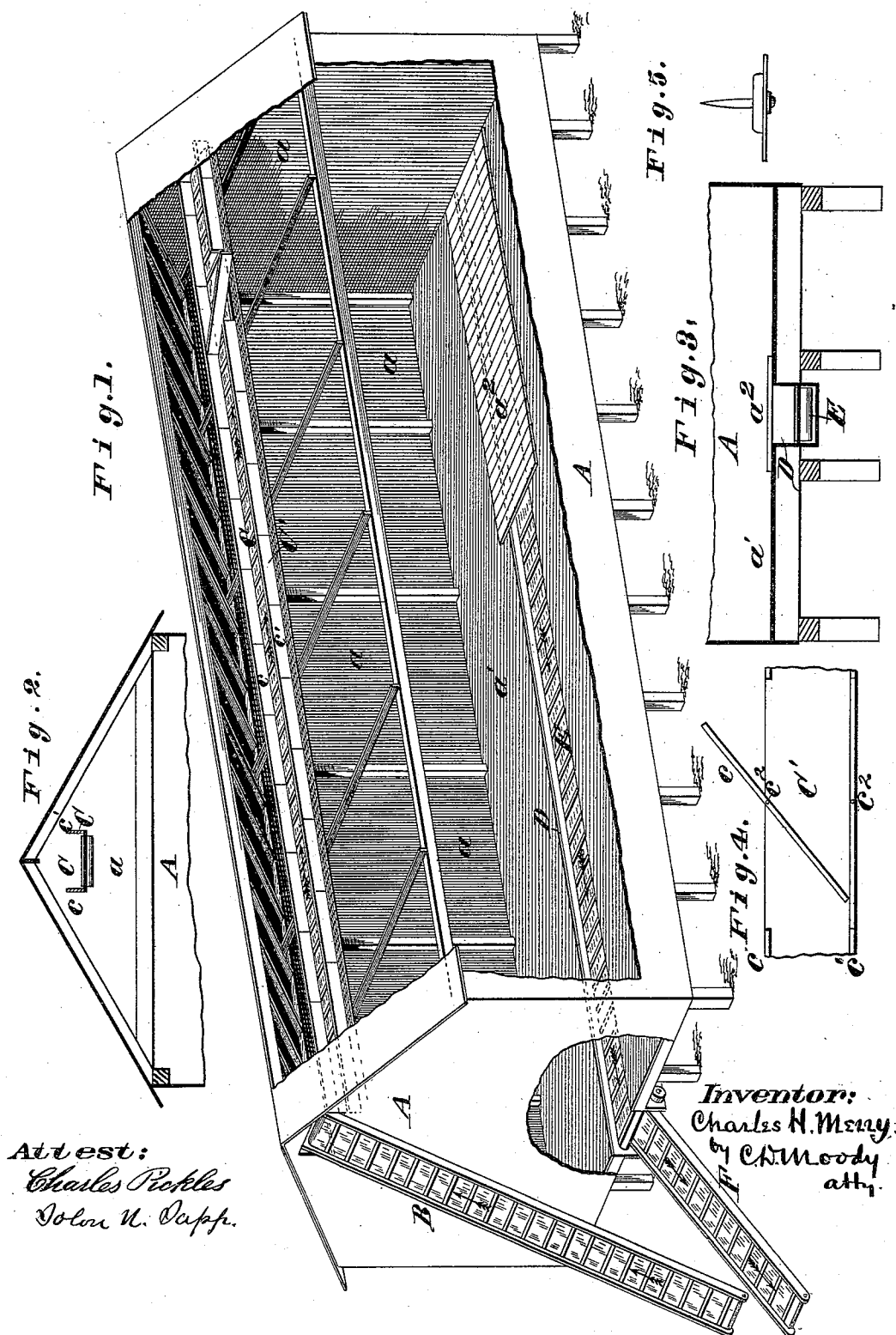


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5 Sheets—Sheet 1.

