(No Model.)

W. C. BRAMWELL.

ENDLESS APRON FOR FEEDING OR OTHER MACHINES.

No. 396,532. Patented Jan. 22, 1889.

Fig. 1.

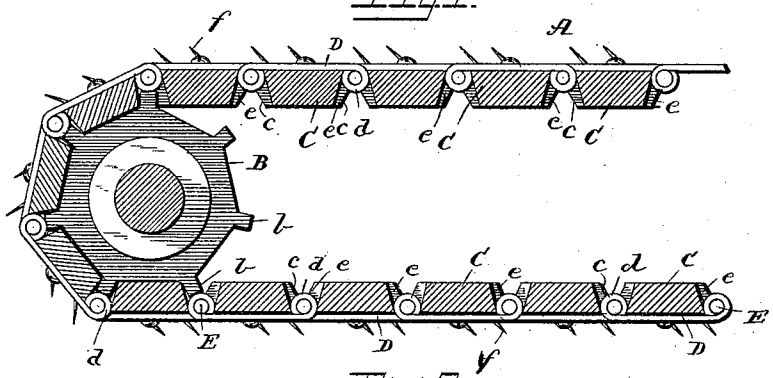


Fig. 2.

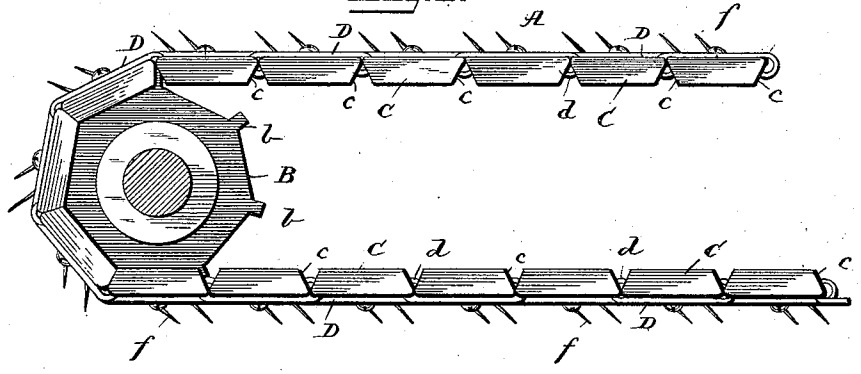


Fig. 3.

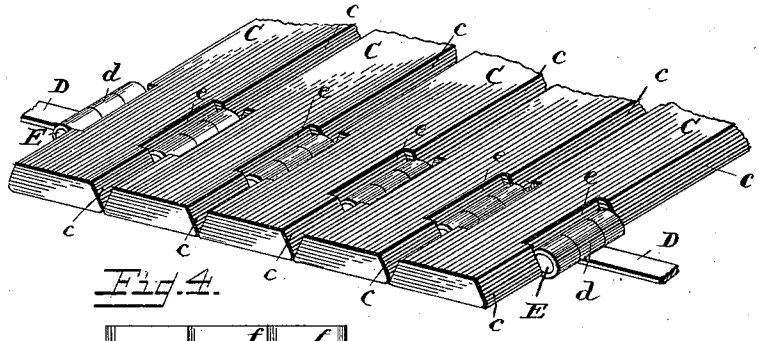
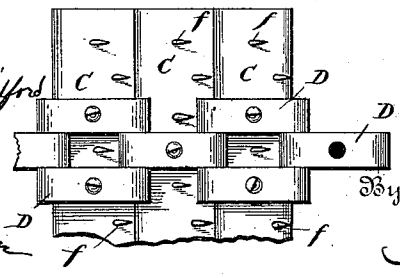


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM CALVERT BRAMWELL, OF HYDE PARK, MASSACHUSETTS.

ENDLESS APRON FOR FEEDING OR OTHER MACHINES.

SPECIFICATION forming part of Letters Patent No. 396,532, dated January 22, 1889.

Application filed June 14, 1887. Serial No. 241,317. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CALVERT BRAMWELL, a citizen of the United States, residing at Hyde Park, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Endless Aprons for Feeding or other Machines, of which the following is so full, clear, and exact a description as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse section of a portion of my improved endless apron or carrier with a feeding pulley or roller. Fig. 2 is an end elevation of the same. Fig. 3 is a perspective of the apron, showing more clearly the form of the slats and the connecting-links. Fig. 4 is a top plan of a portion of the apron.

Similar letters of reference denote corresponding parts in the several figures.

The object of my invention is to construct an endless apron or carrier which will not permit any wool or other fiber to pass through it between the slats; and to this end my invention consists in certain peculiarities in form of the edges of the slats and in making the joints of the metal links coincide with the edges of slats where they come nearest together.

