

J. B. WOODRUFF:
PACKAGE.
APPLICATION FILED JUNE 2, 1916.

1,201,906.

Patented Oct. 17, 1916.

FIG. 1-

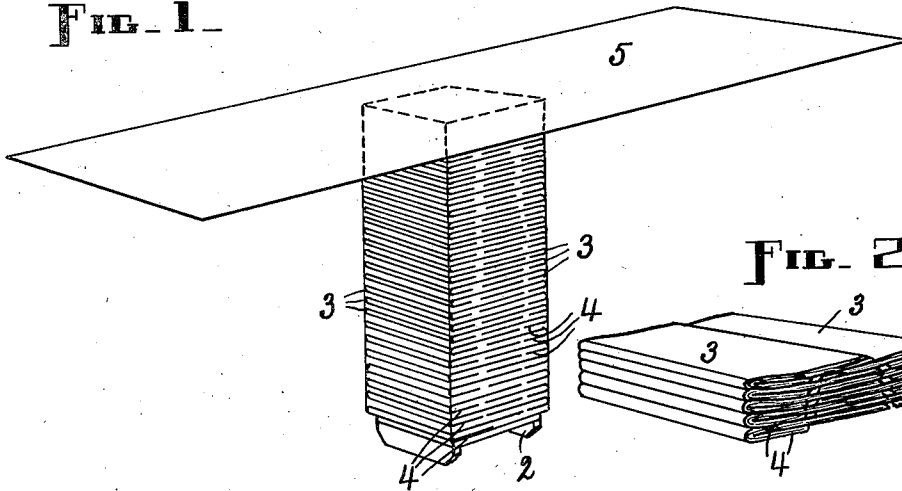


FIG. 2-

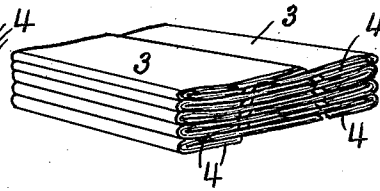


FIG. 3-

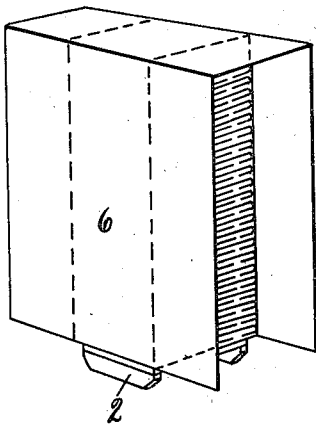
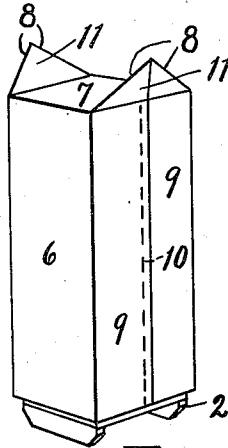


FIG. 4-

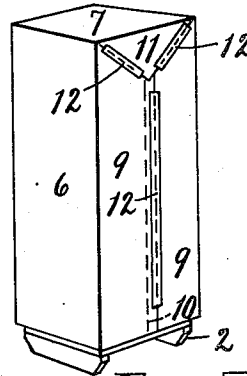


FIG. 5-

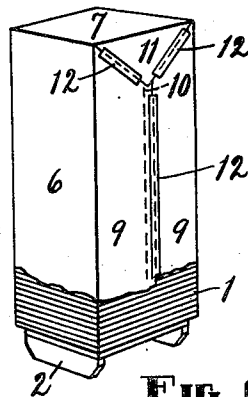


FIG. 6-

WITNESS

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PACKAGE.

1,201,906.

Specification of Letters Patent.

Patented Oct. 17, 1916.

Application filed June 2, 1916. Serial No. 101,369.

To all whom it may concern:

Be it known that I, JOSEPH B. WOODRUFF, a citizen of the United States of America, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented a new and useful Package, of which the following is a specification.

