NOVELTY IN MEN'S WEAR FROM ABROAD. 
Woolen Melton Suiting.

Warp: 3456 ends.
Dress: 8 sections, each containing 54 patterns @ 8 ends, or 432 ends total.

Arrangement of Warp:
1 end 4½ run, black.
3 ends 5 run, white.
1 end 4½ run, black.
3 ends 2 ply, 8 run black and 10 run white.

8 ends in repeat of pattern.

Diameters of Yarns.
The approximate diameter of a given count of yarn may be ascertained by finding the square root of the yards per lb. and deducting 8 per cent for silk, cotton, and linen yarns, 10 per cent for worsted yarns, and 15 per cent for woolen yarns.

(1) The diameter of a 1/40's cotton yarn = \[ \sqrt{\frac{40 \times 840}{100}} - 8 \, \text{per cent} = \frac{1}{16}\,\text{"} \]

(2) The diameter of a 2/60's worsted yarn = \[ \sqrt{\frac{30 \times 560}{100}} - 10 \, \text{per cent} = \frac{1}{12}\,\text{"} \]

It is obvious that if a 1/40's cotton yarn is \( \frac{1}{16}\) of an inch diameter, 168 of such threads can be placed side by side just touching each other in one inch; and, in the same manner, 116 threads of 2/60's worsted. It is convenient to express the diameter of a yarn, not as a fraction of an inch, but as so many diameters per inch (the reciprocal of the diameter). Thus the diameter of a 1/40's cotton yarn may be expressed as 168 diameters per inch, and of a 2/60's worsted yarn as 116 diameters per inch.

Setting of Simple Structures.
Simple fabrics may be divided broadly into three distinct classes, as follows:
(a) Ordinary structures, in which the warp and filling threads bend about equally.
(b) Warp rib structures, in which the filling threads lie straight and only the warp threads bend.
(c) Filling rib structures, in which the warp threads lie straight and only the filling threads bend.

In the ordinary structures the warp threads are separated from each other by the intersections of the filling threads, and the filling threads by the intersections of the warp threads. In the warp and filling rib structures the threads of the straight series are separated by the intersections of the threads which bend, but the latter are not separated by the intersections of the straight threads.

The approximate maximum setting in the loom of square ordinary cloths is found by the formula:

\[ \text{Diameters per inch of the yarn, times number of threads in one repeat of the weave, divided by number of threads, plus number of intersections in one repeat of the weave.} \]

(3) The number of ends and picks per inch in a square plain cloth woven in 40's cotton yarn (see the first calculation) =

\[ 168 \, \text{diameters} \times 2 \, \text{threads} \]
\[ 2 \, \text{threads} + 2 \, \text{intersections} = 84 \]