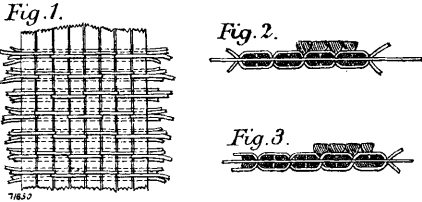


of any obstruction meeting the rod or guard during the "beat up" the guard will at once fold up without damage either to itself or to the obstruction which it met. (Accepted July 11, 1900.)

TEXTILE MACHINERY.

17,650. W. H. Smith and T. Cooper, Kidderminster, Worcester. Pile Carpets. [5 Figs.] August 31, 1899.—According to this invention Axminster or tufted pile carpets are manufactured in the following manner: Two straight or tight warps and two binding or slack warps and four rows of weft are used, two rows of weft above and two below the tight warps, the crossings of the binding warps being arranged so as not to coincide, that is to say, the crossings of each pair of binding warps are opposite or coincident with the



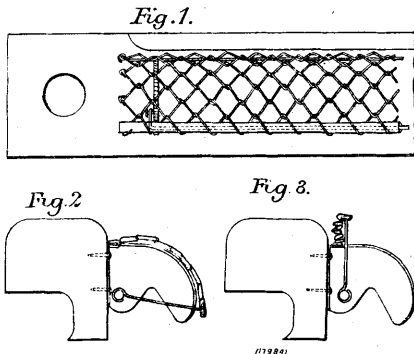
sheds of the adjacent warps. To weave a carpet of this kind cams are employed so constructed as to produce a stitch with four shots of weft to two rows of pile to the warp threads in each dent of the reed of the loom. Five cams are employed, four working the binding warp threads, the fifth working the straight or tight warp threads. The cams are driven by gearing from the main shaft of the loom. It is stated that "by manufacturing Axminster or tufted pile carpets in the way described the rigidity or inflexibility and strength of the carpet are increased and the carpet thereby improved." (Accepted July 4, 1900.)

7432. J. W. Cook, Manchester. Ring Spinning Traveller. [2 Figs.] April 23, 1900.—Travellers used in ring spinning as ordinarily constructed are formed from flat wire of a certain shape so that they can be slipped over the flange of the ring. The tips or ends of the traveller which come into contact with the inner and outer surfaces of the ring respectively are at right angles to the edges of the traveller and are of the same width as the body, the result being that when the traveller is drawn round the ring considerable friction is set up which neces-



sitates the employment of a lighter traveller than would be otherwise usable. It is also well known that in commencing spinning the corner of the traveller when of ordinary shape sometimes catches on the ring and leads to breakage of the end of the thread being spun. By shaping the tips or ends of the travellers like a V as is shown in the drawings, so that only the point of the V comes into contact with the ring, it is stated that friction is reduced and that travellers so constructed start well, a heavier size being usable for any specific yarn than if the rings were made in the ordinary manner. (Accepted July 11, 1900.)

17,984. J. Taylor, Cloughfold, Lancs. Shuttle Guard. [3 Figs.] September 6, 1899.—Hinged to each end of the slay is a light metal rod extending the length of the shuttle race, and this rod works over one or more guides forming supports. Fixed to the top edge of the slay is one edge of a collapsible metal



net, the other edge of such net being fixed or connected to the metal rod. The guides have recesses or hollows near the top and in these recesses the collapsed net and rod rest when the guard is folded close to the slay, but when the net is extended over the whole of the shuttle race, in the event of the shuttle rising out of the race it is caught in and held by the net. It is stated that in the event