

No. 789,772.

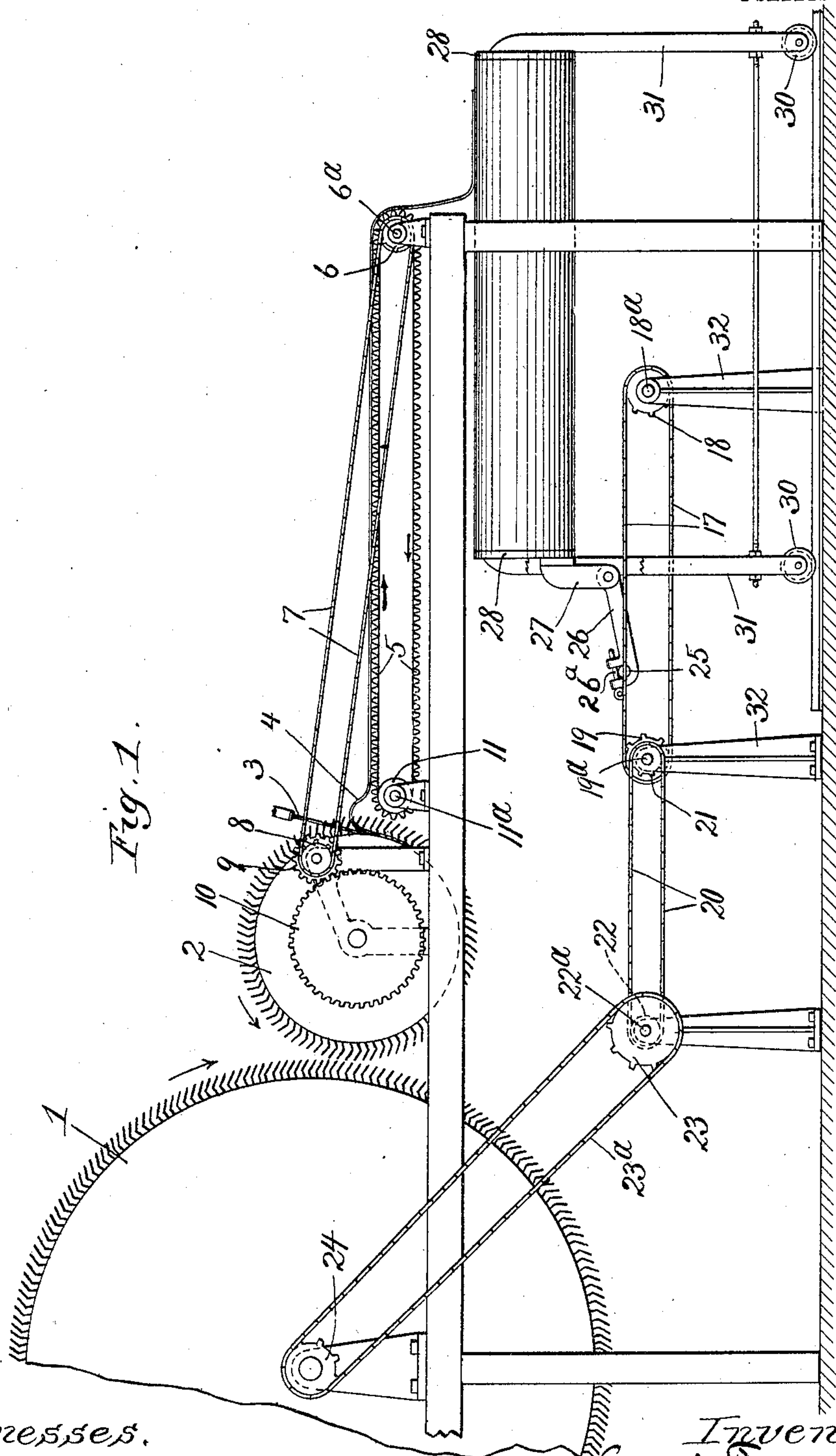
PATENTED MAY 16, 1905.

E. TYDEN.

BAT FORMING AND DELIVERING DEVICE FOR CARDING MACHINES.

APPLICATION FILED OCT. 19, 1903.

2 SHEETS—SHEET 1.



Witnesses.

Edward T. Wray.
Fred G. Fischer

Inventor.
Emil Tyden
by Burton Burton
his Atty's.