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Device for Handling and Shipping Cotton.
No. 230,144. Patented July 20, 1880.



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Device for Handling and Shipping Cotton.

No. 230,144.

Patented July 20, 1880.

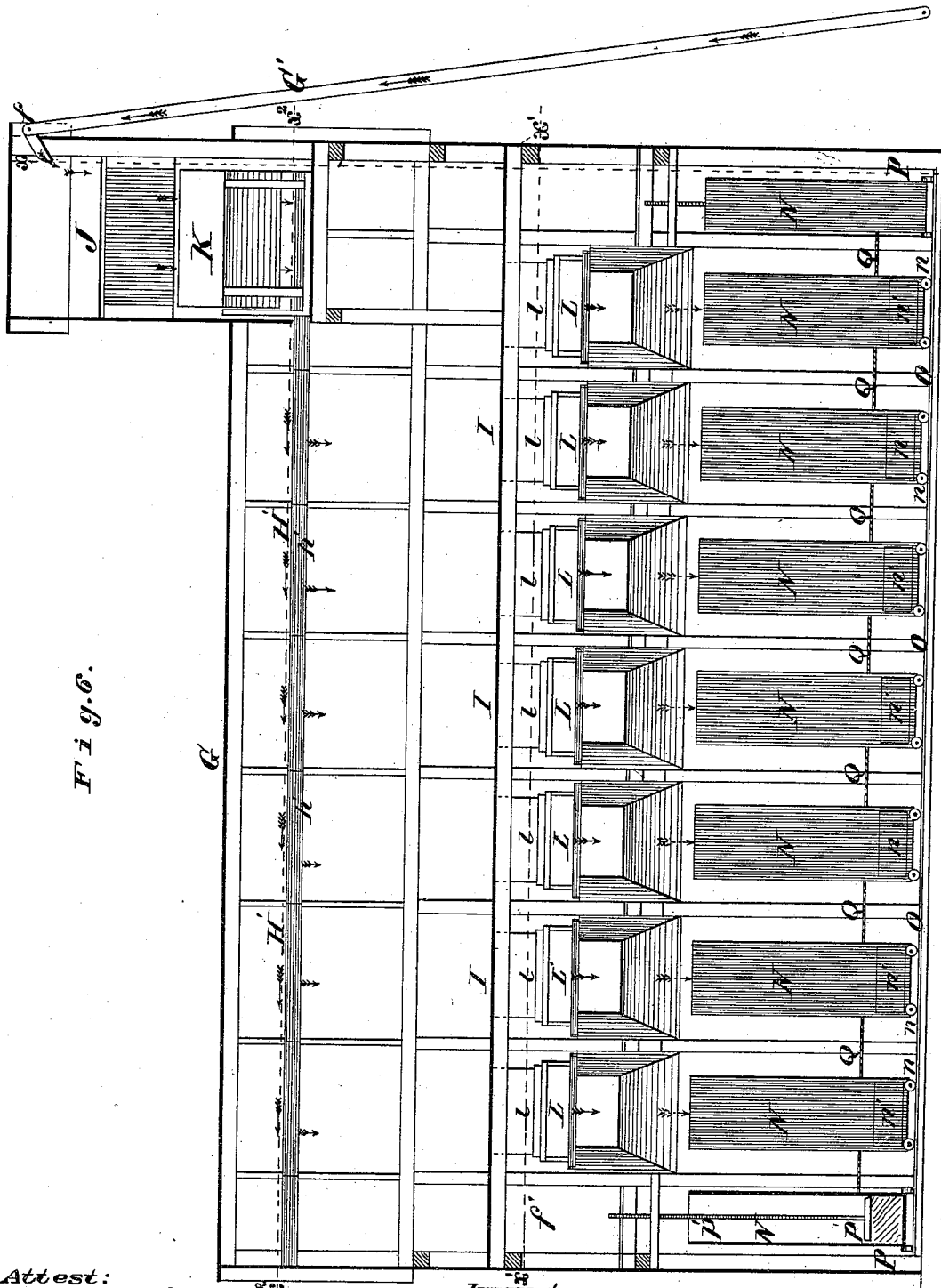


Fig. 6.