My invention relates to wrapping large or bulky and heavy piles or stacks of material, and more especially to the wrapping and the piling and wrapping of wood pulp on supports, and resides in the peculiar manner of building up the pile of wood pulp and applying the wrapping thereto, and in the particular wrapping and wrapped pile or stack, all as hereinafter set forth.

Heretofore wood pulp, which is produced in large and comparatively thin sheets, has been wrapped in separate packages and these packages have been stacked, one on top of another, on supports or skids ready for shipment. Each of these packages contains a number of thick sheets, each of which latter is made by folding and superimposing a plurality of the thin sheets, and pressing them in a hydraulic press into a compact mass, which forms the thick sheet or unit. The sheets or units are completely wrapped, that is, covered on all sides, with wrapping paper, and the packages thus produced are stacked on the skids, as previously stated. These stacks with their supporting skids are shipped from the pulp mill to the paper mill. At the paper mill the wrappings are removed and the pulp used as required.

Much time, labor, and expense, both for labor and wrapping material, are thus involved, and the primary object of my invention is substantially to reduce all of these items, which I am able to do with my improved package and through the method of making the same. Moreover, I insure the stability of the stack, while protecting the pulp as thoroughly and completely as in the old way and by the old means.

Other objects and advantages will appear in the course of the following description.

I attain the objects and secure the advantages of my invention by the means and in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a stack of wood pulp sheets or units piled in the new way, and illustrating the first step of the wrapping process; Fig. 2, an enlarged

perspective view of a small pile of such units, showing more clearly the manner of folding and superimposing or stacking them; Fig. 3, a perspective view of the elements shown in Fig. 1, but illustrating the second step in said wrapping process; Fig. 4, still another perspective view, which is illustrative of an additional step in said process; Fig. 5, a perspective view of the finished package, and, Fig. 6, a perspective view of a finished package containing the thick sheets or units, portions of the wrapper being torn off to disclose some of the units within.

Similar numerals refer to similar parts throughout the several views.

Wood pulp is formed into sheets for shipment, and roughly or generally estimated one of such sheets may be said to be from one-sixteenth to three-fourths of an inch thick, and to have an area containing several square feet.

In the last view, the stack or pile is made up of thick sheets or units 1 placed one above the other, the bottom unit resting on a suitable support as a skid 2 in this as in all cases. Each sheet or unit 1 includes in its make-up a plurality of thin sheets which have been folded several times and pressed into a compact mass, in the manner well understood by those skilled in the art. But in the other views, or as shown in Figs. 1, 2, and 3, the stack or pile is made up of the thin sheets of pulp folded, arranged, and superimposed in a special manner, as described below.

In building up a pile with unpressed sheets of wood pulp, I take a plurality of such sheets, which latter have been placed together evenly, and fold them over or under at one edge for a third of their length, more or less, to form a unit 3, and place such unit, with the short fold or lap, as 4, underneath, on a skid 2; and I form, in a similar manner, a second unit 3 and lay it in reversed position on said skid and said first unit, or so that the short lap 4 of said second unit lies directly on said skid with that portion of said first unit that overlays and extends beyond its short lap, that is, the long lap, and the major portion or long lap of said second unit lies partly on the second unit short lap and partly on the aforesaid long lap of said first unit, bridging the gap or covering the joint, as the case may be, between said second unit short lap and the

immediately adjacent part of said first unit. A third unit 3 is formed and added to the stack, this unit being arranged with its short fold or lap 4 resting on the first unit and the longitudinal edge of said lap abutting or approximately abutting the contiguous edge of the second unit. Upon the second and third units a fourth unit is placed after being folded, with its lap 4 on the same side of the pile as is the lap 4 of the second unit. Other units are added until the stack is of the required height, the arrangement, whereby the laps 4 of one set of alternate units are on one side and the laps 4 of the other set of alternate units are on the opposite side of the stack, being maintained throughout.

By thus folding and piling the pulp, I am able to produce a well balanced and stable stack of suitable horizontal dimensions. The folded edges are evenly distributed and located at the sides where they prevent sagging and afford the necessary support. A stack five to six feet in height and weighing approximately half a ton is thus built up with the units 3, and after being inclosed in my wrapping is well adapted to be shipped to any distance, and indefinitely to maintain its shape under reasonable conditions.

