No. 674,746. Patented May 21, 1901.

H. TINDELL.

FEEDING MECHANISM FOR PICKING AND CARDING MACHINES.

(Application filed Sept. 5, 1899.)

(No Model.) 2 Sheets—Sheet 1.

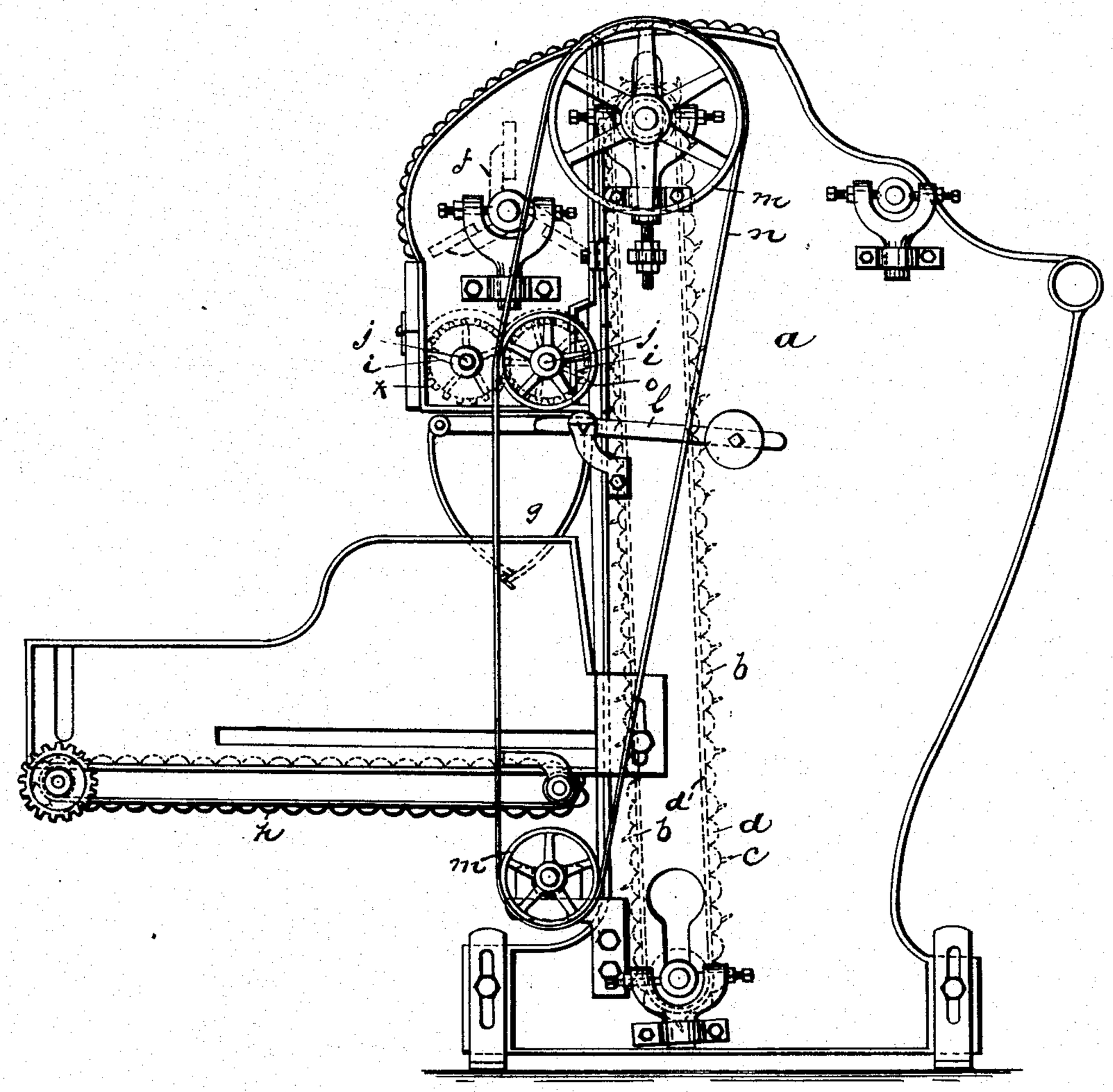

Fig. 1.

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Fig. 2.