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(No Model.)

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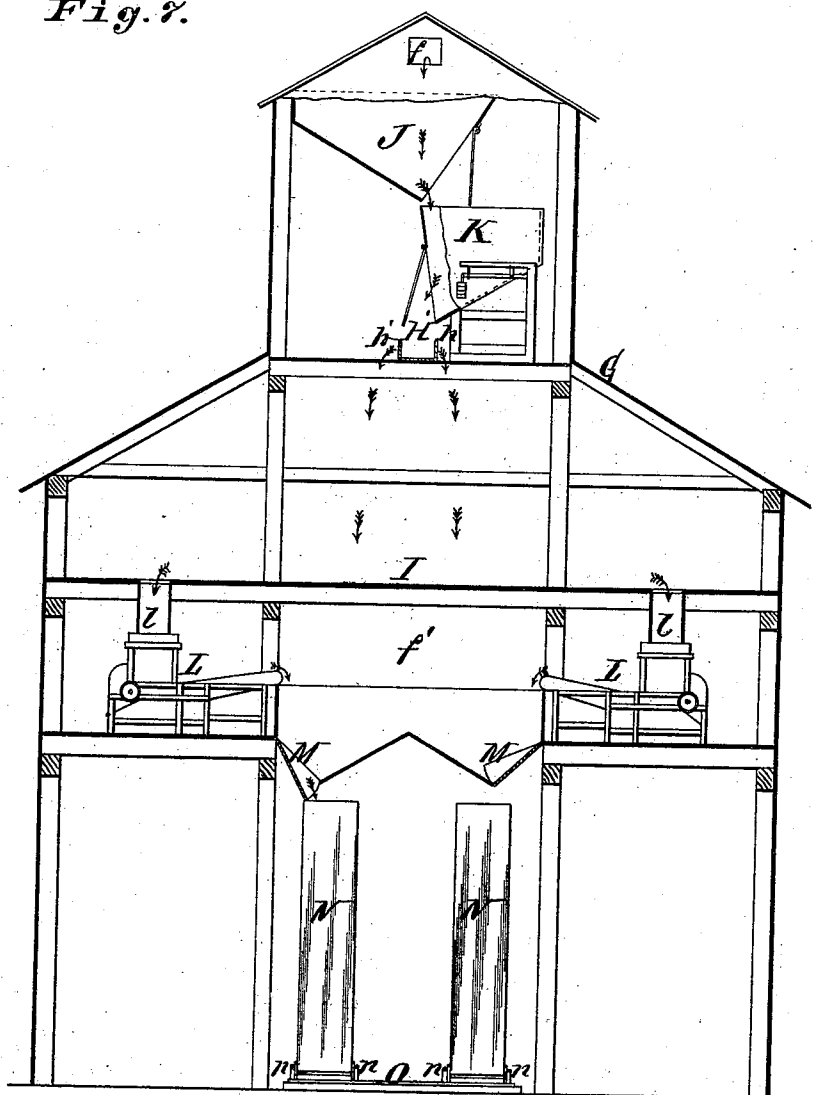
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Device for Handling and Shipping Cotton.

No. 230,144..

Patented July 20, 1880.

Fig. 7.



Attest:

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(No Model.)

