

A Chinese Professor's Contribution to Scientific Sericulture.

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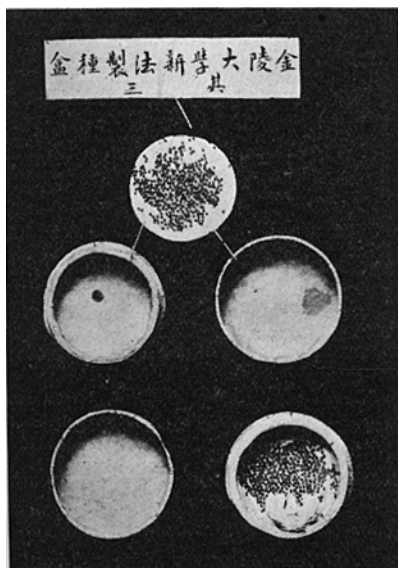
By John H. Reisner

Professor C. L. Chien, head of the department of Sericulture in the University of Nanking, may be considered as one of the outstanding Chinese authorities on the problems of raw silk production in China. He has been active as a teacher, investigator, writer, and originator of a number of mechanical devices which should contribute greatly to the improvement of raw silk culture. He is a graduate of the New York State College of Agriculture and took his Master's degree in horticulture and plant breeding at the same institution.

As a writer on silk problems Professor Chien is very well known, his most widely published article being on the "Abolishment of Existing Laws regulating

are provided to him, and he is expected to produce cocoons from such eggs as his share of responsibility in improving raw silk production. An increase of five to ten dollars per picul for the larger and stronger cocoons will not necessarily solve this problem.

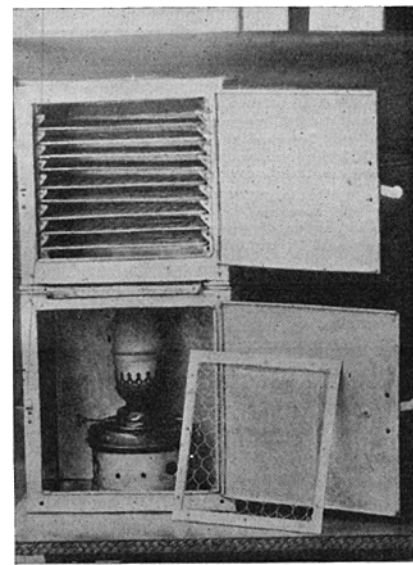
Attention must be called to several inventions and devices which have been worked out by Professor Chien. The provision for a cheap incubator will make it possible to do away with the present system of wearing the egg card around the body. It will be more sanitary by providing better conditions of light and air. The silk worm egg-laying box, a cut of which is produced herewith, combines the best features of the European and Japanese egg-laying devices. It guarantees



EGG LAYING BOX.

Cocoon Shops in Kiangsü Province" (Shanghai District) for which he had agitated. The laws gave undue advantage to the cocoon buyers as against the interests of the farmers.

As an investigator Professor Chien made valuable contributions in the study of silk worm diseases, raising summer crops from cold storage eggs, studies in efficiency with which various varieties of silk worms utilize their foods, the purifying of silk worm varieties and effect of hybridization between certain of the Chinese varieties of silk worms. There is not space enough to go into the details of this work, except to mention one study which to me is most suggestive and is of great practical value. This study had to do with the determining of efficiency with which various varieties of silk worms utilized their food. Of nineteen varieties used in the experiment the variety utilizing its food most efficiently produced 135 grams of silk as against 42 grams for the variety which made the least efficient use of its food. In other words, it was shown that one of these nineteen varieties produced over three times as much silk with the same amount of food as the poorest of these varieties. The mulberry leaves available to the farmer constitute in largest part his working capital and the farmer's interest must be safe-guarded when certified disease-free eggs



INCUBATOR DEVISED BY PROFESSOR CHIEN.

the individual features of the European paper bag, keeping the moth and eggs together until the microscopic examination has been made, eliminating so far as is mechanically possible chances for making mistakes, and makes possible at the same time the use of the egg-card, so commonly used in Japan and also in China, to which the European bag method is not well adapted. Because of its low cost and simplicity and practicability there is every reason to believe that this new box will be widely used in China in the production of certified silk worm eggs free from *Peribone*. In addition Professor Chien has devised a silk worm rearing case particularly adapted to pedigree breeding, a new cocoonage, and a drying oven for slides in connection with the microscopic examination of moths.

Professor Chien is above everything else a good teacher, who not only knows how to impart knowledge understandingly to the students but who can inspire them as well—an important qualification when one considers the present condition of Chinese raw production and the amount of work that will have to be done before it can be put on a proper scientific basis, or on the basis that has been attained in France, Italy or Japan, as it must be placed if China is to continue as one of the great world raw-silk producing countries.

(Continued on page xxvi.)

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(Continued from page 68.)

together, and it should be mentioned that in fancy patterns this motion can be greatly extended to cover an inch or more in extent of lap, but these laps have the disadvantage of having to be retraced; that is, when a guide bar has moved a certain distance to the right, it must return again to the starting point by a corresponding series of laps towards the left until the starting point is again reached.

This is in some respects a disadvantage, in that the usual type of pattern has a zig-zag character in the direction of the length, although certain means may be taken to break up these effects by bringing back the guide bar to the start all at once instead of at succeeding laps. This tends to become monotonous unless the work of designing the patterns is in the hands of one

who thoroughly understands the capacity of the warp loom. Such a designer and colorist will find in this machine ample scope for originality and will produce each season a range of fabrics which will attract a ready market and achieve a place of their own on account of their special features and characteristics which are so different from those of other textile products.—Wm. Davis, M. A.

CONTRIBUTED TO SCIENTIFIC SERICULTURE.

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Finally, Professor Chien understands full well that for scientific knowledge in sericulture to affect in a practical way the production of raw silk in China, it is necessary to bring such knowledge to the Chinese farmers, through the production and distribution of disease-free eggs and high grade mulberry trees. Such knowledge is being made available to the Chinese farmers through short courses and through extension exhibits and lectures in the silk-raising villages. These two most important tools of improvement, disease-free eggs and mulberry trees are being provided in as large a measure as the present limited facilities of the University will permit and with the co-operation of the International Committee for the Development of Sericulture in China. It appears trite to say, although the fact is not always appreciated, that it is most largely through the efforts and in the hands of such men as Professor Chien that the larger problems in the improvement of silk production rest, and it seems to me it is up to us who are interested in the improvement of raw silk in China, whatever our interest in it may be, to provide facilities and encouragement for the larger development of the work he is accomplishing.—*The Silkworm.*