When the pile of units 3 (or 1) on the skid 2 reaches the desired height, the wrapping is applied thereto. This is done by placing a long and wide strip or sheet 5 of wrapping paper over the pile, with the center of such sheet directly above the center of such pile, wrapping the sheet about the pile, and securing the wrapper at the ends, in the manner about to be explained. Owing to the size of the package involved, the services of two men are usually required for the work. It is to be assumed, of course, that the paper sheet 5 is of the dimensions necessary for the purpose to which it is to be applied. The sheet 5 is applied lengthwise to the width of the stack.

Proceeding now with the description of the wrapper and its production, and starting with the sheet 5 in the position described above and as shown in the first view, it will be clear, upon reference to Fig. 3, that the ends of said sheet are next turned down to cover the sides of the pile and form the sides of the wrapper. One of the aforesaid sides of the wrapper appears at 6 in all except the first two views, and that portion of the sheet 5 which covers the top of the stack and constitutes the top of the wrapper is designated by the numeral 7 in the last three views.

It may be well to observe at this point that the wrapper has no bottom since none is needed. The stack or pile rests on the skid 2 and therefore is in need of no protection underneath. This is a fortunate circumstance, inasmuch as it would be a difficult

matter to introduce any portion of the wrapping under the pile, and impracticable to build up the stack on or in the midst of a sheet of wrapping paper.

The portions of the paper sheet that extend beyond both ends of the stack, at the top and sides, are folded vertically at the vertical corners of said stack, and obliquely from the tops of said corners to the approximate centers of the edges of the top projecting portions of the wrapping, as represented at 8 in Fig. 4. The vertical end portions or sections of the wrapping, which have just been formed and are designated by the numeral 9, lie against the ends of the stack, and the edges of such sections overlap, as represented at 10. The end sections 9 extend above the plane of the top of the pile, and these elevated portions at each end together form a triangular flap 11. The flaps 11 are turned down, on the end edges of the top of the pile, against the faces of the sections 9. The sections 9 and the down-turned flaps 11 are fastened or secured by some suitable means, strips 12 of adhesive tape preferably being employed both for securing the lapped edges 10 in place and said flaps to said end sections. It will now be seen that each end of the wrapper consists of the parts 9 and 11. The parts 9, however, fully cover the ends of the stack, while the flaps 11 act as binders at the top, and generally stiffen and strengthen the wrapper. This wrapper covers the pile on all sides except the bottom.

The foregoing description, of the wrapping or wrapper and the method of applying the same, comprehends the Fig. 6 stack made up of the thick pressed sheets 1, as well as the other stack made up of the peculiarly folded and arranged units 4.

The wrapper protects the stack from dust and dirt, and the thick heavy paper used for the wrapper is also a protection against moisture.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A package comprising a support, a stack of sheets of material, such as wood pulp, on said support, a wrapper covering the top, sides, and ends of said stack, the central part of said wrapper being on top of said stack, and the remaining portions of said wrapper embracing with their intermediate parts the sides of said stack, and with their vertical edge portions the ends of said stack, and forming top flaps which also embrace said ends of the stack, and means to secure said vertical edge portions and said flaps.

2. A package comprising a support, units consisting of pluralities of sheets of material, such as wood pulp, folded in long and short laps, and arranged on said support and on each other, with the short laps of one set of alternate units at one side and the

short laps of the other set of alternate units at the opposite side, a wrapper covering the top, sides, and ends of said stack, the central part of said wrapper being on top of said
5 stack, and the remaining portions of said wrapper embracing with their intermediate parts the sides of said stack, and with their vertical edge portions the ends of said stack, and forming top flaps which also embrace said ends of the stack, and means to secure 13 said vertical edge portions and said flaps.

JOSEPH B. WOODRUFF.

Witnesses:

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A. C. FAIRBANKS.