No. 608,042. Patented July 26, 1898.

M. A. HEATH.

METALLIC BALE COVERING.

(Application filed Aug. 30, 1897.)

(No Model.)

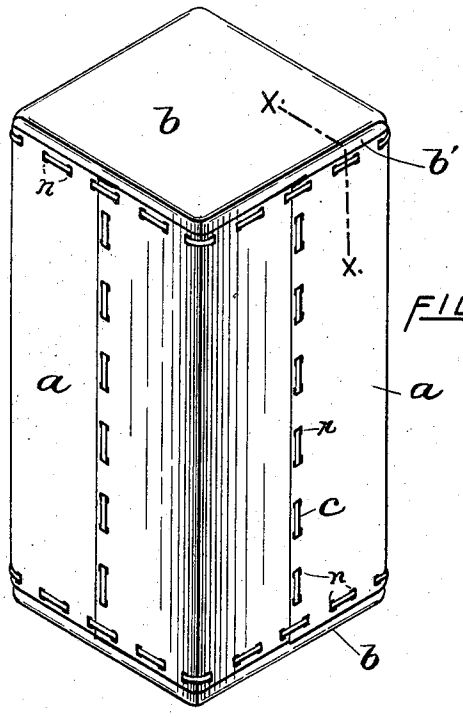


FIG. 1.

FIG. 2.

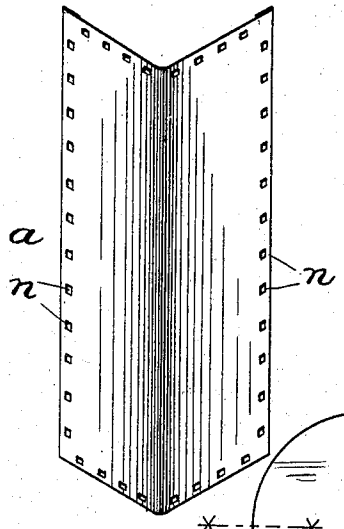


FIG. 6.

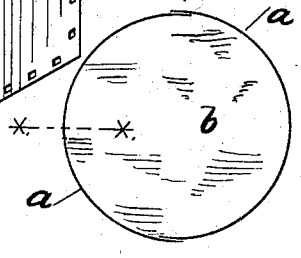


FIG. 3.

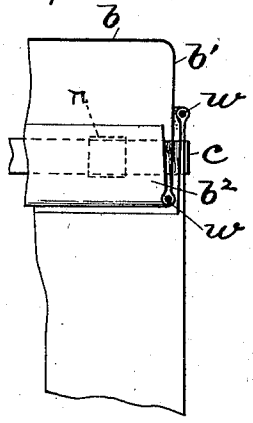


FIG. 4.

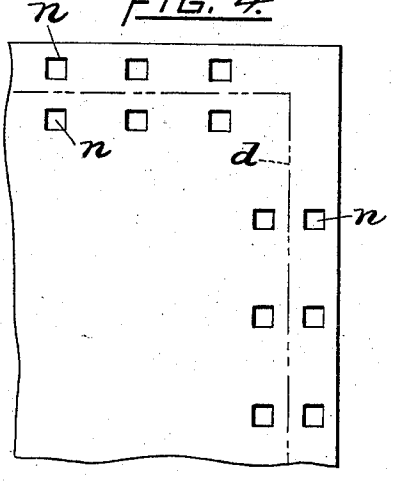
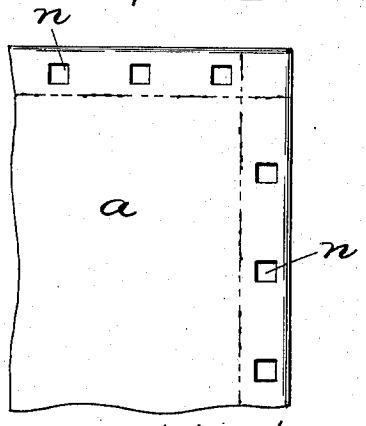


FIG. 5.



WITNESSES.

Charles T. Hannigan

Remington Sherman

INVENTOR.

Mark A. Heath.

by Geo. H. Remington & Co.

Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MARK A. HEATH, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE AMERICAN COTTON-BALE COMPANY, OF SAME PLACE.

METALLIC BALE-COVERING.

SPECIFICATION forming part of Letters Patent No. 608,042, dated July 26, 1898.

Application filed August 30, 1897. Serial No. 649,941. (No model.)

To all whom it may concern:

Be it known that I, MARK A. HEATH, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Metallic Bale-Coverings; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

In a patent of the United States issued to me March 10, 1896, No. 556,056, I have described and claimed a metallic bale-covering of novel construction. The several parts or sections of the said covering or envelop are, after being removed from the bale, adapted to be packed one within another in close compass for reshipping without bending or changing their shape in the least.

