

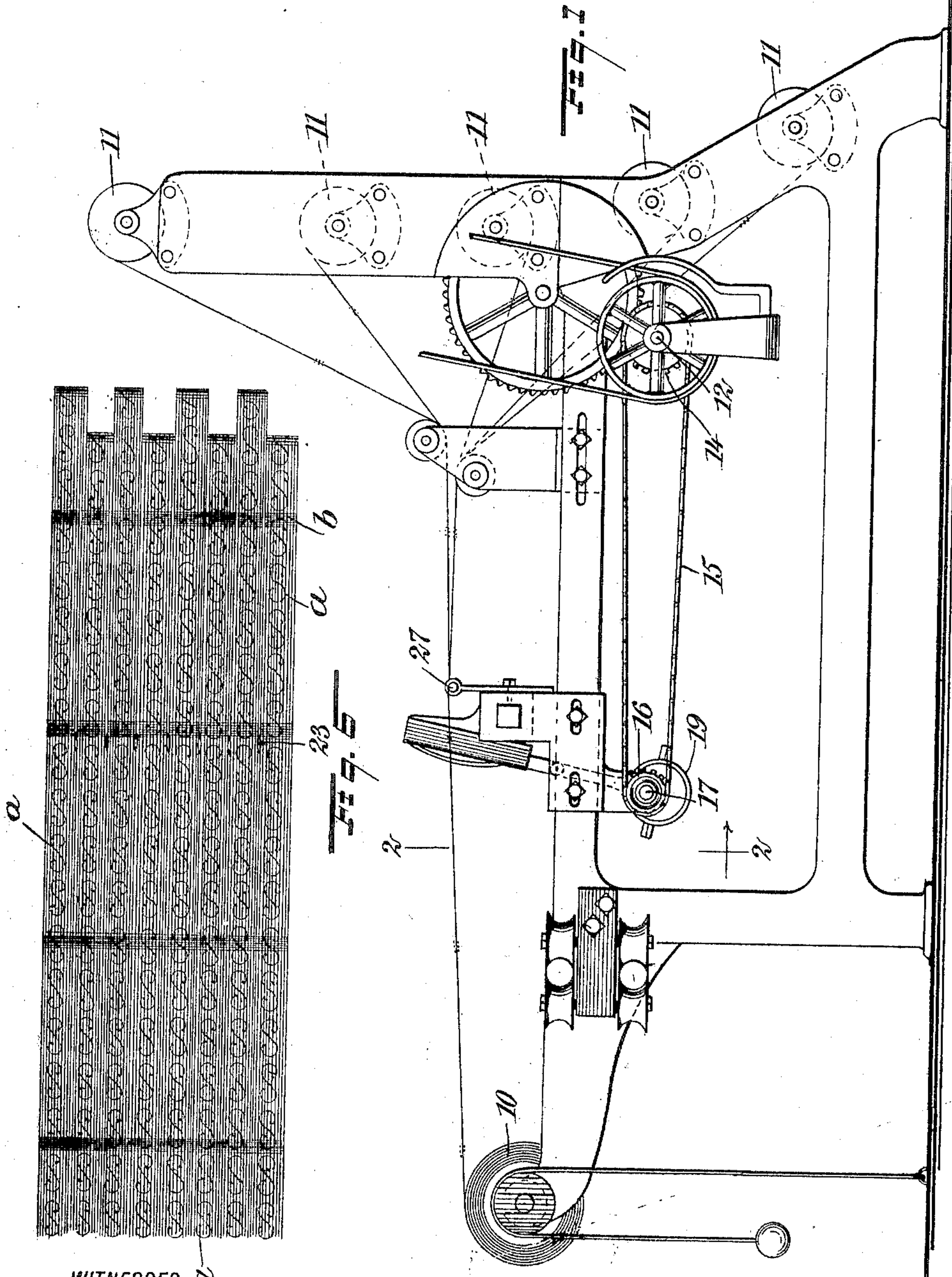
No. 811,358.

PATENTED JAN. 30, 1906.

