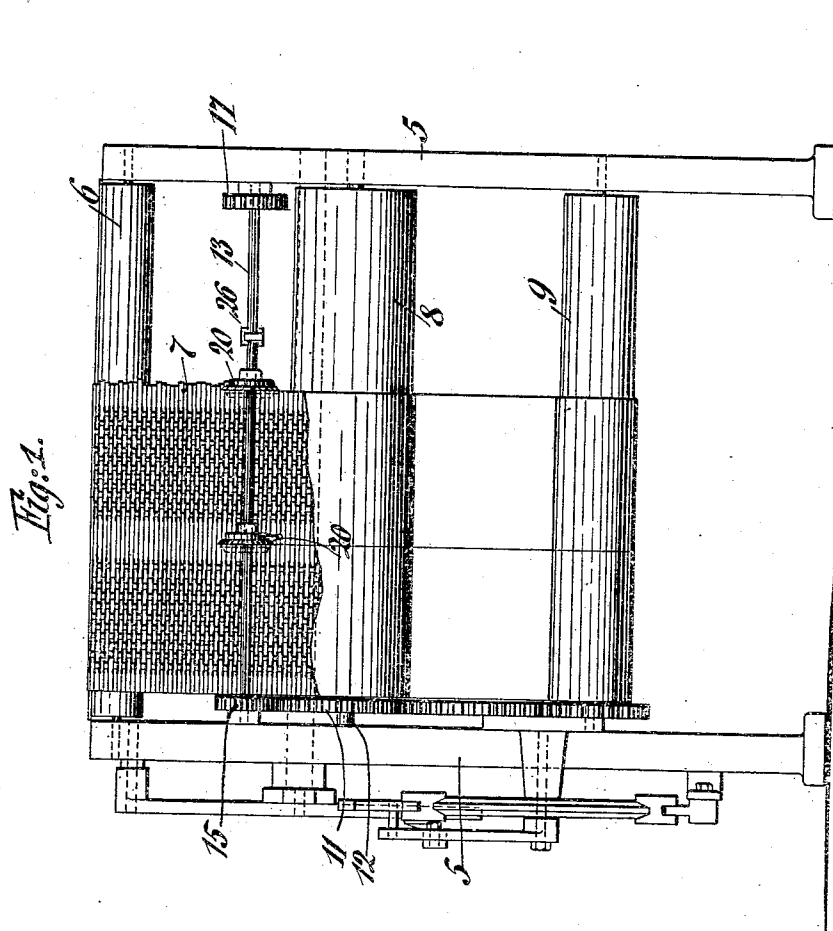


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 APPLICATION FILED FEB. 23, 1909.

941,112.

