My invention relates to paper making machines and it is an object of my invention to provide a machine of this kind in which the rails of the shaking frames are divided and are shaken differently.

In the new machine the Fourdrinier wire or wire cloth is so guided by clamping means arranged at a short distance from the connection of those rails which are shaken differently that the wire cloth is compelled to follow the shaking motion of the rails. Preferably, these means comprise a roll arranged below the wire cloth and extending across the entire width thereof, and two comparatively narrow rolls which only engage the marginal portions of the wire cloth so as not to interfere with the pulp which passes between them.

In the drawings affixed to this specification and forming part thereof, a machine embodying my invention is illustrated diagrammatically by way of example.

In the drawings

Figs. 1 and 2 are a diagrammatic elevation and plan view, respectively,

Figs. 3 is a cross-section on the line 3—3 in Fig. 1, viewed from the left, and

Fig. 4 is an elevation of the clamping device, both the last figures being shown on a larger scale.

Referring to the drawings, the Fourdrinier wire or wire cloth, moves in the direction of the arrows in Figs. 1 and 4 and is supported by table rolls which are carried on frames constituted by pairs of register bars 1, 1 and 2, 2, the register bars being connected by pins 15 or other suitable means and made tubular in order to save weight.

The front register bars 1, 1 are shaken in parallel and may be connected by transverse and diagonal stays in the usual manner said front register bars being reciprocated by means of a device generally indicated at 1'. The rear bars 2, 2 are arranged for rocking motion about pins 9 and 10 on brackets 5, 5 as indicated in dotted lines, so as to effect the compensating shaking motion. Preferably the registering bars 2 are connected by transverse stays, which however must be pivoted to the bars so as not to interfere with their rocking motion.

Pulp is delivered to the wire cloth 4 from a device comprising the usual deckle strap 14 and a wire cloth 15 which delivers the pulp to the Fourdrinier wire 4 at the front end of the machine.

The clamping device as shown in Figs. 3, 4 comprises a roll 11, preferably a solid rubber roll, which rotates about trunnions 11', 11' carried in the rails 1, 1 and narrow rollers 12, 12 above and on either side of the sieve 4, the shaft 13 of which is carried in brackets 13' secured to the rails 1 as will be seen in Fig. 4. The pulp 14 is narrower than the wire cloth so that the rollers 12 do not interfere with it.

The novel clamping device effects a good transfer of the pulp from the frame 1, 1 which is shaken in parallel to the rocking frame 2, 2 the wire cloth being compelled to partake in the motion of the rails. This prevents undesired deviations of the wire cloth which would interfere with the action of the suction boxes. Consequently in my novel machine the water marks will be clearly defined in any part of the pulp.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

I claim:

1. Paper making machine comprising a wire cloth pivotally connected shaking frames, means for supporting and guiding said wire cloth along said frames, means for imparting to said frames different shaking motions and means carried on one of said frames for positively connecting said wire cloth to said frame, said connecting means being arranged at a short distance from the connection of said frames.

2. Paper making machine comprising a wire cloth, pivotally connected shaking frames, means for supporting and guiding said wire cloth along said frames, means for imparting to said frames different shaking motions, said means comprising a roll extending all over the width of said wire cloth and adapted to rotate in contact with one side of said wire cloth and a pair of concentric rolls adapted to rotate in contact with the other side of said wire cloth, said roll and said concentric rolls being arranged on one of said frames and said concentric rolls being spaced apart a distance substantially equal to the width of the web of paper pulp on said wire cloth.

In testimony whereof I affix my signature.

PAUL ERKENS.