(Specimens.)

E. T. KEPNER.

MATERIAL FOR FORMING BOXES, &c.

No. 508,723. Patented Nov. 14, 1893.

Fig 1

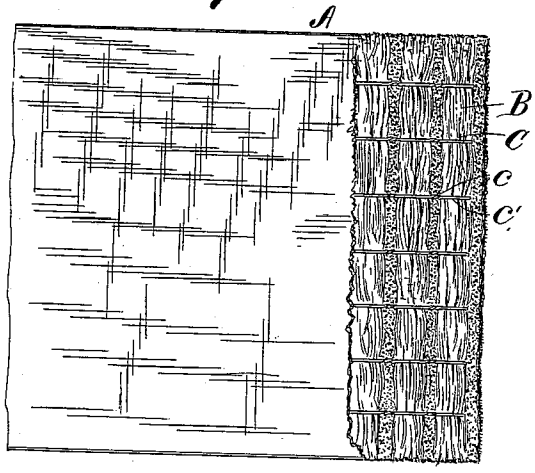

Fig 2

Fig 3

WITNESSES:

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MATERIAL FOR FORMING BOXES, &c.

SPECIFICATION forming part of Letters Patent No. 508,723, dated November 14, 1893.

Application filed May 21, 1892. Serial No. 433,860. (Specimens.)

To all whom it may concern:

Be it known that I, EUGENE T. KEPNER, a citizen of the United States, residing at Helena, in the county of Lewis and Clarke and State of Montana, have invented certain new and useful Improvements in Materials for Forming Boxes, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement in materials for forming boxes, crates, tubes, &c., and it consists in the peculiar construction or combination of materials hereinafter described and definitely pointed out in the claims.

The object or purpose of this invention is the provision of a light, durable and inexpensive material to be used more particularly in the formation of boxes, crates and shipping tubes. This object is obtained by the construction illustrated by the accompanying drawings wherein like letters of reference indicate like parts in the several views and in which—

Figure 1 is an elevation of a section of the material showing a portion of the outer face removed. Fig. 2 is an edge view, and Fig. 3 is an enlarged sectional view.

In the drawings A represents the outer coating composed of paper and B the interposed or embedded fabric consisting of a series of parallel bunches of excelsior or other fibrous material held and bound together by twisted wire strands C.

In forming the fabric I employ at intervals two strands of wire carrying them in opposite directions around the bunch forming loops c' and twisting these together between the bunching as at c, the twisting holding the bunches apart, and binding the material constituting the same tightly together. After the fabric has been completed, I place on the opposite sides thereof the paper, which is preferably straw board soaked until it is in a soft pulpy state but not necessarily disintegrated. The material is then passed between pressure rolls which force the soft paper into the interstices of the fabric filling the same and making a complete union between the paper and fabric.

The amount of paper used is sufficient to completely cover the bunches and strands, and the continued pressure evens or smooths out the surfaces making in the finished article a sheet having even or regular sides, with the usual exterior appearance. When the material is formed into boxes or tubes, the wire or strands and bunches being embedded, no injury will be caused the goods packed by protruding ends or sections.

The material composed as above described is found to be exceedingly strong and light, and it is especially adapted for use in connection with the construction of boxes for carrying eggs, plants, fruit and other products, the boxes requiring no other additional coverings or linings.

It will be understood that, although I have described the invention consisting of the united bunches of excelsior with the outer coating of paper, I do not wish to be limited to the material specified, as it is evident that other materials can be used in lieu thereof.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture a material for forming boxes tubes and the like, consisting of an inner layer of fabric composed of a series of bunches of fibrous material and strands for binding the fibers and separating the bunches, and a united inner filling and outer coating of paper, substantially as described.

2. As a new article of manufacture a material for forming boxes tubes and the like, consisting of an inner layer of fabric composed of a series of bunches of fibrous material and wire strands for binding the fibers and separating the bunches, and a united inner filling and outer coating of paper, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EUGENE T. KEPNER.

Witnesses:

JAMES HUTCHINSON,

ALBERT R. GATES.