wrapper section may be positioned between the expansible material and the movable platen 42 of the press with the ends and side edges of the wrapper positioned about the ends and side edges of the platen 42 so that the ends and side edges 43 and 44 of the wrapper, as initially applied, extend upwardly and lie against the ends and side edges of the platen, while the overlapping triangular corner portion 46 may be folded inwardly beneath the side edges 44 and be protected thereby against becoming torn or otherwise injured during the movement of the platen.

While in the embodiment of the invention shown in Figs. 12 to 14 the parts of the wrapper are so arranged that the overlapping triangular portions 46 of the wrapper section are located beneath and covered by the side edges 44 of the wrapper during the time that the bale is being compressed, it will be understood that the wrapper section may be so arranged that the overlapping triangular corner portions are located at the ends instead at the sides of the wrapper, in which case they may be folded in a manner similar to that shown except that they will be covered by the end portions 43 of the wrapper section in such a manner as to protect them from becoming torn during the movement of the platen.

After the application of the upper and lower wrapper sections, as previously described, the bale is compressed with both the upper and lower wrapper sections in place between the material to be compressed and the upper and lower press platens respectively, and when the material has been compressed to the desired degree, bale ties are passed around the bale, between the wrapper sections and press platens, and the ends of the bale ties secured together to form the completed bale.

Before the bale ties are placed about the compressed bale, the side edges 33 and the depending portions 34 of each corner are folded upwardly after the manner shown in Fig. 10, to fit smoothly against the sides of the bale, and the end portions and side edges 43 and 44 of the upper wrapper section are reversed and folded downwardly over the end and side portions of the compressed material with the triangular corner portion folded inwardly so as to be covered by portions of the side edges of the wrapper.

In order to illustrate better the manner of folding the wrapper sections, as well as the manner in which the folded side and end portions may be arranged relative to the platen of the gin press and about the compressed bale, the wrapper has been shown as formed of a single sheet of the material entirely devoid of pleats or folds, but it is to be understood that such showing is solely for the purpose of better illustrating the folded wrapper structure and that the manner of folding and using the same is applicable to and intended to be employed in connection with composite wrappers of the type shown in Figs. 1 to 3 of the drawings and in my patents, as well as wrappers generally formed of one, two or more sheets, with or without pleats or folds, or in which a portion of one or more sheets is provided with pleats or folds and a portion thereof is of plain unpleated material, or in connection

with wrappers made up of two or more sheets certain of which sheets are of plain unpleated material and certain of which sheets are provided with pleats or folds, or in connection with composite wrappers one or more layers of which are formed of paper, whether or not the several layers are connected together throughout a substantial portion of their extent by means of adhesive or waterproofing material.

Although I have shown and described one manner in which the triangular corner portions of the wrapper may be folded both in applying a wrapper section to the stationary platen of a gin press and in applying the same to the movable press platen, it is to be understood that various other arrangements of the triangular corner portion may be made in applying a wrapper section to either the fixed or movable platens without departing from the spirit and scope of my invention, which comprehends such arrangements of these triangular corner portions as may be found best adapted for protecting the wrapper sections from becoming torn through movement of the press parts and best adapted for forming a uniformly smooth and neat covering for the baled material, and the angular folds 35 and 45 may be increased in number, over those shown in the illustrated embodiment, when found necessary by reason of the length of the wrapper section considerably exceeding the width thereof so as to render it impractical to form the folds upon lines which are truly diagonal with respect to the square or rectangular corner portions lying between the folded end and side edge portions of the wrapper.

It will be seen from the above that the folded wrapper sections as shown and described are particularly adapted for use to provide a folded wrapper of limited area and suitable for shipment in bundles, as well as a wrapper so formed as to be readily and quickly applied in the formation of the bale so as not to interfere with the operating mechanism of the press or the material to be baled and having the end portions and side edges so disposed as to be free from the baled material and capable of being quickly and easily folded about the side and end portions of the bale after the bale has been compressed and is ready for the application of the bale ties thereto. The folded wrapper section shown and described herein constitute an improvement over the form of folded wrapper section shown and described in my Patent No. 1,846,949.

While I have shown and described a preferred form of bale wrapper as well as one method of folding the same for the purpose set forth it is to be understood that various changes may be made in the construction of the wrapper and in the form and arrangement of the fold without departing from the spirit and intent of my invention or the scope of the appended claims which are to be broadly construed in the light of my disclosure which is to be considered as illustrative and not as limiting the claims to the exact form of structure shown and described.

What I claim is:—

1. A wrapper for a bale of expansible material comprising two or more paper sheets capable of longitudinal expansion and of sufficient length to extend over substantially one side of the bale intermediate the bale ends, and a continuously extending non-expansible sheet of greater length than said first named paper sheets, the ends of said first named paper sheet being each secured to said last named sheet at points located adjacent to the bale ends.

