

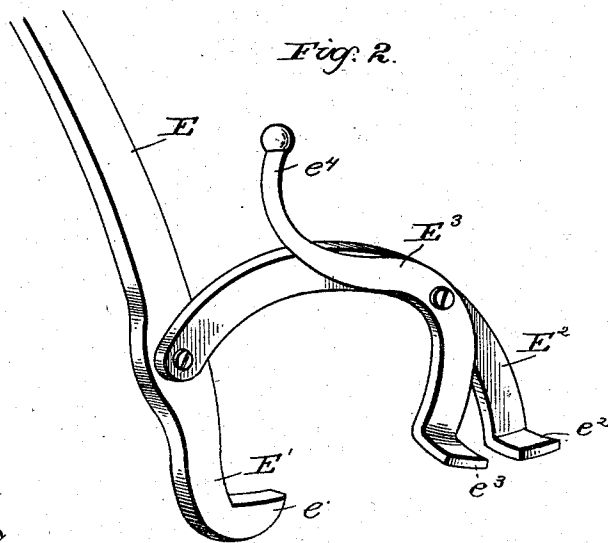
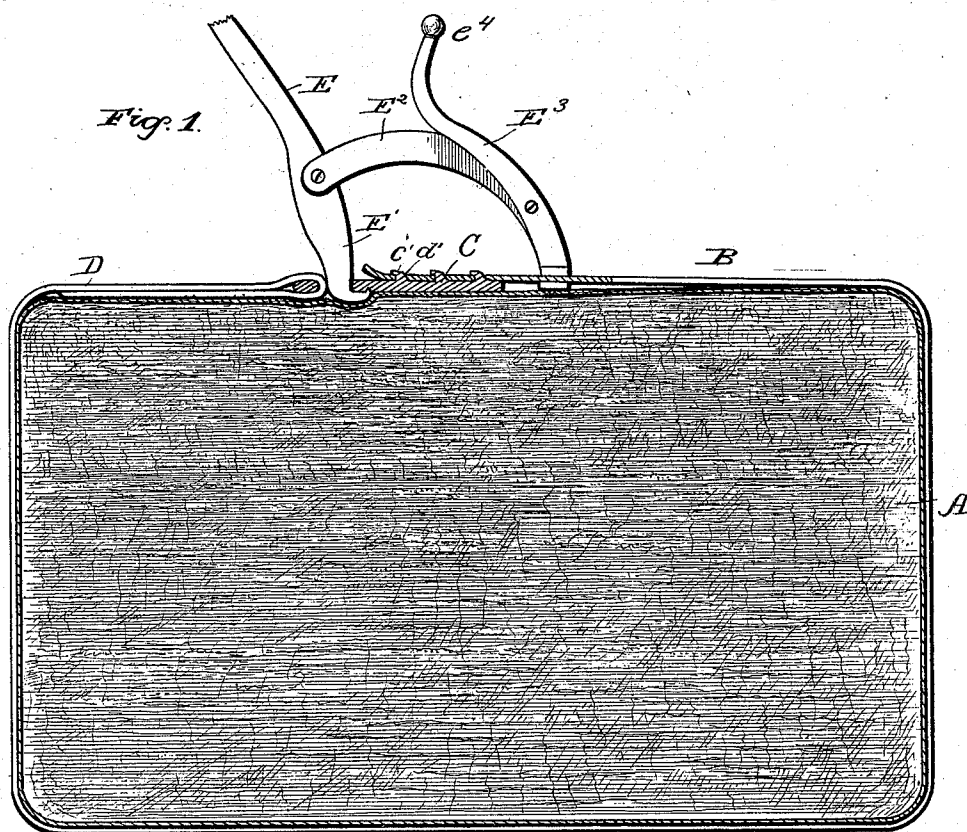
(No Model.)

2 Sheets—Sheet 1.

A. S. GOOCH.
BALE TIE.

No. 559,523.

Patented May 5, 1896.



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(No Model.)

A. S. GOOCH.
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2 Sheets—Sheet 2.

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Fig. 3.