Patented Nov. 23, 1909
 3 SHEETS—SHEET 1



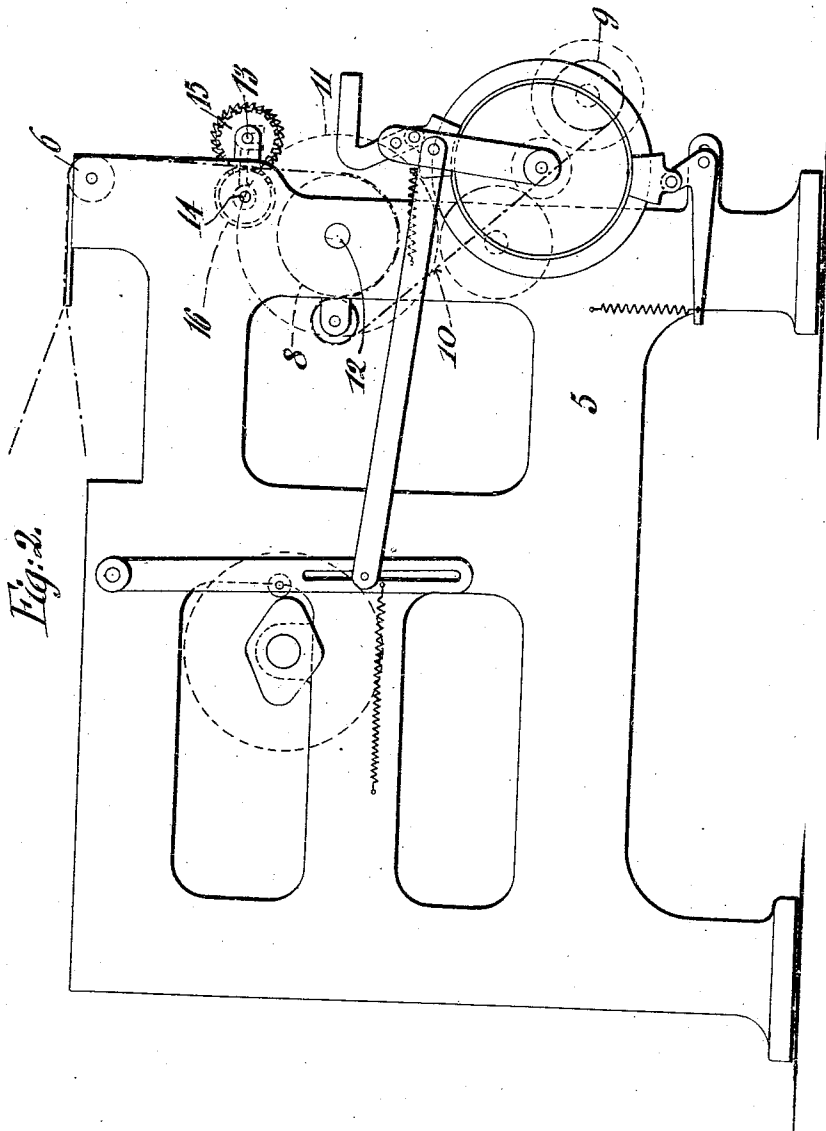
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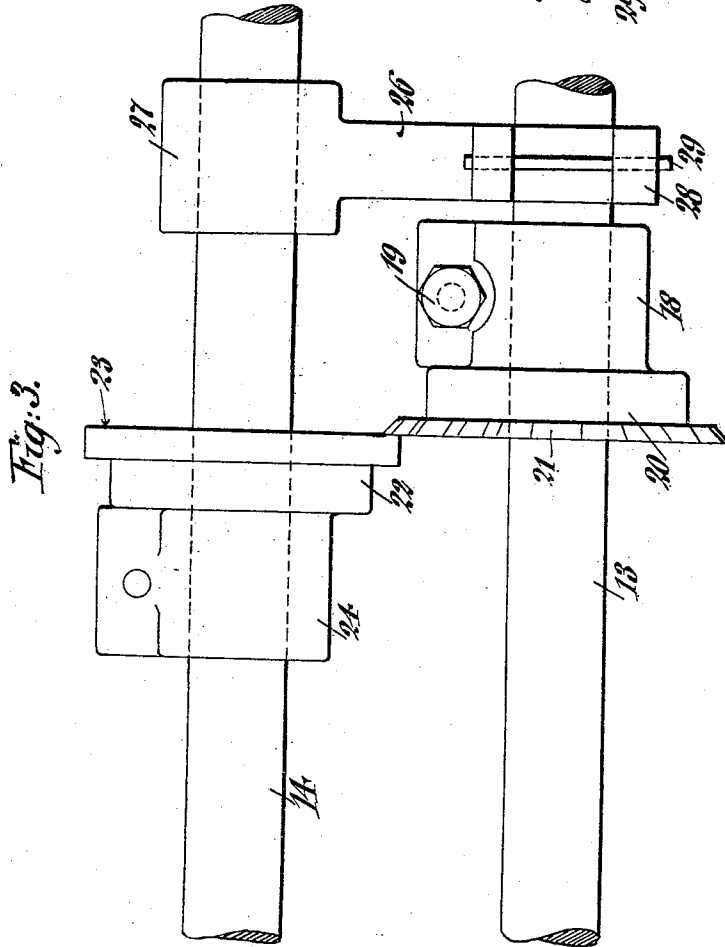
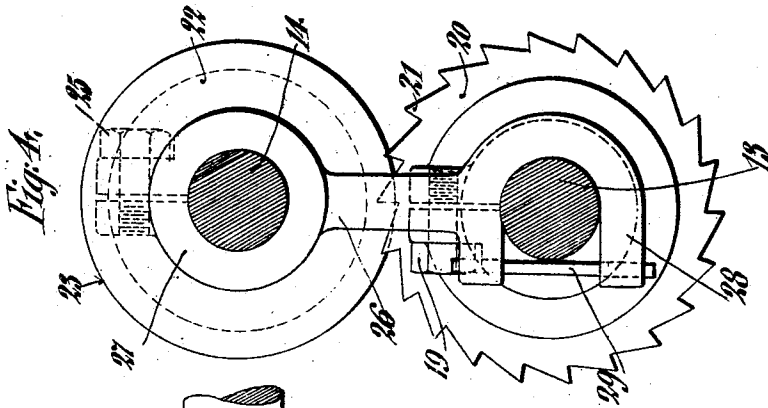
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WEB-CUTTING MECHANISM FOR CANE-LOOMS.

941,112.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed February 23, 1909. Serial No. 479,625.

To all whom it may concern:

Be it known that I, JOSEPH TILP, a citizen of the Empire of Austria-Hungary, residing in Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Web-Cutting Mechanism for Cane-Looms, of which the following is a specification.

This invention relates to mechanism for cutting the webs of different fabrics, but more particularly woven cane-fabrics, and the mechanism is primarily designed for application to cane-loom, taking the form of an attachment which can be readily embodied in cane-loom of the well-known types either at the time these looms are manufactured or at any subsequent time. However, although the mechanism is described as used in connection with a cane-loom, it may be used for other purposes.