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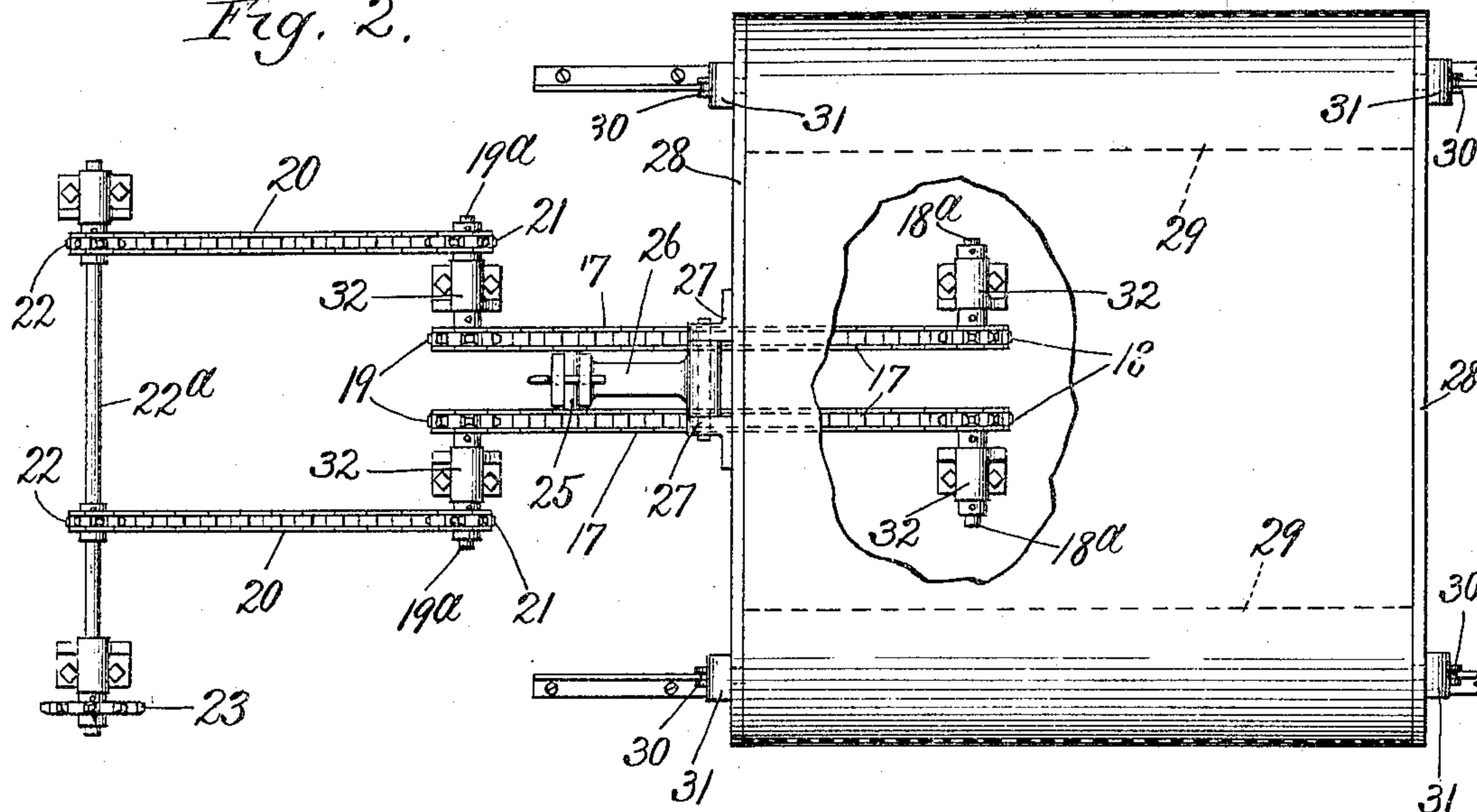
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2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

EMIL TYDEN, OF HASTINGS, MICHIGAN.

BAT FORMING AND DELIVERING DEVICE FOR CARDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 789,772, dated May 16, 1905.

Application filed October 19, 1903. Serial No. 177,573.

To all whom it may concern:

Be it known that I, EMIL TYDEN, a citizen of the United States, residing at Hastings, in the county of Barry and State of Michigan, have
 5 invented new and useful Improvements in Bat Forming and Delivering Devices for Carding-Machines, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

10 The purpose of this invention is to provide in a carding-machine improved means for carrying the film from the doffer or final card-cylinder and delivering it onto the blamire to form the bat or "blanket," and improved
 15 means for operating the blamire in its reciprocating movement.

It consists in the features of construction which are specified in the claims.