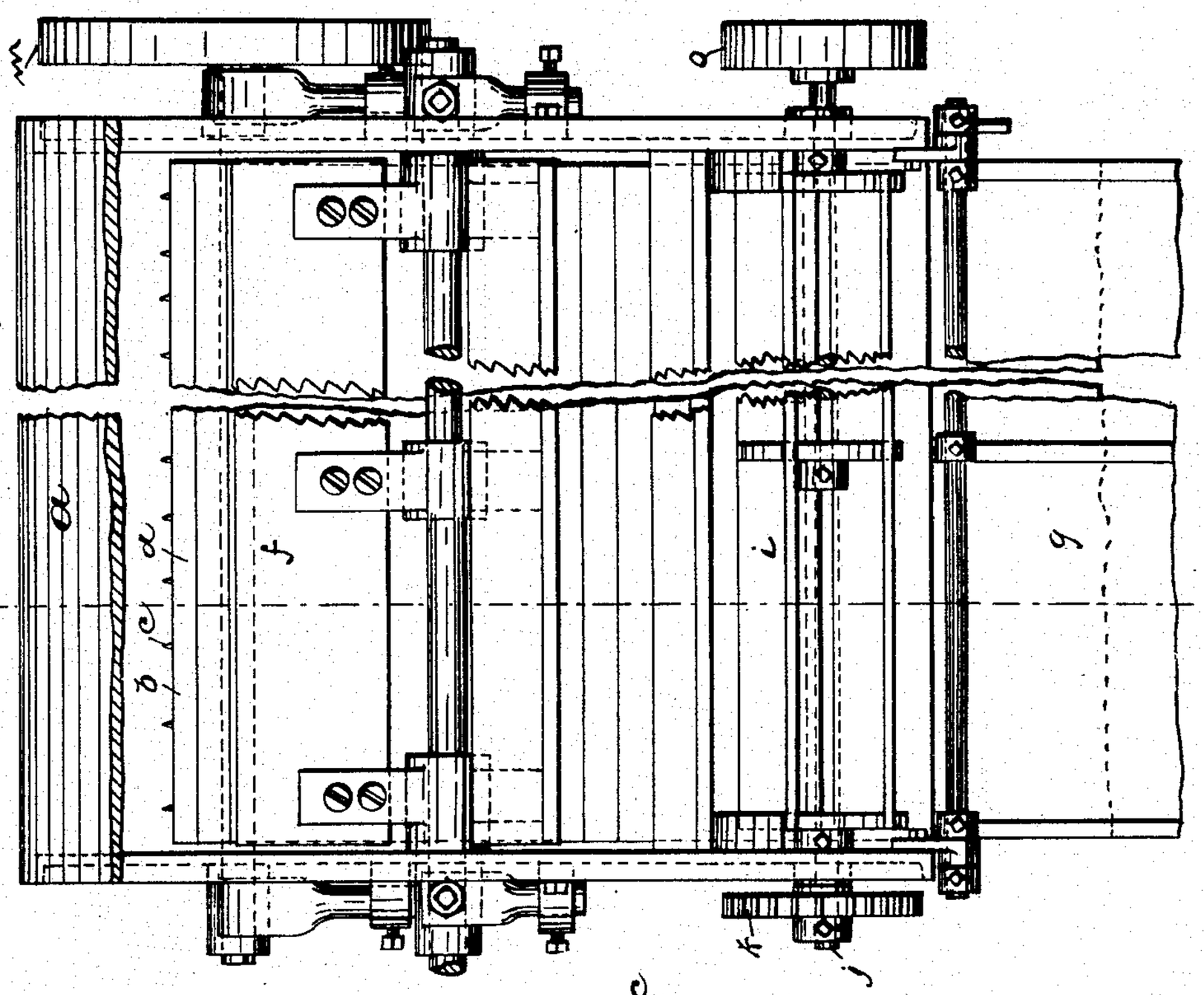