The object of the invention is to provide a mechanism by which the fabric which is woven by the loom can be sheared at its side-edge, in order to present a perfectly straight, trimmed edge, or, if desired, the fabric may be divided into two or more parts simply by the addition of another pair of cutting disks to the shafts with which the mechanism is provided. These shafts, upon which any desired number of rotary cutting devices may be arranged, are rotated through a positive connection with the operative parts of the loom and the cutting devices move in consonance with the feed-roll so that the proper speed is imparted to the cutting devices in relation to the rapidity with which the fabric is fed. A fixed relation between the speeds of the cutting devices and of the feed-roll is at all times maintained.

In the accompanying drawing, Figure 1 is a front-elevation of a loom provided with web-cutting mechanism constructed according to the invention, Fig. 2 is a side-elevation of the loom, Fig. 3 is a detail elevation of the cutter-shafts and the cutters thereon, and Fig. 4 is an end-view of Fig. 3.

Similar characters of reference indicate corresponding parts throughout the several figures of the drawing.

In the drawing the loom is shown as being of the well-known type, having side-frames at the upper front-portion of which a roller guides the fabric which is woven by the loom downward to a feed-roll 8, likewise journaled in the side-frames 5. Below the feed-roll is

located the winding-up roll 9, as shown in Fig. 1, this roll receiving the fabric from the feed-roll after taking the course indicated by the dotted line 10 in Fig. 2.

The feed-roll and the winding-up roll are connected, as is usual in machines of this character, by a train of gears embodying a gear 11 fixed to the feed-roll shaft 12, as shown in Fig. 1.

The improved web-cutting mechanism is driven from the gear 11, that is to say, the feed-roll gear, and comprises two parallel shafts 13, 14 rotatable in suitable brackets carried by the side-frames of the loom at the front thereof, and these shafts are located in the same horizontal plane slightly above the feed-roll, as shown in Fig. 1. Motion is transmitted to the outer shaft 13 by means of a gear 15 on said shaft meshing with the feed-roll gear 11. At the end opposite the gear 15 there is a gear 17 on the shaft 13 meshing with a gear 16, so that the shafts 13, 14 rotate together. Also, as the gears on the shafts are of the same diameter the shafts will rotate at the same speed.

In the embodiment shown in the drawing, there are arranged on the shafts 13, 14 two cutting devices, each consisting of a pair of rotary cutting disks, the disks of one pair coacting to cut the woven fabric at the edge of the same, while the disks of the other cutting device serve to sever the fabric in a straight line to divide the same centrally. Any number of such pairs of cutting disks may be employed, but as they are all alike it will only be necessary to describe one of the cutting devices, such as shown in Fig. 3. On the shaft 13 is adjustably applied, by means of a split sleeve 18 and bolt 19, a rotary cutting disk 20 having a series of circumferential shearing teeth 21, as shown in Fig. 4, coacting with a similarly mounted disk 22 on the shaft 14 having a right-angled cutting edge 23, as shown in Fig. 3, with which edge the teeth 21 coact in such a way as to cut the strands of the woven cane-fabric. The plain cutting disk 22 is formed integral with a sleeve 24 and provided with a clamping bolt 25, these parts 24, 25 corresponding with the sleeve 18 and bolt 19 of the toothed disk 20. By means of the split sleeves and their clamping bolts the disks may be slid along the shafts and secured in the desired position so as to cut the fabric at any point.

In order to hold the shafts 13, 14 together and prevent them from spreading and moving the cutting disks out of coöperation with each other, I find it advisable to provide the shafts with a frictional connection 26, which may be of any preferred form, but is illustrated as a hook having an eye 27 fitting about one shaft, while the hooked end 28 frictionally grips the other shaft, the disengagement of the hook from the shaft being prevented by a small pin 29. This device holds the shafts at exactly the distance from each other to insure the proper engagement of the cutting disks.

In the operation of the machine the movement of the feed-roll necessitates a corresponding movement of the two geared shafts 13, 14, which rotate at the same speed and cause the pairs of cutters to cut the fabric at points depending on the positions in which such cutters are adjustably clamped, and in this way the trimming of the fabric at the edge, or its division into two or more parts, can be readily and efficiently accomplished. As indicated by the dotted lines in Fig. 2, the woven fabric passes between the shafts 13 and 14 and thence to the feed-roll, so that the fabric is cut before it reaches the latter.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a cutting mechanism, the combina-

tion of a pair of parallel shafts having intermeshing gears, a plurality of cutting disks separately, longitudinally, adjustably mounted on each of said shafts and adapted to coöperate with each other, a connection having an eye forming a bearing fitting about one of said shafts and having a U-shaped hook adapted to fit over the other shaft, and a pin passing through the ends of the U-shaped hook for holding the shaft in the hook.

2. In a cutting mechanism, the combination of a pair of parallel shafts having intermeshing gears, a plurality of cutting disks separately, longitudinally, adjustably mounted on each of said shafts and coöperating with each other, a connection having an eye at one end forming a bearing and fitting about one of said shafts, the other end of said connection being provided with a U-shaped hook in which the other shaft is engaged, the ends of the arms of said hook being provided with alined perforations, and a pin passing through said perforations and holding said hook on the shaft.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

JOSEPH TILP.

Witnesses:

HENRY J. SUHRBIER,
FANNIE FISK.