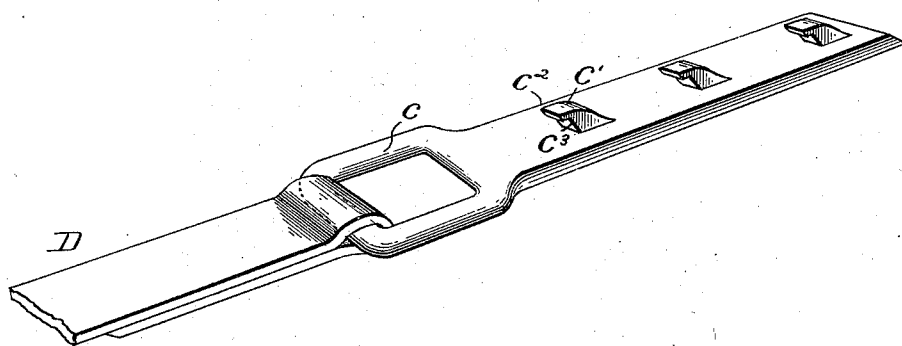
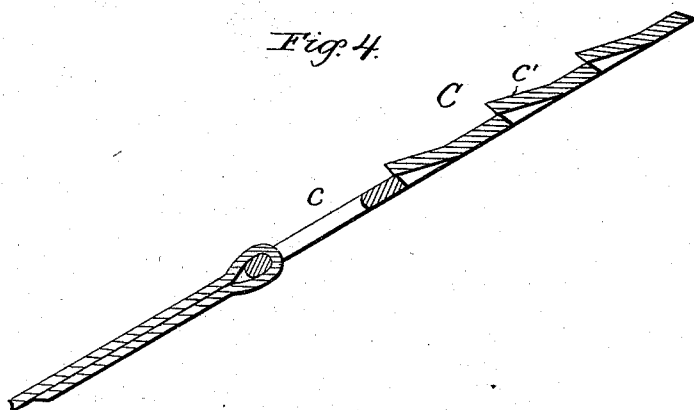


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALPHONSO S. GOOCH, OF LITTLE ROCK, ARKANSAS, ASSIGNOR TO THE
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BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 559,523, dated May 5, 1896.

Application filed February 27, 1896. Serial No. 580,940. (No model.)

To all whom it may concern:

Be it known that I, ALPHONSO S. GOOCH, a citizen of the United States, residing at Little Rock, in the county of Pulaski and State of Arkansas, have invented certain new and useful Improvements in Bale-Ties; 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.

My invention relates to improvements in devices for handling lint-cotton; and it consists in the improved bale-tie whose construction and arrangement of parts will be hereinafter fully described, and particularly pointed out in the claims.

The object of my invention is to provide a bale-tie which will be simple in construction, strong, and durable, and which will be formed to permit the use in connection therewith of a clamping device, by the action of which the ends of the bale-tie will be drawn more tightly together than can be done with the bale-ties now in use. In this manner I aim to tie a bale of cotton more securely than can otherwise be accomplished and to prevent rebound of the cotton forming the bale after the pressure applied thereto in the baling operation has been removed.

In accomplishing the object of my invention I form my bale-tie in two pieces: first, a plate having projections on its upper surface and an opening formed in one end thereof, and, second, a band of metal or other material, one end of which is passed through an opening in said plate and secured thereto in a suitable manner, and the other end of which is provided with slots which are adapted to fit over and engage with the projections formed on the upper surface of the plate. In connection with this bale-tie and in order to enable the same to be placed in position on a bale I use a clamping device which is formed with a leg adapted to fit in the opening formed in the plate above mentioned and with clamping-jaws pivoted to said leg and adapted to grasp the slotted end of the bale-tie band, so that by actuating said clamping device I am able to draw the bale-tie band over the bale until the slots formed in the end thereof will register with the projections formed on the

bale-tie plate. In this manner I am able, as I have found by practical tests, to save more than an inch in the rebound of the cotton forming the bale after the pressure applied thereto during the course of the baling operation has been removed. This enables me to hold the bale of cotton in approximately the form which it assumed at the completion of the baling operation, and thus to facilitate transportation of such bale.

My invention is fully illustrated in the drawings which accompany and form a part of this specification, in which the same reference-letters refer to the same or corresponding parts, and in which—

Figure 1 represents a bale of cotton having my improved bale-tie in position thereon. Fig. 2 is a detail perspective view of the clamping device which I use to place the bale-tie in position upon the bale. Fig. 3 is a view showing the plate forming a portion of my bale-tie and also one end of the bale-tie band, which is employed. Fig. 4 is a similar view showing a different manner of forming the projections upon the upper surface of the bale-tie plate.