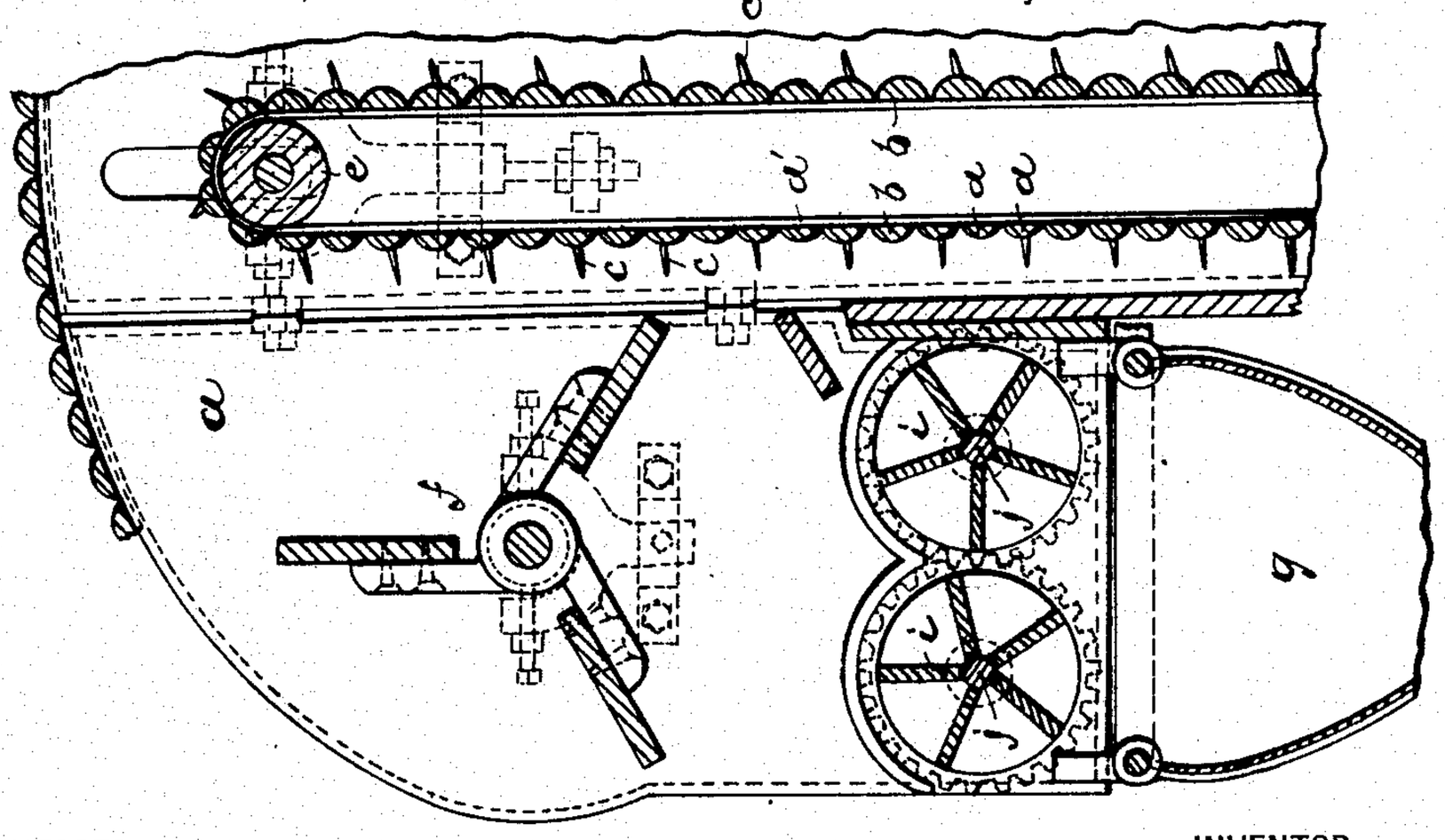


