

### TEXTILE MANUFACTURING IN MAINE.

The water-power of Maine early attracted the attention of American manufacturers of cotton goods. One of the pioneer mills of the State was established at Brunswick in 1809, another at Wilton in 1810, and a third at Gardiner in 1811. Factories were erected at Saco in 1831, at Lewiston in 1841, and at Biddeford in 1845, while in later years Augusta and Waterville secured large plants. Lewiston is, however, the chief centre of industry, while the twin cities of Biddeford and Saco rank next in importance. At present the cotton mills of Maine are all west of the Kennebec river. They are located, without exception, at the falls of large rivers, and are worked by water-power. The manufacture of cotton goods is the most important industry in the State. The fifteen establishments reported in 1900 gave employment to 13,723 workers or 18.3 per cent. of the wage-earners in the State, and their products were valued at £2,926,217, or 11.5 per cent. of the total value of the products of the State. In 1890 there were twenty-three establishments with 13,912 wage-earners, and products valued at £3,063,381. The decrease in the value of products during the decade was £137,164, or 4.4 per cent.

Wool manufactures in Maine date back to a period some years before the introduction of cotton mills in the State, one of the earliest having been established in that year at Dexter in Penobscot County. Owing to the generally favorable conditions for its growth and development, the manufacture of woolen goods is now carried on in nearly every county in the State, water-power being used. The town of Sanford, in the south-western part of Maine, not far from the New Hampshire line, is the seat of an important branch of this industry, the manufacture of carriage robes, mohair plush, and horse blankets. Wool manufactures rank third among the industries of Maine, with 79 establishments, 7,155 wage earners, and products valued at £1,504,263. There is also one establishment reported for the manufacture of worsted goods, the statistics of which are not available for comparison, being included with those of "all other industries" to avoid disclosing operations of individual establishments. The increase in the value of products during the decade ending 1900 was £1,178,293.

### HYDROCYANIC GAS AS AN INSECTICIDE.

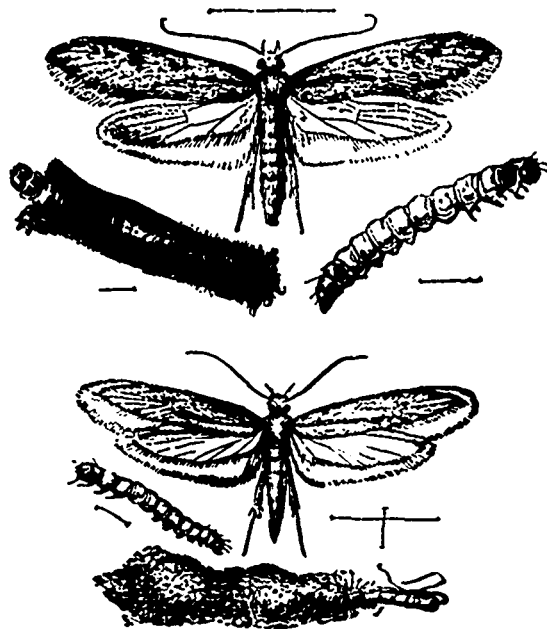
L. O. Howard, chief entomologist of the United States Agricultural Department, sends out a timely and interesting bulletin relating to household insects of all kinds, in which he says: "Good housekeepers throughout the whole United States have frequent occasion to consult entomologists as to the best means of ridding their houses of insects which, through the fact that they have succeeded in accommodating themselves to the conditions of civilization, have become known rather distinctively as insects of the househo'd. The problem is a much more serious one in the South than in the North, yet most of these insects occur in the Northern States as well as in the Southern. In the latter, however, they are apt to be more abundant. Their occurrence in the North is due to the fact that houses are artificially heated in the winter time, thus affording opportunity to breed throughout the entire season. Fleas, cockroaches, house centipedes, ants (especially the little red ant), "silver-fish" or "slickers," book-lice, clothes moths, the buffalo carpet beetle, the black carpet beetle, and the host of insects which affect stored products, and others found breeding in storerooms and pantries, which are carelessly kept by indifferent housekeepers, comprise the principal insects known as household insects."

After discussing the insect question generally, also the

use of rugs and carpets, and the extinction of insect life in the household and on trees and shrubs, Professor Howard asserts that hydrocyanic gas is to-day the most formidable foe of house pests and vermin of all kinds.

#### How to Use the Gas.

The latest development, says Professor Howard, in the use of the gas and the latest development in the warfare against household insects is the use of the gas in houses. Last summer Mr W. R. Beattie, of the Department of Agriculture, conducted certain experiments in a building used for laboratory purposes by the division of botany, which indicated that the dissolving of 0.1 gram of pure cyanide of potassium per cubic foot of space was perfectly satisfactory against cockroaches and other insects. Upon the evening of June 20th, 1901, such an experiment was tried and the gas allowed to remain in the building over night. The following morning the gas had not



entirely escaped, and the house flies, centipedes, spiders, cockroaches and mice were dead, with the exception of a few roaches that had secreted themselves between the sash and frame of a loosely fitting window, and had thus secured enough pure air to prevent them from being killed. Later in the summer, Mr. A. H. Kirkland, a well-known entomologist of Boston, conducted, independently and without knowing Mr. Beattie's results, two striking experiments of a similar nature. One was in a closed house, the inhabitants of which were absent at the seashore, and which was overrun with clothes moths, and the other was in a similar house, which had become infested with fleas, from the fact that flea eggs had been left there in the sleeping places of certain pet domestic animals. Mr. Kirkland used 1 ounce of pure cyanide of potassium to every 100 cubic feet space (a lesser amount is used in green-houses on account of the possible damage to plant foliage). He used ordinary porcelain wash-basins, and, beginning at the top of the house, dropped his cyanide in each basin, running down to the lower floors as rapidly as possible and closing the outer door behind him. Everything in the way of living insects was killed in both of these experiments, and it is interesting to note that in one of them, two English sparrows, which had alighted upon the ridge pole, were overcome by the slight exudation of the fumes from the shingled roof. The houses were opened up the next morning and thoroughly aired.