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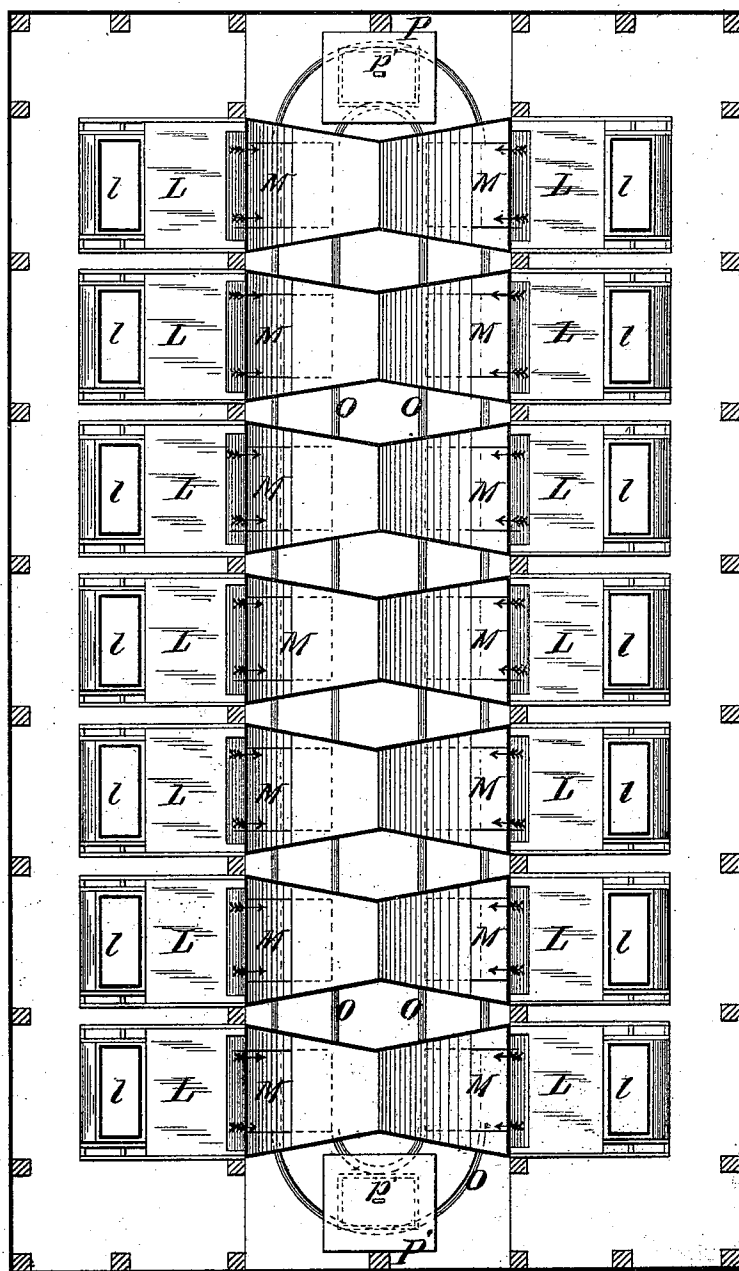
C. H. MERRY.

Device for Handling and Shipping Cotton.

No. 230,144.

Patented July 20, 1880.

Fig. 8.



Attest.
Charles Pickles
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(No Model.)