Fig. 3.



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UNITED STATES PATENT OFFICE.

HENRY TINDELL, OF HARRISON, NEW JERSEY.

FEEDING MECHANISM FOR PICKING AND CARDING MACHINES.

SPECIFICATION forming part of Letters Patent No. 674,746, dated May 21, 1901.

Application filed September 5, 1899. Serial No. 729,414. (No model.)

To all whom it may concern:

Be it known that I, HENRY TINDELL, a citizen of the United States, residing at Harrison, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Feeding Mechanisms for Picking and Carding Machines; 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.

This invention relates to certain improvements in that class of mechanisms for picking and carding machines represented by the device shown in my prior invention, No. 439,311, patented October 28, 1890, the objects of the present improvements being to secure a more even and uniform weighing of the cotton or woolen fibers and a more regular distribution of the same upon the conveying-apron and to secure other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved feeding mechanism for picking and carding machines and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is a side elevation of my improved machine, illustrating the relation of the various operating parts. Fig. 2 is a detail front elevation, on an enlarged scale, showing more particularly the present features of novelty in their relation to the coöperating parts; and Fig. 3 is a sectional view taken at line *x*, Fig. 2.

In said drawings, *a* indicates a hopper; *b*, an endless lifting-apron having inclined lifting-teeth *c* attached to and projecting from the connecting-slats *d*, said slats being attached to the flexible belt or belts *d'*, as shown in Fig. 3, the apron comprising said slats and belt or belts, as will be understood. The said lifting-apron is suitably arranged on drums or rollers *e* and operated in any suitable manner by means of cogged gearing, belts, and pulleys or other means *m n*. (Shown in Fig. 1.) At the forward side of the vertically-disposed feeding-belt within the said hopper, near the upper end thereof, is arranged a rotating doffer *f* of any suitable construction, and below said doffer *f* is arranged a scale-pan *g* of any suitable construction, adapted to receive the wool or fiber from the doffer and, when sufficient of said wool is fed, to be overbalanced thereby or opened by gravity and the wool or fiber permitted to pass therefrom to the apron *h* after having been weighed. The scale-pan is connected with the ordinary scales *l*. Heretofore the wool or fiber has been unevenly supplied by the said doffer to the weighing-pan, the result of which has been to secure irregular weighing, resulting in the uneven distribution of wool or fiber upon the apron *h* and unevenness in the final roping. By my present construction these defects have been avoided, and in securing the desired evenness or distribution of wool upon the apron I have arranged between the doffer *f* and the weighing-pan *g* a pair of revolving feeders *i i*, adapted to receive the wool from the said doffer and feed the same centrally upon the said weighing-pan *g*. The pair of feeders *i i* revolve in opposite directions, forming a hopper-like receptacle for the wool between, from which receptacle the wool is fed between said feeders upon the weighing-pan. The said feeders do not rotate continuously, but only revolve in unison with the lifting-apron *b*. When the said lifting-apron stops, the said feeders stop their movements, and thus upon the opening of the weighing-pan and the stopping of the said lifting-apron the fiber from the doffer is immediately prevented from falling upon the apron *h* through the orifice normally closed by the weighing-pan. While the weighing and delivering and coöperating movements are taking place the wool from the doffer is interrupted in its passage to the weighing-pans and gravitates upon the said feeders, the doffer remaining constantly in motion. The said feeders are suitably ar-

ranged upon shafts *j*, extending to the outside of the hopper, and are there provided with cog-wheels *k*, intermeshing one with the other to secure the desired direction and simultaneous movement.

The lifting-belt is provided with the usual means for giving movement thereto. It is also provided with the ordinary means for automatically stopping its movements when the weighing-pan is sufficiently filled or a suitable weight of wool is thereon.

In connection with the ordinary pulleys *m* and belt *n* for operating the lifting-apron I employ upon one of the shafts *j* of the feeding-wheels a pulley *o*, which engages the said belt *n*, so that when said belt *n* stops its movement the said pulley *o* will also stop the operation of the feeders, as will be understood upon examination of Fig. 1.

Having thus described the invention, what I claim as new is—

1. In a feeding mechanism for a picking and carding machine, the combination with a hopper and an endless lifting-belt arranged in said hopper, a doffer arranged at one side of said lifting-belt and weighing-pans arranged beneath said doffer, of a pair of rotary feeders centrally arranged between said doffer and weighing-pan, and means for rotating said feeders, substantially as set forth.

2. In a feeding mechanism for a picking and carding machine, the combination with the hopper, an endless lifting belt or apron arranged in said hopper, and a doffer arranged at one side of and near the top of said lifting-belt, of a pair of rotary feeders arranged beneath the said doffer and adapted to receive the fiber therefrom, and connections of said feeders and endless belt, whereby said parts move and stop together, a pair of weighing-pans arranged centrally beneath the pair of feeders, and connections whereby the lifting belt or apron will be caused to stop its movements when the pair of weighing-pans opens to permit the down-passage of the weighed fiber, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of August, 1899.

HENRY TINDELL.

Witnesses:
CHARLES H. PELL,
C. B. PITNEY.