

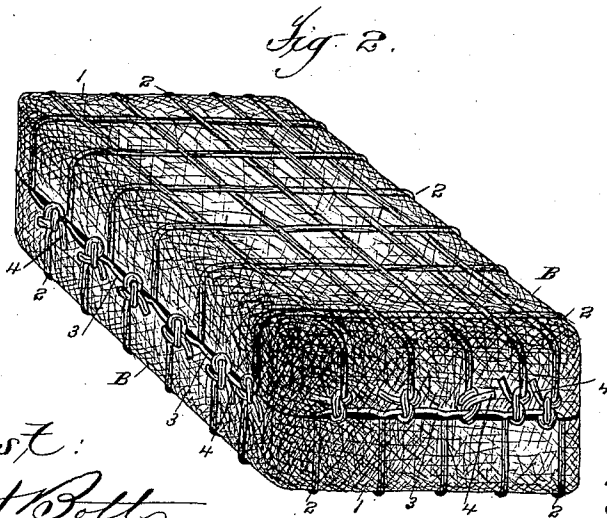
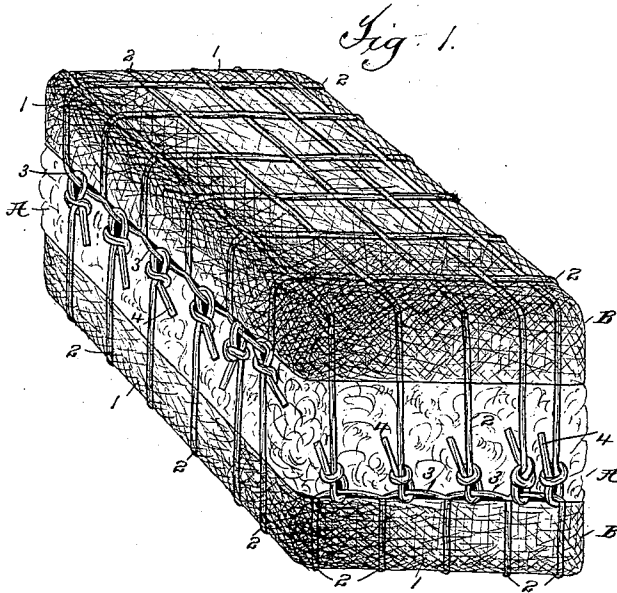
(No Model.)

2 Sheets—Sheet 1.

W. ORR.  
COTTON BALE COVER.

No. 443,620.

Patented Dec. 30, 1890.