F. A. BAER.
BEAMING MACHINE.

APPLICATION FILED APR. 26, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

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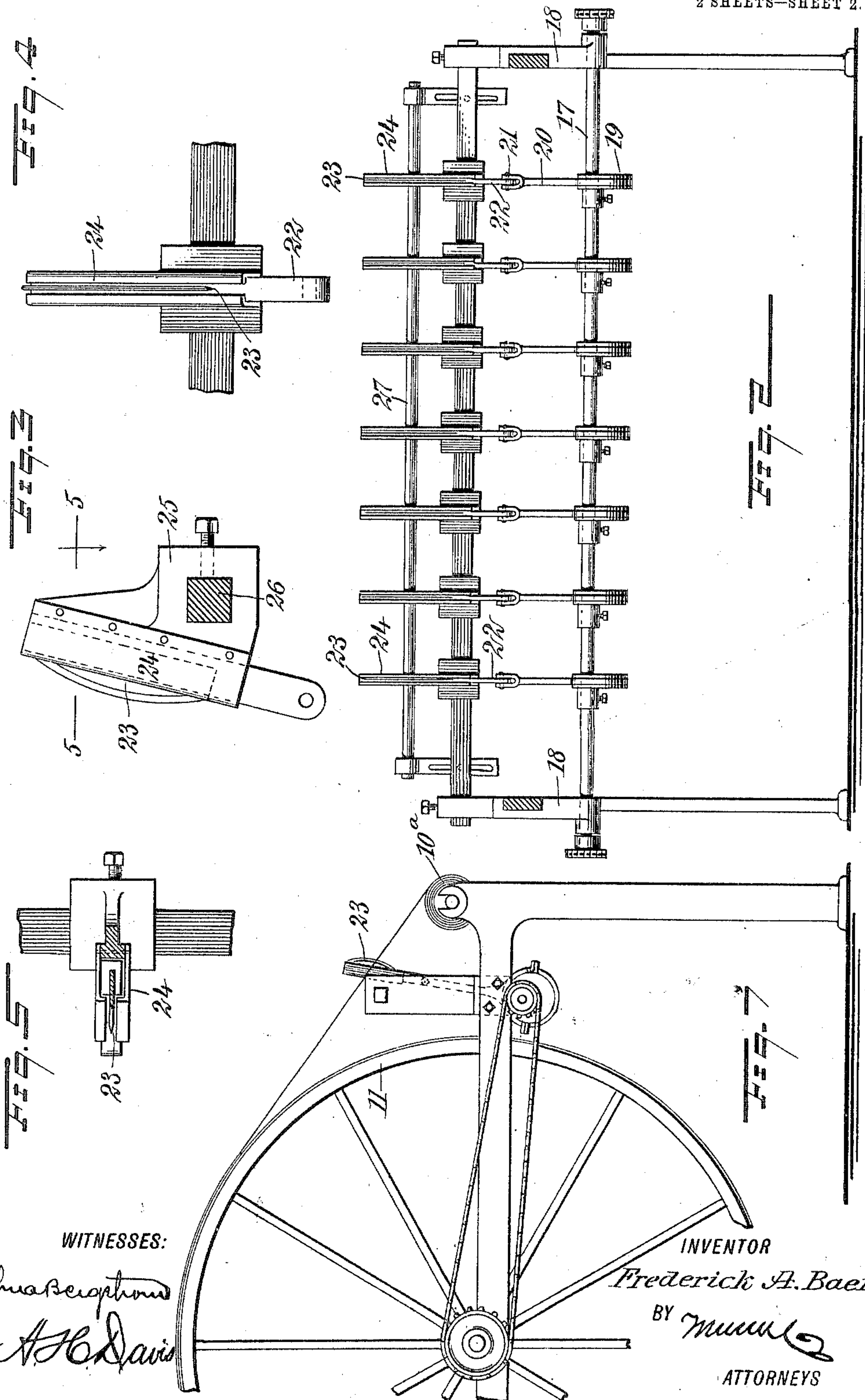
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UNITED STATES PATENT OFFICE.

FREDERICK ALBERT BAER, OF PATERSON, NEW JERSEY.

BEAMING-MACHINE.

No. 811,358.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed April 26, 1905. Serial No. 257,475.

To all whom it may concern:

Be it known that I, FREDERICK ALBERT BAER, a citizen of the United States, and a resident of Paterson, in the county of Passaic and State of New Jersey, have invented a new and Improved Beaming-Machine, of which the following is a full, clear, and exact description.

In the manufacture of printed ribbon it is customary to weave "picks" or short-length threads into the warp to hold the same in position to receive the printed impression, after which the warp is washed, dried, or otherwise treated and then taken to a beaming-machine, where it is wound on beams preparatory to placing it in the loom for the weaving operation. Heretofore it has been customary after the printing operation to cut the picks out from the warp before weaving the ribbon. This is usually done by an operator with a scissors, and considerable loss results from accidental injury to the warp.

