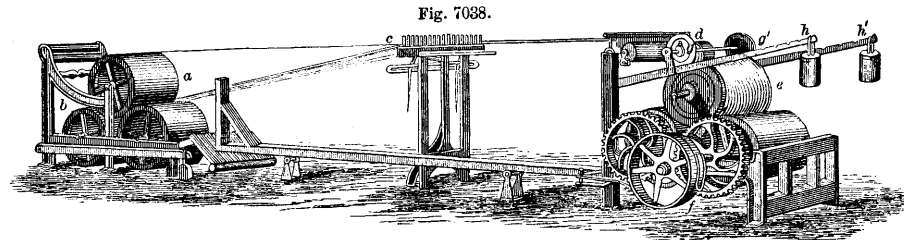


Warping-machine. (*Weaving.*) A machine for *beaming*, that is, laying flat and parallel on the *yarn-beam* the threads of which the warp is composed.

In that illustrated, the yarns, having been first wound from the spindles upon a cylinder *a*, this is transferred to the frame *b*, its journals resting in bearings on the upright standards of the frame, and the mass of warp-threads pressing on the surfaces of two large anti-friction rollers beneath. The yarns divided into sets are passed between the teeth of the separator or *ravel* *c*, and each thread is separately conducted between two adjacent teeth of a second *ravel* *d*, and finally secured to the roller or *yarn-beam* *e*. This rests upon two rollers, caused to rotate in the same direction by gear-wheels engaged by an intermediate pinion on the shaft of the pulley *f*; these carry round the yarn-beam, which withdraws the threads from the roller *a*, winding them upon itself; it is held down and its longitudinal motion prevented by two narrow rollers *g g'*, which bear against a circular projection at each of its ends, and rotate on a common axis journaled in standards upon the pivoted levers *h h'*, which are weighted so that any requisite pressure may be given to the yarn-beam. These contrivances give the minimum amount of friction, equalize the strain, and lessen the danger of rupturing any threads. See also next article.



Warp-Beaming Machine.