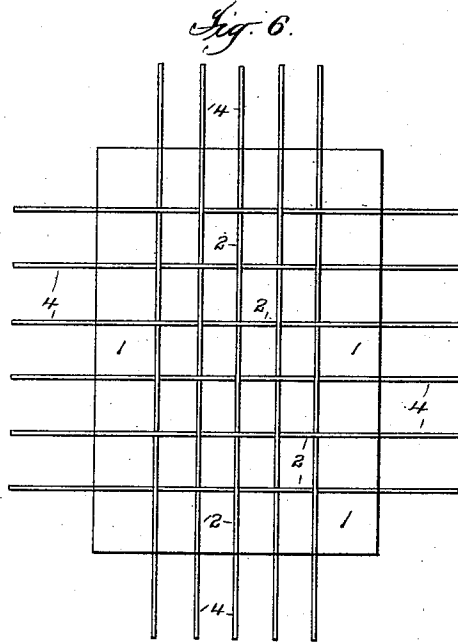
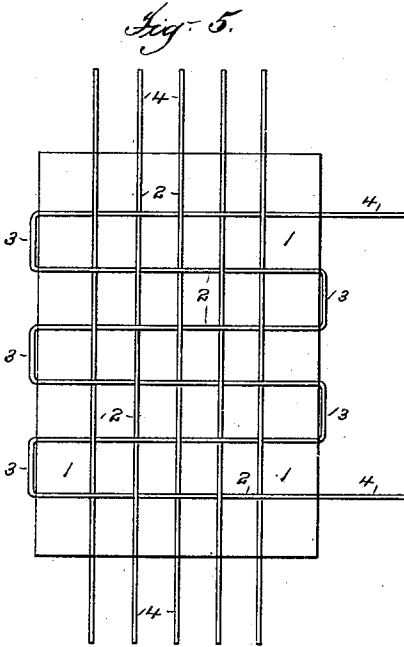
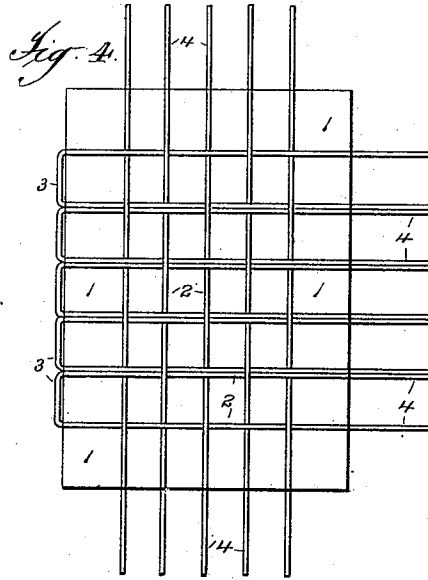
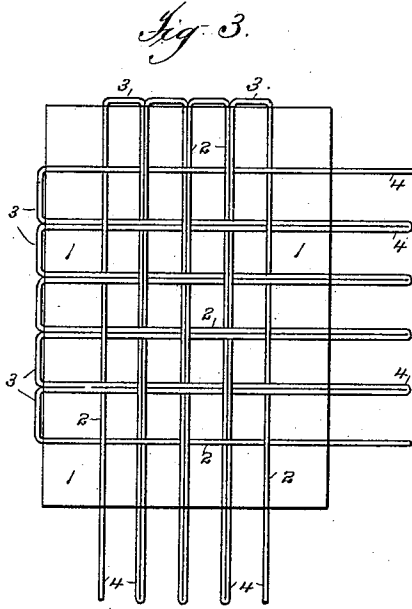
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*Fig. 7.*

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# UNITED STATES PATENT OFFICE.

WILLIAM ORR, OF TRENTON, NEW JERSEY, ASSIGNOR TO THE NEW JERSEY WIRE CLOTH COMPANY, OF SAME PLACE.

## COTTON-BALE COVER.

SPECIFICATION forming part of Letters Patent No. 443,620, dated December 30, 1890.

Application filed April 30, 1890. Serial No. 350,009. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM ORR, a citizen of the United States, residing at Trenton, county of Mercer, and State of New Jersey, have invented certain new and useful Improvements in Cotton-Bale Covers, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to cotton-bale covers, its object being to provide an improved cover, which shall be more simple, cheap, and convenient in use than those heretofore employed.

In baling cotton it has been the general practice to use an inner cover of jute, cotton, or other suitable material woven in coarse meshes and of very heavy strands, so as to have sufficient strength to stand the strain of the compressed fiber and prevent the bale-hooks tearing large holes in the cover. The inner cover is generally made in two parts, covering, respectively, the top and bottom of the bale, each part lapping over the sides and ends, so that the ends are covered entirely when the bale is first compressed at the ginning-mill, but the sides only partially covered, the edges of the two parts of the cover being adapted to meet on the sides of the bale when it is doubled at the compress, the ends of the cover then overlapping and causing the waste of much material. This inner cover is held in place by bale-ties, usually of strip-iron, which are put on while the bale is in the ginning-press, and encircle the bale only in one direction, protecting the top, bottom, and sides of the bale, but leaving the ends unprotected, except by the inner cover, previously described, the two parts of which are sewed together along the ends of the bale. Thus the sewing of the inner cover must stand the strain on the end of the bale, and it is found that the ends frequently burst out or the ties next the ends break on account of the excess of pressure thereon. The ties usually employed are of sufficient length to reach entirely around the bale as it comes from the ginning-press, and it is found necessary to remove all or nearly all of them before the bale is put in the compress, as it is not possible to

adjust these metallic ties, if left on the bale, without cutting each tie and using an extra set of buckles.

