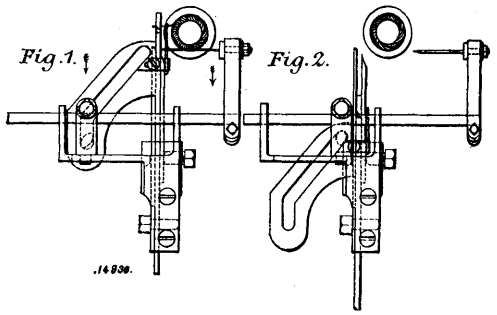
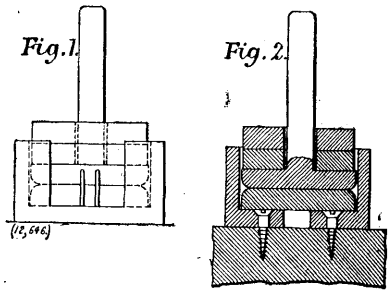
TEXTILE MACHINERY.

14,936. W. and D. McGee, Paisley. Yarn Balling Machine. [5 *Figs.*] July 20, 1899.—In machines for winding yarn or thread into balls, and with the object of providing in conjunction with the thread-cutting mechanism of such balling machines mechanical appliances for drawing the cut end of the thread within the convolutions of the ball before the latter is removed from the winding spindle, there is secured upon the bracket support of the thread cutter provided for each ball spindle, a guide wherein is fitted to slide crosswise a rod or bar carrying adjustably thereon a needle provided with an eye, and bent or directed towards the cutter. The bar with the needle is reciprocated or pressed inwards by a wedge or cam piece carried by the sliding cutter bar, which is actuated in the usual way from a hand-lever, and upon the sliding cutter is secured a hook or crochet needle which, as it moves forward with the cutter bar, is arranged to enter the eye of the bent needle. In operation, when the thread ball has been wound the cutter is actuated by the hand lever to cut the thread, and by the movement of the cam piece thereby effected the bent needle is pressed through the outer convolutions of the ball thread. The crochet hook then passes through the needle eye, whereupon the flyer of the balling machine is moved round to lay the



thread across the hook, which, on being drawn back on the return movement of the cutter mechanism, engages the thread as it is cut, and draws the cut end through the eye of the needle. The movements of the needle and hook being timed, the needle is then retracted and draws the cut end of the thread with it through the outer thread convolutions, and leaves it in the ball just before the latter is doffed from the winding spindle. One of the ball ending appliances is provided for each winding spindle, and they are all operated simultaneously by the hand lever which operates the cutters. (*Accepted August* 29, 1900.)

12,646. R. F. and J. Alexander and Co., Limited, and J. Mackie, Glasgow. Tension Devices. [3 *Figs.*] July 13, 1900.—Tension devices for machinery in which thread is wound, are, for the purpose of preventing accumulation of grit or



refuse upon them from the thread, arranged so that the discs through which tension is applied are rotatable within a frame, the upper disc carrying a pin upon which perforated disc weights may be placed to increase the tension of the thread. (*Accepted August* 22, 1900.)