It is the essential object of my invention to provide means for automatically cutting out the picks as the warp is beamed, leaving only short lengths in the warp, which may be readily removed by the weaver. In attaining this end I prefer to provide the beaming-machine with a number of automatically-operating knives, which run between the warp-threads and as the picks approach the knives serve to sever the same.

Reference is to be had to the accompanying drawings, which illustrate, as an example, the preferred manner of carrying out my invention, in which drawings like characters of reference indicate like parts in the several views, and in which—

Figure 1 is a side elevation of the beaming-machine equipped with my improvement. Fig. 2 is a sectional elevation on the line 2 2 of Fig. 1, showing a series of knives in position for cutting the picks. Fig. 3 is an enlarged side elevation of one of the knives and its sheath. Fig. 4 is a front elevation of the same parts. Fig. 5 is a sectional plan on the line 5 5 of Fig. 3. Fig. 6 is a view showing the printed warp with the picks therein and indicating the positions of the knives in cutting the picks, and Fig. 7 is a fragmentary elevational view showing the application of the invention to a horizontal warper.

As shown in Fig. 6, the warp-threads *a* are connected and held together during the print-

ing operation by means of the picks *b*, which are threads of any desired material woven in between the warp-threads.

In Fig. 1, 10 indicates the shell or beam on which the warp-threads are wound after the printing operation, and 11 indicates the various shells or beams on which the warp is wound by the beaming-machine, after which the beams 11 are removed from the beaming-machine and placed in the loom. The warp is drawn from the shell 10 to the shells or beams 11 by a suitable driving-gear (not shown) rotating the beams 11. 12 indicates the prime mover of this gearing. Attached to the prime-mover shaft 12 is a sprocket 14, over which a chain 15 runs. This chain also passes around a sprocket 16, attached to the shaft 17. The shaft 17 is revolvably mounted on hangers 18, depending from the frame of the beaming-machine, and said shaft carries a number of eccentrics 19, the rods 20 of which are pivoted, as indicated at 21, to the tangs 22 of knife-blades 23. These blades are arranged with their edges facing the beam 10 and are held in relatively slender sheaths 24. Said sheaths are carried by slides 25, which are adjustably supported on a beam 26, extending across the frame of the beaming-machine under the plane of movement of the warp. 27 indicates a roller, which is located behind the knives to support the warp in its movement.

The knives and their sheaths project up between the warp-threads, as is indicated best in Fig. 6. As the warp is drawn along toward the knives these knives, reciprocating continuously, are engaged by the picks and sever the same into short lengths. The warp then passes off to the various beams 11 and is ready for weaving. In the weaving operation the weaver may easily remove the short lengths of the picks remaining in the warp. The sheaths 24 fully protect the warp-threads from the knives, so that injury to the warp is not possible, while the exposed blades 23, moving continually across the path of the picks, incidentally sever the picks as they engage the blades.

The arrangement shown in Fig. 7 differs in no essential particular from that shown in the other views. In this view the knives 23 are mounted the same as before described and are placed between the beam or shell 10^a, bearing the warp and the beam 11, on which

the warp is wound, so that as the picks approach the knives they are severed in the manner before described.

I also desire it understood that my invention is not limited to the specific applications illustrated, but that the automatically-operating knives may be employed in connection with any machine where the warp with the picks therein is wound upon a shell or beam.
10 Having thus described the preferred form of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with the beam for discharging warp-threads having picks therein
15 and a plurality of reels for receiving the warp-threads, of a plurality of knives extending between the threads of the warp, and means for reciprocating the knives.

2. The combination with the beam for discharging warp-threads having picks therein
20 and a plurality of reels for receiving the warp-threads, of a plurality of knives extending between the threads of the warp, and means for reciprocating the knives in a direction substantially perpendicular to the travel of the warp.

3. The combination with the beam for discharging warp-threads having picks therein and a plurality of reels for receiving the

warp-threads, of a plurality of knives extending between the threads of the warp, means for reciprocating the knives, and means adjacent to the knives for supporting the warp. 30

4. The combination with the beam for discharging warp-threads, having picks therein and a plurality of wheels for receiving the warp-thread, of a plurality of sheaths extending between the thread of the warp, knives within the sheaths and extending
40 therebeyond, and means for reciprocating the knives. 35

5. The combination with a means for winding or beaming warp-threads having picks therein, of a supporting-bar, a slide adjustably carried thereon, a sheath carried by the slide, a knife fitted in the sheath and having its edge projecting beyond the same, and means for driving the knife, said sheath and knife being adapted to fit between certain of
50 the warp-threads to cut the picks therein. 45

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK ALBERT BAER.

Witnesses:

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WAYNE DUMONT.