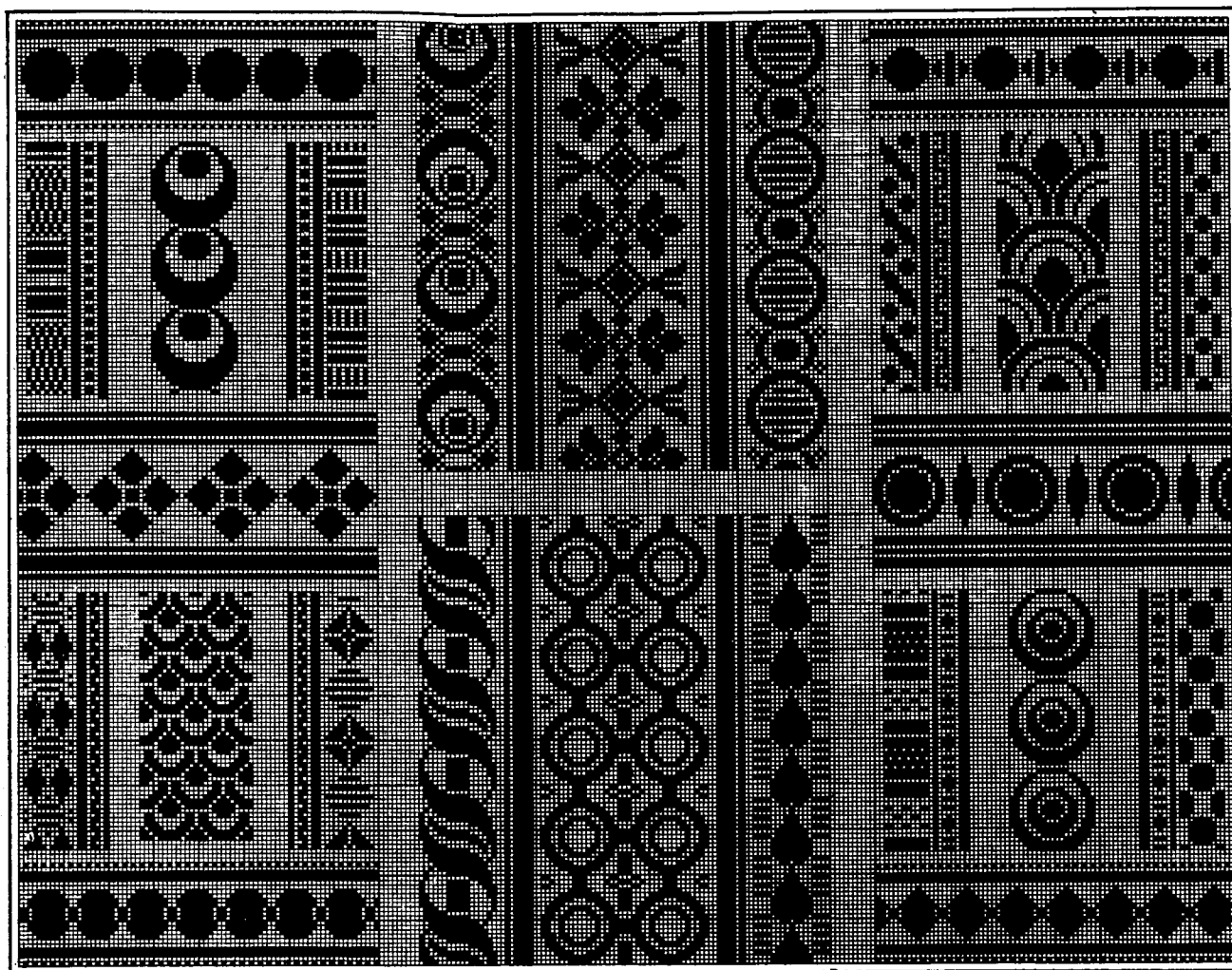


2. It is necessary to avoid drops of water that are liable to form by condensation on the walls and ceiling of the chamber and fall on the goods that are being bleached. These drops are very dangerous, not only because of the dirt they may carry, but because of the sulphuric acid in them, which may burn the silk. In order to prevent the drops from falling on the silk the roof of the chamber is made very steep so that the water of condensation will trickle down instead of falling on the material. It is also necessary for the same reason to have special supports for the silk.

3. It is necessary to take every precaution to keep the silk clean and to prevent its being stained by the substances that are produced during the burning of the sulphur, also to prevent the silk from coming in contact with the supports on which it is placed.

Novelties in Border Designs for Rugs.



A Method of Treating Raw Wool.

Among the impurities present on wool, substances such as lime soaps are generally found, which are insoluble in water, slightly alkaline solutions, and in green solvents, but they readily submit to emulsification. These compounds may, however, be decomposed or destroyed and transformed under the influence of certain acid gases, particularly carbonic acid, preferably previously heated. In the case of the soluble lime soap, the fatty acid becomes separated from the lime,

and in place of the lime soap, soluble substances are obtained which may be easily eliminated. Furthermore, it must not be forgotten that the wool fibre contains an element special to it and what is termed wool grease, or the essential oil of wool. This product is not, however, strictly a grease or oil, it is not a saponifiable fatty acid nor a soluble wax, but a specific element of the wool. It is necessary to remove this grease from the exterior parts of the scales of the fibre, but not entirely without risk of damaging the qualities of the fibre.

In the new method of treatment the wool is treated with an acid gas, carbonic acid or hydrochloric acid, for the purpose of decomposing the saponaceous and other impurities. The decomposition products and other prejudicial products which are soluble in water are removed by washing with cold water and then rinsing with a slightly alkaline solution. The wool is next treated with a fat solvent, preferably one that is not inflammable. The resulting solution is expressed by centrifugal force. The wool is washed with water or a detergent solution, and then dried.

In practice the following is the manner of operating:—The wool is arranged in suitable containers which are placed in a machine with vacuum arranged, such as the machines used for dyeing, and therein treated with carbonic acid gas previously heated to 37 deg. C. After the gas has exerted its action the washing is carried out in the same machine, and the material then centrifuged. A solution of not more than 1 per cent of ammonia in distilled water at a temperature of 40 to 43 deg. C., is then passed into the ma-