

Weaving Design.

For Damasc. The particulars are:—16's warp, 16's black alizarine weft, 56's reed, 56 picks; 50 p. c. size; take plain picks and ends round the pattern as required.



The Economy Resulting from Superheated Steam.—Among the papers recently read before the American Society of Mechanical Engineers was an instructive one on the progress made during the past twenty-seven years in the economical use of steam in the engine, by Mr. F. W. Dean. After showing the percentage of saving due to compounding, jackets, economisers, and improved furnaces, he referred to the increasing use of highly superheated steam as a further means of economy. A small "Schmidt motor" has used only 10.17 pounds of steam per indicated horse-power per hour, and it would seem that we have a right to anticipate in the early future a steam rate of 10 pounds by means of superheated steam in the best designed engines. Compared with the lowest rate thus far mentioned, this corresponds to a saving of 11.11 per

cent. We have also in anticipation the use of very high steam pressure and quadruple expansion engines as built experimentally at a Cornell University and described by Professor Thurston last year. If, however steam can be so highly superheated that expansion in one cylinder will not cause condensation, nor even the saturated condition until the moment of exhaust, as was the case in the Schmidt motor, extreme economy may be obtained without resort to the multiple expansion engine. On the supposition that superheated steam can reduce the steam consumption of the best engines of the present time to 10 pounds per indicated horse-power, and that the combined efficiency of boilers and economisers is not affected thereby, there will be a saving effected in the yearly charges of 8½ per cent, as compared with the best plant of the present day.—*Trade Journals' Review.*