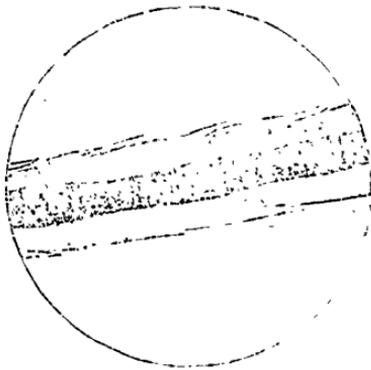


the damage Miss Eaton expected to find an insect of the size of a grasshopper, but found instead only the empty cocoons of the caterpillars of the small Clothes Moth (*Tinea pellionella*, Linn.) shown admirably in the excellent cut (Fig. 1) which has been kindly lent by Dr. C. V. Riley, the U. S. Entomologist. The felting of the ticking was due to the barbed nature of the morsels of feather. The plumules of feathers and the down of many animals when highly magnified are found to be invested with minute barbs, all pointing the same way. The feathers were cut up by the caterpillars of the moths feeding upon them, and the minute barbed portions of the feathers by the movement and shaking of the pillow were brought in contact with the pillow case.



Beaver fur. Magnified 250 diameters.
From Martin's CASTOROLOGIA, p. 132.

These morsels, if short enough, had sufficient rigidity to work their way into the cotton cloth, and were at once fastened there by their own barbs. The value of these barbs in the making of felt is explained in a most interesting manner in Mr. Horace T. Martin's excellent work "Castorologia," where he describes the manufacture of felt from "beaver wool,"

for the shapes of hats, and shows the nature of the barbs or "staple" of this wool by the magnified illustration (Fig. 2), which he has been kind enough to lend us. In this illustration, a hair of beaver wool is shown magnified 250 diameters.

The Clothes Moth *Tinea pellionella*, as well as the other two species of Clothes Moths found in this country, *Tinea tapetzella* with black and white wings, and *Tineola biselliella*, with pale, silvery, fawn-coloured wings, is an immigrant from the old world.

1. *Tinea pellionella*, Linn., in the perfect state, is a small, gray moth, with three or four black spots on the wings. These lie flat over the back. The caterpillar lives in a short, muff-shaped case, which it carries about with it. (Fig. 1).