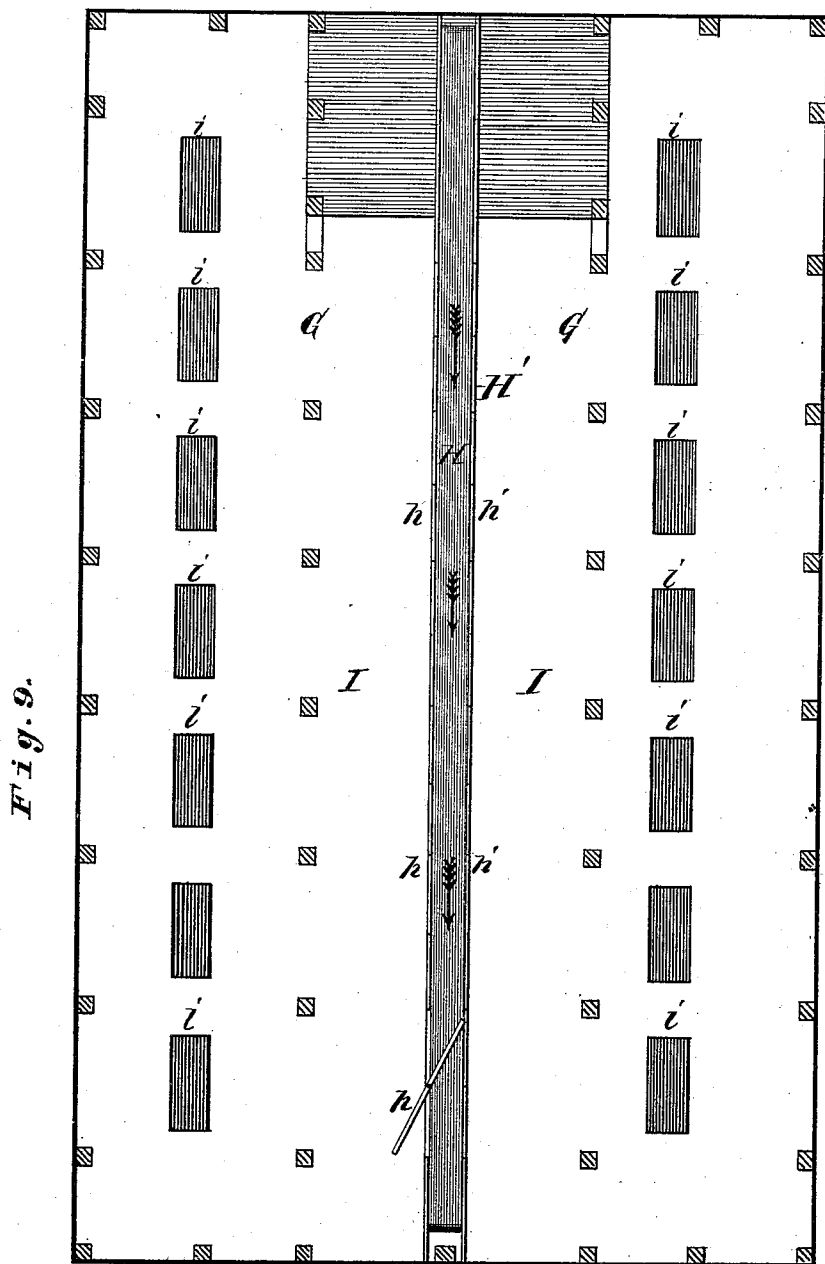
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C. H. MERRY.

Device for Handling and Shipping Cotton.

No. 230,144.

Patented July 20, 1880.



Attest:

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UNITED STATES PATENT OFFICE.

CHARLES H. MERRY, OF ST. LOUIS, MISSOURI.

DEVICE FOR HANDLING AND SHIPPING COTTON.

SPECIFICATION forming part of Letters Patent No. 230,144, dated July 20, 1880.

Application filed May 31, 1880. (No model.)

To all whom it may concern :

Be it known that I, CHARLES H. MERRY, of St. Louis, Missouri, have made a new and useful Improvement in Handling and Shipping Cotton, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a view, in perspective, of the warehouse wherein the cotton is received in bulk from the field. A portion of the wall of the building is broken away to exhibit the interior construction. Fig. 2 is a transverse vertical section taken through the upper portion of the warehouse; Fig. 3, a similar section taken through the lower part of the warehouse; Fig. 4, a detail, being a plan of a portion of the conveyer-trough in the upper part of the warehouse; Fig. 5, a detail, showing a form of spike with which the elevator-belt is furnished; Fig. 6, a central vertical longitudinal section of one of the grand central gin-houses, wherein the cotton is received in bulk from the warehouses and there ginned, pressed, and baled; Fig. 7, a transverse vertical section taken through the building last named and on the line $x\ x$, Fig. 6; Fig. 8, a horizontal section taken on the line $x'\ x'$, Fig. 6; and Fig. 9, a horizontal section taken on the line $x^2\ x^2$, Fig. 6, being a plan of the upper floor.

The same letters denote the same parts.