2. A wrapper for a bale of expansible material comprising two or more expansible paper sheets each of which is of sufficient length to extend throughout substantially the entire length of one side of the bale, a sheet of relatively non-expansible material of greater length than said first named sheets so that it extends continuously throughout the length of said first named sheets and a sufficient distance therebeyond to overlie a substantial portion of each bale end, means connecting the ends of said first named sheets to said last named sheet at points adjacent to the bale ends, and a section of fabric reinforcing material having one end thereof secured to one or more of said sheets at a point adjacent to the bale ends and positioned outwardly of said non-expansible sheet to extend thereover and serve as a protection for that portion of said sheet which overlies the bale end.

3. A prepared wrapper structure prefolded into a form adapted for application to a rectangular package comprising a sheet of material having the opposite end portions folded over the central portion thereof and the side edges of the sheet thus formed intumed over the central portion, and angular folds formed in common with the folded over side and end portions and located adjacent to the junction of said central portion and side edges.

4. A prepared wrapper structure prefolded into a form adapted for application to a rectangular package formed from a substantially rectangular sheet of material having a central portion and the opposite ends and side edges of said sheet folded over upon the central portion thereof to form a folded sheet conforming in size substantially with the area of one face of a gin press platen, the corner portions of said wrapper common to both side and end edges being provided with diagonal folds formed in such a manner as to render the end portions and side edges of said wrapper capable of extending at substantially right angles to the plane of the central portion either upon the same side or upon opposite sides of said central portion.

5. A prepared wrapper structure prefolded into a form adapted for application to a rectangular package comprising a sheet of material of substantially rectangular form having a central portion and having the opposite ends and side edges thereof folded over upon the central portion in such a manner that the central portion will be of rectangular shape, and diagonal folds formed in those corner portions of the wrapper which are common to the side and end edges thereof, said diagonal folds coinciding substantially with the side folds in the folded wrapper.

6. A prepared wrapper structure prefolded into a form adapted for application to a rectangular package comprising a sheet of material having a substantially rectangular central portion and having the opposite side and end edges thereof folded over said central portion, and corner portions located at the junction of said end portions and side edges, said corner portions being each provided with angular folds whereby the folded corner portions may be located upon the sides or ends of the completed bale as may be desired.

7. A prepared wrapper structure prefolded into a form adapted for application to a rectangular package comprising a sheet of material of substantially rectangular form having the opposed side and end edges folded over the central portion thereof to form a folded sheet of substantially rectangular form and having angular folds

formed in the corners of said bale wrapper, the angular folds formed in each corner of said wrapper radiating from the corners of said central portion to form triangular corner portions capable of being folded beneath the side or end edges of said wrapper.

8. A prepared wrapper structure prefolded into a form adapted for application to a rectangular package comprising a sheet of material having the opposite end portions and side edges thereof folded over the central portion and angular folds formed in the corners of said sheet, whereby said end portions and side edges may be arranged to occupy positions at substantially right angles to the central portion of said sheet and extend in either of two directions therefrom.

9. As an article of manufacture a prefolded wrapper for a rectangular package of expansible material comprising a sheet provided with a central portion adapted to be positioned upon a press platen, the area of said central portion corresponding substantially with the area of said platen, and having the ends and side edges thereof folded over the central portion and diagonal folds formed in those corner portions of the wrapper which are common to the side and end edges thereof in such a manner as to permit the ends and side edges to occupy positions at substantially right angles to said central portion and in proximity to the ends and side edges of the press platen or to be reversed in situ and occupy positions at substantially right angles to said central portion and in proximity to the ends and side edges of the bale.

10. The method of applying prefolded wrappers to a bale of compressed expansible material which comprises, positioning previously folded wrapper sections between opposed press platens and a quantity of expansible material and arranging the previously folded portions in such a manner that the ends and side edges of one of said wrapper sections are located outwardly of and folded back over the ends and side edges respectively of the movable press platen and portions of the side or end edges of the other wrapper are folded back over the side or end edges of the stationary platen, while the remaining side or end edges of said last named wrapper section extend at substantially right angles to the plane of said stationary press platen and in the opposite direction from said folded over portions, compressing the expansible material, and then re-folding the end portions and side edges of said wrapper sections about the ends and side edges of said bale.

11. As an article of manufacture, a prefolded bale wrapper comprising a paper sheet having its side and end edges successively folded over the central portion thereof, and having diagonal folds formed in the corners thereof which are common to said side and end edges, whereby parts of the corner portion may be infolded against the side or end portions of the bale as may be desired.

12. As an article of manufacture, a prefolded bale wrapper comprising a paper sheet having longitudinal and transverse folds formed therein and spaced from the side and end edges of the sheet respectively, the side and end edges of said sheet being folded over the central portion of the sheet along the longitudinal and transverse folds respectively, and diagonal folds formed in the corner portions of the sheet, the said corner portions of said sheet being infolded along the diagonal folds to form triangular portions.