series of small, round, shallow holes which are often arranged in a straight line. These shallow depressions, and in fact the whole area of the apple which comes in direct contact with the leaf are covered by a white waxy "bloom." This is the fall work of the bud-moth, on the fruit, and is quite common, causing a large percentage of apples which otherwise might have been classed as No. 1's or No. 2's, to be graded as No. 3's. A similar injury, traceable to the same source, is often noted where two apples come into contact with one another while growing on the tree. In either case the injury is done by the larva which lives either between the leaf and the apple as noted in the first instance, or between two apples as described later, feeding on, and to a certain extent tunnelling under the skin of the fruit.

With the approach of cold weather in the fall, the larva seeks a protected place and there hidden away in a crevice or crack, or concealed under a bud scale or other sheltering object, it commences to weave about itself a delicate silken cell A very interesting fact in connection with this nest-building is that when the shelter is about half completed the larva moults, and as if anxious to conceal the fact from curious investigators, builds the old exuvia into the wall of the hibernaculum by spinning a second layer of silk between its body and the cast skin. It is also interesting to note that after the nest is completed, the larva lies with its posterior end towards, and anterior away from the ecdysed head.

In 1915, the first larva was seen hibernating on August 26 and on October 20 the last larva was found among the foliage. In other words, it took 55 days for all the caterpillars to hibernate.

To find out the percentage of bud-moth larvæ in their winter quarters at different dates during the hibernating period, counts were made and the results tabulated as follows:—

1915.	Percent of Larvae in Winter Quarters.
September 29	13·6
October 7	76·7
" 9	72·2
" 13	82·1
" 15	96·3
" 17	94·6
" 20	99·1

In order that the reader may see how a drop in temperature accelerates the hibernation of the larvæ, a daily record of minimum temperature between September 29 and October 20 is given below:—

1915.	Minimum. Temperature.
September 29	45° F.
" 30	40
October 1	38
" 2	26
" 3	42
" 4	43
" 5	29
" 6	53
" 7	40
" 8	52
" 9	52
" 10	45
" 11	37
" 12	35
" 13	32
" 14	41
" 15	52
" 16	27
" 17	33
" 18	28
" 19	37
" 20	52