Heretofore in shipping and handling cotton the practice has been to gin the cotton in the immediate vicinity of the field where it is picked, the lint being baled and the seed bagged and each thence shipped separately to its destination. This procedure necessitates the use and expense of a gin at each plantation, as well as the increased expense incident to the separate handling of the lint and seed.

To obviate the objections referred to, and to provide a simpler and a much more economical mode of handling and shipping cotton, is the aim of the present invention, which consists substantially as follows:

The seed-cotton, in place of being ginned in the immediate vicinity where it is gathered, is taken in bulk from the various cotton-fields in any given neighborhood to a warehouse located upon the bank of a navigable stream or

upon a railroad and at a point central to the neighborhood in question. Similar warehouses are similarly located at central shipping points throughout the cotton-growing region, and in which the cotton is similarly received and stored. From these various warehouses the bulk-cotton, still in the seed, is, and by means of barges or cars, transported to the chief commercial centers of the country, such as the ports along the seaboard, and there received into large warehouses. In connection with these last-named buildings is a series of gins and means for pressing and baling the cotton after ginning. Thus the cotton in the seed is shipped in bulk from the place where it is grown to the large commercial centers, and there, for the first time, separated into lint and seed.

The improvement relates to the means by which, at the various points above named, the cotton is handled and prepared.

Referring to the drawings, A represents a warehouse of the class first-above named, and which may be of any suitable description, saving as modified by the devices essential to the improvement, which, in this respect, is as follows: B represents an elevator leading into the warehouse at the upper portion thereof. It serves to deliver the cotton to a conveyer, C, which extends along the upper part of the storage-space a , and which conveys the cotton into and along this space and discharges it onto the floor a' beneath.

A convenient means for discharging the cotton from the conveyer is as shown in Figs. 1 and 4.

The conveyer moves in a trough, C' , the sides of which are in sections $c\ c'$, and the various sections are pivoted at $c^2\ c^2$ to enable them to be turned horizontally. When any one of the sections is thus turned the trough is opened at that point, and the section in question operates as a deflector to shoot the cotton from the trough and onto that part of the warehouse floor that is beneath the opened part of the trough. When the storage-space a has been filled at that point the section of the trough that has been opened is closed and another section opened, and the cotton similarly discharged at that point, and so on through-

out the length of the conveyer and on each side of the trough until the warehouse is filled. The cotton now rests in bulk upon the warehouse floor, where it remains until transported to the buildings hereinafter described.

D represents a trough or opening in the floor *a'*.

E represents a conveyer arranged in the trough. It serves to convey the cotton from the warehouse and discharge it onto the leg F, the outer end of which leg is supposed to extend (and for which purpose it is made adjustable in the usual way) into or onto the barge, car, or other conveyance that is to transfer the cotton to the gin-houses.

The cotton in the space *a* is not allowed to bear down upon the conveyer E, the trough or opening D being covered by a covering which is removable in sections—such as the boards *a*²—and when it is desired to remove the cotton from the warehouse the boards are successively removed from above the trough, beginning at any suitable point in the length of the trough, and the cotton allowed to fall or be fed in small quantities onto the conveyer E.

There may be one or more conveyers, such as C, extending along the upper part of the space *a*, and one or more, such as E, along the bottom of the space.

From the warehouses, such as above described, the cotton is transported to the gin-houses mentioned as being located at the chief commercial centers.

G, Figs. 6, 7, 8, 9, represents one of the last-named houses.

G' represents an elevator-leg used in transferring the cotton from the barge or car into the upper part of the warehouse, entering therein at *f* and falling thence onto a conveyer H, and thence and thereby being distributed upon and along a floor, I, which extends throughout the length of the main part of the building, as shown in Figs. 6, 7, 9.

Before depositing the cotton in the conveyer H it may pass into a hopper, J, and thence into a hopper, K, where it may be weighed, and then to the conveyer.

The cotton may be distributed from the conveyer H in manner similar to that employed in connection with the conveyer C in the house A, the conveyer H being in a trough, H', the sides *h h'* of which are made sectional and swinging horizontally, as seen in Fig. 9.