I greatly lessen the cost of the cover by constructing it of any suitable material having woven or interlaced therein at suitable intervals, preferably in both warp and filling, much heavier strands, thus enabling the cover to be made of very light and cheap material, and still be of sufficient strength. This cover will preferably be made in two parts so formed as to overlap the sides and ends of the bale equally, the edges of the two parts being adapted to meet on the ends and sides without overlapping when the bale is finally compressed, thus avoiding the waste of material due to the overlapping of the cover at the ends, as previously constructed. I also construct this cover so that the strength will be more evenly distributed over the whole of the bale, and that the cover may be more conveniently and cheaply applied, avoiding entirely the use of the ordinary bale-ties, and enabling the complete cover to be used for the bale as originally compressed at the ginning-press and doubled at the compress without removing any of the parts. To accomplish this I use the heavy strands for securing the cover in place of the metallic ties heretofore employed, the heavy strands being extended beyond the body of the cover both at the ends and sides sufficiently to permit of the heavy strands of the two parts of the cover being tied together when the bale is pressed at the ginning-mill, it being necessary only to untie and retie these ends when the bale is doubled at the compress. These two series of strands passing around the bale in opposite directions protect the ends of the bale as well as the sides, thus avoiding the breaking out of the ends, which is common where sewing is depended upon.

For a full understanding of my invention a detailed description will now be given, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of a cotton-bale as it leaves the ginning-press provided with one form of my improved cover. Fig. 2

100

is a similar view of the bale after passing through the compress. Fig. 3 is a view of the cover shown in Figs. 1 and 2. Figs. 4, 5, and 6 show modified forms of cover, and Fig. 7 is a cross-section of the cover on an enlarged scale.

Referring now to Figs. 1 and 2, A represents the cotton fiber or lint, and B the cover. This cover may be made of any suitable material, such as jute, manila, hemp, cotton, or any twisted or woven fiber, or woven or braided flax, rushes, straw, or similar material.

The body of the cover is formed of light strands 1, and in it are woven or interlaced strands of much greater strength 2, these strands being placed at suitable intervals, so as to give the cover the requisite strength to resist the rough handling it is subjected to and prevent the bale-hooks tearing large holes in the cover.

The body or main web of the cover and the heavy strands may be of the same material, light and heavy strands being used. The cover may be cheapened, however, by making the heavy strands of cheaper material than the web. For instance, the main web may be formed of light cotton or other light easily-woven material, and the heavy strands of jute, manila, hemp, or some other cheaper material.

This cover is formed, preferably, in two parts, as shown, one part covering the top and upper portion of the sides and ends of the bale, and the other part the bottom and lower portion of the sides and ends, the parts overlapping equally, so as to be adapted to meet when the bale is doubled at the compress, but to leave a part of the cotton uncovered as the bale comes from the ginning-press. The heavier strands 2 form two series extending at right angles to each other, one series extending around the ends of the bale and the other around the sides. These strands are extended beyond the body of the cover and form the means by which the two parts of the cover are secured together, at the same time holding the exposed cotton as the bale comes from the ginning-press. The strands may be formed and interlaced or woven in the body in any suitable manner to provide a convenient means for securing the parts of the cover together.

One convenient form of construction is shown in Figs. 1 to 3, in which the heavy strands form loops 3 at one side and end of the cover, the other side and end having plain ends 4, the two parts of the cover being so placed upon the bale that the plain ends of one part are opposite the loops of the other part. This construction, in which the two parts are duplicates, enables both parts to be made by a single machine without change.