Referring to the drawings, A represents a bale of cotton on which my bale-tie is to be placed in position. This bale may either be made by the compress methods now in general use or by presses adapted to form bales of cotton layer by layer of the character shown and described in the application of Lewis B. McDonald for improvements in presses for baling cotton and other fibrous materials, filed December 30, 1895, Serial No. 573,797.

B represents the bale-tie. It is formed, as shown in the drawings, of a bale-tie plate C and a bale-tie band D. The bale-tie plate is provided with an opening *c* in one end thereof and a plurality of projections *c'* on the upper surface of the other end thereof. These projections may be cast in one piece with the bale-tie plate, as shown in Fig. 3, or the bale-tie plate may be made of sheet metal and the projections *c'* struck up, as shown in Fig. 4, or any other suitable construction may be employed. It is essential that the projections *c'* be on the upper surface of the plate, and it is preferable that a number of such projections be formed, as thereby the strain of hold-

ing the bale-tie band in position is divided. It is preferable also that the projections c' be formed with a lip c^2 on their forward end and a sloping face c^3 on such end, as in this manner the security of the bale-tie band when in position is enhanced. One end of the bale-tie band D is passed through the opening c in the bale-tie plate C and is doubled back upon the bale of cotton, being held in position by frictional contact with the surface of the bale. The other end of the bale-tie band is provided with slots d' , which are adapted to fit over and engage with the projections c' , formed on the upper surface of the bale-tie plate, and thus lock itself in its proper position.

In order to place the bale-tie band in position on a bale, I make use of a clamping device E, one leg of which, E' , is adapted to fit in the opening c , formed in the bale-tie plate C, and is provided with a hooked end e' to engage with the lower surface of such bale-tie plate and enable sufficient purchase to be gained to permit the proper operation of the clamping device. To the leg E' of the clamping device is pivoted the lever E^2 , which is formed on its lower end with a flattened outturned portion e^2 of approximately the width of the bale-tie band D. To the lever E^2 is pivoted the hand clamping-lever E^3 , formed on its lower end with an outwardly-turned flattened portion e^3 , corresponding to the similar portion e^2 upon the lever E^2 , and on its upper end with a handle-bar e^4 .

When placing my bale-tie in position upon a bale, I bend one end of the bale-tie band D through the bale-tie plate C and pass the bale-tie around the bale. I then insert the leg E' of the clamp E into the opening c , formed in the bale-tie plate C, grasp the slotted end of the bale-tie band D between the clamping-levers E^2 and E^3 of the clamping device, and, by the use of such clamping device, pull the bale-tie band around the bale until the slots d' , formed in the end thereof, pass over and engage with the projections c' , formed on the bale-tie plate. When the clamping device is now removed, the expansion of the cotton

forming the bale is sufficient to hold the bale-tie in position. In this manner I am enabled to take up all slack in the bale-tie band and thus tie the bale much more securely than it could otherwise be done. The length of the bale-tie bands is usually determined before such bands are put in position upon a bale, such length being uniform for a bale of a given size and weight, so that there is no delay in placing the bands in position, and all of the bands are subjected to a uniform pressure when in position upon the bale.

I use a number of my bale-ties in the tying of each bale, and, as I am enabled to make each one of the same bear its proportionate part of the elastic strain exerted by the bale of cotton, there is no liability in the use of my bale-ties of such ties becoming weakened and broken one by one and finally the entire bale loosened.

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

1. In a cotton-tie, the combination with a plate having projections formed on the upper surface thereof, and an opening in one end of the same, of a band having one end thereof passed through the opening in said plate and doubled backward, and slots cut in the other end of said band adapted to fit over and engage with said projections, substantially as described.

2. In a cotton-tie, the combination with a plate having a plurality of projecting lugs cast on the upper surface thereof, and an opening in one end of the same, of a band having one end thereof passed through the opening in said plate and doubled backward, and slots cut in the other end of said band adapted to fit over and engage with said projections, substantially as described.

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

ALPHONSO S. GOOCH.

Witnesses:

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LEWIS B. McDONALD.