In the floor I are a series of openings, *i i i*, through which the cotton is delivered from the space above the floor to a corresponding series of gins, L L L, arranged in the middle story, *f'*, of the building. Spouts *l l l* may lead to the gins when the latter are not immediately at or beneath the openings *i i i*. The cotton, which thus far has been in bulk and in the seed, is now ginned, and the ginned cotton passes from the various gins onto hinged aprons or stalls, M M M, one to each gin.

N N N represent a series of what I term "baling-cases," which receive the cotton from

the aprons M, and which are movable for the purpose of transferring the cotton from the gins to a central point or points, where it may be pressed and baled. The cases N move, say, upon rollers, ways, or, as indicated, upon a track, O, for which purpose the cases are furnished with rollers *n n*. The track O extends to points—say at P P—where, by suitable means, such as a descending platen, *p*, held and actuated by a rack, *p'*, the cotton can be pressed in the cases N, the operation being as follows: The aprons M being let down, the cotton thereupon falls into the cases N, the practice being to admit enough cotton into each case to form an ordinary bale. If there is not cotton enough upon one apron, the case that is short takes from another apron in the series, and so on. The cases are connected by a tie or coupling, Q, enabling the series of cases to move together. As the cases are filled they are moved to the points P P of pressing, and as they successively come to these points the platens *p* are caused to descend and press the cotton. The ties being put on, the bales are removed through the doorways *n' n'* from the cases.

The operation is continuous, the ginned cotton either accumulating on the receiving-aprons M or being delivered into some of the baling-cases, while one of the cases is at the point P, (or two of the cases at the points P P, as the case may be,) constituting the wall for inclosing the cotton while it is being pressed; and as fast as the completed bales are discharged from the presses the series of cases are moved on or around to bring the other cases successively to the pressing point or points, and so on.

As shown, the track O is carried around and round; but any other suitable arrangement can in this respect be adopted, and the cases may be moved either around and round, or in a reciprocating manner, and the presses P P may be arranged at any convenient points.

I claim—

1. A cotton warehouse, A, having one or more conveyers, C C, extending along the upper part, and one or more conveyers, E E, extending along the bottom of the storage-room, as and for the purpose of receiving, storing, and discharging the cotton in bulk, substantially as described.

2. The combination, in a warehouse, of the conveyer C, trough C', floor *a'*, trough D, conveyer E, and removable covering *a*², substantially as described.

3. The combination of the conveyer C and trough C', having the sectional swinging sides *c c'*, substantially as described.

4. The combination, in a warehouse, A, of the elevator B, conveyer C, extending along the upper part, and the conveyer E, extending along the lower part, of the storage-room, and the leg F, substantially as described.

5. The combination, in a warehouse, of the floor *a'*, opening D, conveyer E, and the removable sectional covering *a*², substantially as described.

6. The warehouse A, having a conveyer, C, extending horizontally along the upper portion of the storage-space *a*, as and for the purpose of conveying and distributing the cotton upon and along the floor *a'* beneath.
7. The combination, in the building G, of the conveyer H, floor I, having the openings *i i*, and the series of gins L L L, substantially as described.
- 10 8. The combination of the series of gins L L L, the receiving-aprons M M M, and the series of baling-cases N N N, substantially as described.
- 15 9. The combination of the gins L L L, aprons M M M, cases N N N, and the platen *p* and rack *p'*, substantially as described.
10. In combination with a series of cotton-gins, a series of movable baling-cases N N N, and means for pressing the cotton in said cases.
11. The combination of the series of baling-cases N N N, the track O, and the platen *p*, substantially as described.
12. The combination of the gins L L L, aprons M M M, cases N N N, tie Q, track O, and platen *p*, substantially as described.
13. The combination of the movable baling-case N, track O, and the platen *p*, substantially as described.
- CHARLES H. MERRY.
- Witnesses:
C. D. MOODY,
SAML. S. BOYD.