20 In the drawings, Figure 1 is a side elevation of the delivery-end portion of the carding-machine, showing the main cylinder and parts subsequent thereto in the machine, including the delivery mechanism in which my improvements are contained. Fig. 2 is a detail plan
 25 view of the blamire and its operating connections.

It will be understood that the film of fiber which is being carded is taken by the doffer 2 from the main cylinder 1 and is stripped from
 30 the doffer by the comb 3 and that said film (shown at 4) is delivered onto the upper ply of the endless-carrier apron 5. The apron 5 is driven by a roller 6 at the discharge side on a shaft 6^a, which derives motion through a
 35 chain 7 from a sprocket-wheel 8, the shaft of which has a gear 9, meshing with a gear 10 on the shaft of the doffer 2. Said apron 5 at the inner end of its course passes about a take-up or idle roller 11, mounted on a shaft 11^a, suit-
 40 ably journaled in the frame.

For the purpose of operating the blamire in its reciprocating movement operating-chains 17 17, passing around the sprocket-wheels 18 18 on the short shafts 18^a 18^a and
 45 the sprocket-wheels 19 19 on the stud-axes 19^a, are driven by the chains 20 20, passing about the sprocket-wheels 21 21 on said shafts 19^a and deriving motion from the sprocket-wheels 22 22 on the shaft 22^a, which has also
 50 a rigid sprocket-wheel 23, which is in turn

driven by a chain 23^a, deriving motion from the sprocket-wheel 24 on the shaft of the main cylinder. The two chains 17 17 are connected by a rod 25, mounted on corresponding links of the two chains, and a link or pitman-rod 55 26 is detachably pivoted at one end on the rod and at the other end is pivotally connected with lugs 27 27 on the blamire-frame. The detachable connection of the link or pitman 60 26 with the rod 25 is conveniently made, as shown, by transversely notching the link for striding the rod and employing a cotter-pin 26^a to retain it on the rod, so that by withdrawing the cotter-pin it may be disconnected for any movement of the blamire frame or 65 carriage which it may be desirable to make independently of the operating connections. Said blamire-frame, it will be understood, comprises the side bars 28 28, in which are journaled the rolls 29 29, about which the bla- 70 mire-apron is carried, and said frame has supporting-wheels 30 30, provided with a track on the floor, the standards 31 for said wheels extending down outside the standards 32 32, which support the shafts 18^a and the stud- 75 axes 19^a. The means for rotating the blamire-apron are not shown, being such as are customary and not forming a part of this invention.

By employing the double connections con- 80 sisting of the two chains 20, operating two shafts 19^a, alined with each other, but separated by an interval, as seen in Fig. 2, so that two chains 17 may be operated synchronously, as described and shown, and may therefore be 85 connected by the single rod 25 for operating the link 26, it is made possible to actuate the blamire-carriage by engagement, as shown, midway between its tracks and from one con- 90 nection only, so that possibility of cramping it in its travel on the tracks is substantially avoided, and more especially so that the draft of the connecting element on the link of the chain to which it is connected does not cramp 95 the chain on the sprocket-wheel, as unavoidably happens when the connection is made with one chain only and necessarily only at one side thereof.

I claim—

1. In a carding-machine, in combination 100

with the endless carrier by which the film is delivered; a blamire or lapper and means for reciprocating it under the delivery side of the endless carrier, said means consisting of a pair
5 of parallel endless chains and separate shafts for driving them, said chains being connected by a transverse rod at one point and a connection extending from said rod to the blamire frame or carriage.
10 2. In a carding-machine in combination with the endless carrier by which the film is delivered; a blamire or lapper onto which it is delivered; a carriage for the blamire and tracks upon which it is adapted to reciprocate;
15 a shaft transverse to the tracks of the blamire-carriage; two shafts alined with each other parallel with said first-mentioned shaft, having their proximate ends separated by an interval; sprocket-wheels on the first-mentioned
20 shaft and a sprocket-wheel on each of the

alined shafts and chains connecting the corresponding sprocket-wheels for driving the alined shafts from the first shaft; sprocket-wheels on the proximate ends of the alined shafts and a second pair of alined shafts having their proximate ends separated and provided with sprocket-wheels, and parallel chains connecting the corresponding sprocket-wheels on the proximate ends of the two pairs of alined shafts; a rod connecting the parallel chains at one point and means connecting the blamire-carriage with such rod. 25 30

In testimony whereof I have hereunto set my hand, in the presence of two witnesses, at Chicago, Illinois, this 15th day of October, 35 A. D. 1903.

EMIL TYDEN.

In presence of—

CHAS. S. BURTON,
FRED G. FISCHER.