TABLE OF AMOUNTS.

HEIGHT OF TREE.	DIAMETER.	CYANIDE.	ACID.	WATER.
Feet.		Grams.	Ounces.	Ounces.
4	3	6.17	0.32	0.48
5	4	12.82	0.67	1.00
6	4	18.85	1.00	1.50
7	4	26.75	1.41	2.11
		Ounces.		
7	5	1.11	1.66	2.49
8	4	1.30	1.95	2.92
8	5	1.50	2.25	3 39
9	5	1.96	2.94	4.41
9	6	2.24	3.36	5.00
10	7	3.20	4.80	7.20
10	8	3.62	5.43	8.14
11	7	3.95	5.92	8.88
11	8	4.40	6.60	9.90
12	9	5.88	8.82	13.23
12	10	6 51	9.76	14.64
13	9	6.93	10.39	15.58
13	10	7.65	11.47	17.20
14	11	9.76	14.64	21.96
14	12	10.65	15.97	23.45
15	11	13.28	19.42	29.88
15	12	14.24	21.36	32.04
16	14	16.34	24.51	36.76
16	15	17.53	26.27	39.43
17	14	18.39	27.57	41.35
17	15	19.36	29.40	44.23
18	15	22.06	33.09	49.63
19	16	26.10	39.15	58.72
20	16	29.00	43.50	65.25

EXPERIMENTAL OPERATIONS.

In the fall of 1896, I discovered a lot of badly infested trees of various varieties in young orchards and nurseries, and decided to make a thorough test of the hydrocyanic acid gas treatment. Accordingly, the trees were selected for the work, and the experiments begun in March, 1897. The outcome of these tests show:

(1). That young trees, either from the nursery or orchard, can be fumigated without injury to the tree.

(2). That the San Jose scale can be completely destroyed, the only requisites necessary being a good, tight room, box or tent, constructed for the purpose, and the chemicals.

Young Trees:—The following experiments were made upon young trees direct from the nursery or from young orchards of one year's standing. All the trees in these experiments were treated in a fumigatorium, especially constructed for that purpose. The room was 4x7x7½ feet.

No. 1—Four Angouleme pear trees, literally covered with San Jose scale, discovered in one year old orchard November 18th, 1896, were

taken up and fumigated March 22d, 1898, for thirty minutes with two ounces cyanide, three ounces acid, and four and one-half ounces water. Planted near my house April 3rd. Made excellent growth during the summer, and not a living scale has yet been discovered upon them. Examination made once a week. Old scales most all washed off. Pits and scars still present. April 1st, 1898, trees making beautiful growth and no live scale.

No. 2—Three Lawrence pear from a nursery, treated same day and planted under same conditions as No. 1. Trees were very badly infested with scale. Examined every week during the summer and fall of 1897, and not a living scale has yet been detected. Trees made a beautiful growth.

No. 3—Six Garber pear trees from young orchard, originally from a southern nursery, treated like Nos. 1 and 2, and at the same time. Trees planted April 4th, 1897, and watched closely throughout the summer and fall. Not a living scale found. Trees also critically examined in January, 1898, when the foliage was off, but no live scale could be found, and most of the old scales had become detached, leaving the bark pitted and marked.

No. 4—Two Clapp's Favorite pear trees from the nursery row treated at the same time and like the three preceding. Trees planted April 4th, 1898. These trees were also moderately infested with scale. Results same as the foregoing.

No. 5—Two Abundance plum trees from a young orchard of one year's standing, very badly infested, treated as the above. Planted April 5th, 1897. Both made excellent growth and no living scale has yet been discovered on them.

No. 6—Four Ben Davis apple trees, two from a one year old orchard and two from a nursery. Treated as above April 5th, 1897. Planted April 7th. Those from the orchard were very badly infested, the trunks and larger branches being literally encrusted with scale. No living scale found any time during the summer or winter months. Trees made good growth.

No. 7—Consisted of miscellaneous lot of nursery stock as follows: 2 Wheatland peach; 4 Oldenburg and 3 Winesap apple; 2 Early Purple cherry; 2 Burbank, 1 Ogon and 4 Satsuma plum; 2 Standwick nectarine and 1 Prunus pissardi. All these varieties were badly infested with scale, and were fumigated together for thirty-five minutes, September 24th, 1897. The amount of gas generated was the same as in the preceding. All these trees were set out and watched carefully, and not a single living scale has yet been discovered.

St. Margarets:—A series of experiments were begun at this place March 4th, 1898, upon peach trees one year from the nursery, which were badly infested with the San Jose scale. The trees were grown by the owner, A. A. Stinchcomb, as already cited on page 21. The object of the experiment was to ascertain whether or not an ordinary room in a frame building with lath and plaster could be used successfully for fumigating purposes. The building was a small, frame structure, 16 feet square, divided into two rooms, each 7¾ feet wide, 15¼ feet long and 7¼