My present invention relates to improvements in the said patented bale-covering just referred to; and it consists, essentially, in providing the lower perforated or slitted edge portion of the vertical sides of the end or head plates with an upturned inner guide-flange, the latter being integral with the plate. By means of this construction the plates are not only reinforced or strengthened, but at the same time the metallic lacing-ribbon employed for securing the several sections together may be more readily inserted or interlaced through the slits formed in the said end sections and the corresponding side sections. This result is due to the fact that in securing the end plate to the said side sections the end of the ribbon, as it is forced ahead in and out through the openings, is deflected outwardly through the corresponding slits upon its engagement with the said guide-flange, the ribbon in this case being wholly protected from the cotton or other material inclosed within the metallic covering.

In the accompanying sheet of drawings, Figure 1 is a perspective view of my improved metallic bale-covering. Fig. 2 is a similar view of one of the side sections. Fig. 3 is a partial transverse section, enlarged, taken through the end of the bale on line $x\,x$ of Fig. 1, showing the end plate provided with the guide-flange. Fig. 4 is a side view showing a portion of one of the side sections or plates before its edges are folded. Fig. 5 is a similar view showing the edges folded or bent rearwardly, and Fig. 6 shows an end view of a cylindrical bale embodying my improvement.

My improved bale-covering is composed of two or more side sections a, interchangeably alike, the two end sections or heads b, also interchangeably alike, and the metallic lacing strips or ribbons c, the latter being woven into the openings or holes n, formed in or near the edges of the several sections, as clearly represented. The said sections $a\,b$ are made, preferably, of thin sheet metal. In the circumscribing edges of the blanks from which the vertical or side sections a are formed are cut a double row of suitably-shaped openings n, the same being so arranged or disposed with respect to one another that when folded over along the lines d, Fig. 4, the edges are thereby reinforced or stiffened. The said folded portions are bent rearwardly and lie snugly against the corresponding side of the plate, the two series of holes n then registering with each other around the four edges. The plates a are next bent rearwardly along the longitudinal center, the included angle being ninety degrees.

The two end plates or head-sections b are or may be round, square, or rectangular and are interchangeably alike. In the case of a square end section each plate when properly bent has four short vertical sides b', the lower edge thereof being provided with a series of holes n, registering with those formed in the top and bottom edges of the vertical side sections a. The said lower edge portion of the sides b' is further provided with a combined reinforcing and guide flange b^2, formed by bending the stock rearwardly back upon itself, substantially as shown in Fig. 3. I prefer to make this flange without openings, thereby when in use keeping the corresponding lacing-ribbon c away from the cotton and at the same time facilitating the weaving of the ribbon through the holes provided for its reception.

In Fig. 6 I have shown an end view of a

cylindrical-shaped bale. In this case the sides are composed of two sections *a*, having overlapping edges adapted to be laced together substantially as before described. The head or end sections *b* are round and have the side portions thereof constructed and arranged substantially as stated with respect to the square end plates. The cross-section shown in Fig. 3 applies to the head shown in Fig. 6, as well as to that represented in Fig. 1.

If desired, the several edges of the sections may be further stiffened by the employment of a small wire *w*, the plates being bent so as to inclose the wires, thus forming what may be termed "beaded" edges.

The manner of assembling and using my improved bale-covering may be described substantially as follows: The several side sections *a* are first placed in position, the longitudinal edges of each section overlapping those of the adjacent section, after which the lacing-ribbons *c* are woven in and out through the several holes *n*, formed in said edges, thereby securing the sections together. One of the end plates *b* is next inserted in one of the open ends of the thus-formed shell until its lacing-holes register with those formed in the corresponding end of the shell, followed by interlacing the ribbon *c* through said holes of the sections *a* and *b*, the function of the inner or guide flange b^2 of the end section being to deflect the front end of the advancing ribbon outwardly, so that it may be more readily seized and introduced into the next hole, and so on successively around the head. The thus-formed empty envelop or casing is next placed in a suitable strong sectional crib or cage arranged to firmly support the sides and bottom end of the casing, after which the cotton or other material to be baled therein is forced into it under considerable pressure, followed by placing the top plate or section *b* in position and forcing it downwardly until its lacing-holes register with those in the upper end of the casing, and, finally, weaving the lacing-ribbon through said holes, substantially as before stated. Upon opening the crib the thus-covered bale may be removed and is ready for shipment.

If desired, the several sections may be provided with suitable small holes for ventilating the bale. The casing may, without departing from the spirit of the invention, be further provided with a suitable "sampling-hole," through which access to the interior of the bale may be had.

I claim as my invention—

1. A metallic bale-covering composed of side and end sections having overlapping edges provided with holes registering with each other, metallic lacing-ribbons interlaced through said holes for securing the said sections together, and having one or both of the end sections provided with a guide-flange arranged at the rear of the said ribbon-receiving holes, substantially as hereinbefore described and for the purpose set forth.

2. In a metallic bale-covering, the combination with the side sections having suitably-arranged lacing-holes *n* formed therein, of an end section or plate having apertured vertical sides arranged with respect to said side sections, the lacing-holes in the side and end sections registering with one another, lacing-ribbons adapted to be inserted in said holes for securing the several sections together, and an inner guide-flange b^2 formed by bending and folding rearwardly the lower portion of the said vertical sides of the end section, or sections, substantially as set forth.

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

MARK A. HEATH.

Witnesses:

GEO. H. REMINGTON,

REMINGTON SHERMAN.