Another object of my invention is to construct a device capable of giving a positive motion to the apron, and which will form a rest for the slats of the apron as they pass over or around the rolls or pulleys; and to this end it consists in forming recesses in the edges of the slats for the reception of teeth or projections formed upon the periphery of the driving rolls or shaft.

The objects, generally, of my invention are to construct an endless apron or carrier which shall be simple in construction, effective in operation, and cheap in cost; and to this end it consists in certain novel features of construction, as will be hereinafter described, and then more particularly pointed out in the claims at the end of the specification.

Referring to the drawings, A represents an endless apron or carrier constructed after the plan to be hereinafter described, and B represents a driving pulley or roll, of which any desired number may be used to rotate the apron.

The endless apron A is composed of a number of slats or bars, C, the longitudinal edges of which are cut slanting, as *c*. (Shown best in Figs. 1 and 2.) These slats are connected by links D, preferably arranged as shown, and the ends of which are formed with heads *d*, for the reception of a pin, E, passing from one link to another, as shown, and connecting them in such a manner that they will form hinges, allowing the slats to be folded, as will be readily seen. Obviously these links may be made of any width or length, and they may be arranged in any desired manner; but I prefer to arrange them alternately, one between every two, thus forming a chain, holding the slats together. As many of these chains may be used in forming the apron or carrier as desired; but I have found from experience that three are sufficient for all purposes—one situated at each end and one in the center.

Any suitable means for securing the links to the slats may be adopted; but for ordinary aprons screws are preferably employed, as then any one of the slats can be readily and easily removed, when desired, in order to substitute another in case of an accident or for any other purpose. A portion of the apron or carrier across which the link or chain extends is recessed at *e* in such a manner that the joints of the metal links will coincide with the edges of the slats where they come nearest together, thus leaving the top of the apron a continuous surface, and leaving no space for the passage of wool or other fiber through the apron between the slats, which so often occurs in aprons heretofore constructed. Within these recesses *e* teeth or projections *b*, formed on the periphery of the driving rolls or pulleys, fit. These teeth or projections *b* are made of a proper length to just fit within these recesses, and they are situated a proper distance apart to allow the slats to rest upon the flat surface of the roll, as shown in Figs. 1 and 2, which will obviously give a positive motion to the apron when the pulley or roll is revolved, and the lower surface of the slats will rest upon the flat portion of the pulley between the teeth or projections *b*.

The apron may or may not be provided with teeth or spurs *f*, projecting outwardly to feed forward the wool or fiber.

The manner of operating will be obvious. The apron A is situated upon the pulley B in such a manner that each of the teeth *b* of the pulley will fit within the recess between each two slats, so that when the pulley is revolved it will rotate the apron, which will feed forward the wool or other fiber.

The advantages of my device over those of like character will be readily comprehended.

In aprons as heretofore constructed the slats were riveted to leather strips, which were liable to rot and stretch, rendering the apron useless in a short time, and with the old style of aprons it has been necessary to cover the back of the slats with a sheet of sail-cloth or cotton-duck to prevent the wool or other fibers passing between the slats. This has given considerable annoyance, cotton fibers often getting into the wool and resulting in specks in the manufactured cloth or yarn. Not only this, but it has been impossible to keep the wool or other fiber from passing between the slats, particularly when the slats turn over the rolls supporting the apron. At that point it has generally happened that said slats have opened apart, on account of the sharp angle they then described, allowing some of the fibers to pass between them. On leaving the rolls and assuming a straight line the fibers would be held as in a vise, soon resulting in prying off or otherwise disarranging the slats. Not only this, but the wool would oftentimes get entirely through the slats and would wind around the rolls, choking the apron and preventing its rotation. Obviously, such disadvantages as these would not be experienced in a device constructed after the plan hereinbefore set forth.

Having now described the construction, advantages, and operation of my invention, what I believe to be new, and desire to secure by Letters Patent, and what I therefore claim, is—

1. In an endless apron or carrier, the slats or bars and connecting metal links and pins, said slats having recessed and beveled edges, for the purpose described, in combination with pulleys or rolls supporting said apron and having teeth or projections fitting in between said slats, whereby a positive motion will be imparted to the apron by the pulleys.

2. An endless apron composed of slats or bars having beveled edges and formed with recesses *e*, in combination with links having their pivotal bearings situated within the recesses *e*.

3. An endless apron or carrier composed of the slats having beveled edges and formed with recesses *e*, in combination with a series of metal links formed with heads and pins passing through the said heads, forming hinges at this point, situated within the recesses *e*, substantially as and for the purposes shown and described.

In testimony that I claim the above as my invention I hereunto set my hand and affix my seal in the presence of witnesses.

WILLIAM CALVERT BRAMWELL. [L. S.]

Witnesses:

F. W. HERRICK,

D. F. CRANE.