The cover of this form may conveniently be made by using a single heavy strand in the warp and filling and weaving this as shown in Fig. 3. It will be understood, however,

that the heavy strands may be formed of two or more strands, if desired, and may be woven or interlaced in any suitable manner.

If the parts of the cover are to be woven in long pieces and cut to the size required, the construction shown in Fig. 4 may be found preferable, in which the warp strands are separate and independent. The other series of heavy strands are formed of a single strand woven into the filling, so as to form loops on one side and plain double ends upon the other. In this case the parts will be secured by loops upon the sides and by tied plain ends at the ends of the bale.

Fig. 5 shows a construction in which the warp-strands are separate and independent, and the strands at right angles thereto are formed by weaving strands in the filling so as to form loops on both sides of the cover. It will be understood, however, that in this case the other portion of the cover will be woven so as to be placed at right angles to the part shown in Fig. 5, the plain ends and loops of the two parts thus being placed opposite each other.

Fig. 6 shows a construction in which the cover is provided with strands having plain ends throughout.

The method of applying my improved cover is as follows: One part of the cover is first laid in position upon the floor of the press and the press then filled with the cotton fiber, after which the second piece of the cover is placed on top of the cotton. After the bale has been pressed to the required size, as shown in Fig. 1, the two pieces constituting the cover are united by passing the ends of the heavy strands of one part through the loops of the corresponding opposite part and the slack taken out by drawing the strands taut, when the ends will be tied to the loop, as shown.

The cover does not protect the entire surface of the bale at either the sides or the ends, the heavy strands serving to protect the fiber in the uncovered portion sufficiently for such handling as is required previous to shipment.

When the bale is to be doubled, it will be compressed to the size shown in Fig. 2, in which the edges of the inner cover overlapping the sides and ends meet in the middle of the bale, thereby covering the bale completely and protecting the fiber during transportation. The bale having been reduced to the proper size, the strands are untied and the slack taken out by drawing the plain ends through the loops until the strands are taut, when they will be retied, as shown in Fig. 2, thus completing the operation of preparing the bale for shipment.

If desired, metallic ties of any suitable form may be used with my improved cover; but it will generally be found that these are unnecessary, the heavy strands being conveniently made of such strength as to secure the bale sufficiently without a metallic jacket. In any case the ties need not be applied until the

bale is doubled, thus avoiding all difficulty in that process, the ties being made of the proper length for the doubled bale.

5 By my construction I am able to use a single cover, and to make this of very light and cheap material, at the same time better protecting the bale and avoiding a waste of material of the cover and the expense of the metallic ties.

10 It is evident that my cover formed with heavy strands at intervals may be secured otherwise than by the heavy strands, and may be advantageously used with ties in place of the common inner cover made of material of  
15 the same web throughout.

Any suitable process of manufacture may be employed in making my cover, and by the term "woven" I intend to cover any process by which textile material is put together to  
20 form a fabric.

What I claim is—

1. A cotton-bale cover of woven material having strands of greater strength woven therein at intervals, the cover being made in  
25 two parts, one part covering the top and upper portion of the sides and ends of the bale and the other part the bottom and lower portion of the sides and ends of the bale, the

edges of the two parts being adapted to meet when the bale is doubled at the compress, and the stronger strands being extended beyond the body of the cover on all sides for securing the two parts together upon the bale, substantially as described. 30

2. A cotton-bale cover of woven material having strands of greater strength woven therein at intervals, the cover being made in two parts, one part covering the top and upper portion of the sides and ends of the bale and the other part the bottom and lower portion of the sides and ends of the bale, the edges of the two parts being adapted to meet when the bale is doubled at the compress, and the stronger strands being extended beyond the body of the cover on all sides and adapted to be secured upon the bale by loops formed in the strands of one part, substantially as described. 35 40 45

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses. 50

WILLIAM ORR.

Witnesses:

A. D. CARNAGY,  
H. N. CORNING.