

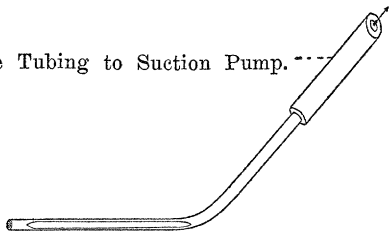
Florida, Wisconsin and Kansas. Recently silver scurf has been reported from Oregon⁴ and Washington.⁵ It has been very difficult to trace the introduction of this disease into Utah for the reason that the potato growers are not always informed as to the source of their seed tubers. In most cases the seed was said to have been purchased from other points within the state of Utah, but in some instances it was definitely ascertained that the seed came from Idaho. It is certain, therefore, that seed planted on new soil, with the resultant crop developing the disease, must have been infected previous to being planted. The writer believes that the silver scurf disease of the potato is widespread throughout the intermountain states particularly in Utah and Idaho. P. J. O'GARA

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A SIMPLE DEVICE FOR COUNTING SEEDS

In preparing tests of seed germination a great deal of rather monotonous work is required in counting the seeds. The device to be described was worked out to obviate part of this labor, and has proved very efficient in our seed laboratory. In the hope that it will save valuable time for other workers in this field the following description is presented.

Pressure Tubing to Suction Pump. ---



The seed counter is made from a piece of brass or copper tubing 20 cm. in length and about .5 cm. in diameter. This is bent in the middle at an angle of 45° and then on one

⁴ Bailey, F. D., "Phytopathology," 4: 321-322, August, 1914.

⁵ Rees, H. L., *Western Washington Experiment Station Bulletin*, 1: 15-16, 1914.

side filed almost paper thin for a distance of 8 cm. At intervals of .7 cm. on this flattened side ten holes of suitable diameter are punched with a needle and hammer. One end of the tube on the side nearest the holes is sealed with solder or sealing wax, and the other end is connected by .5 cm. rubber pressure tubing to a small Richards air pump.

The seeds to be counted are placed in a flat tray and the pump started. The suction through the fine openings holds the seeds in lots of ten to the tube, which are removed by a flick of the finger. In case more than one seed adheres to a hole the extra ones can be quickly removed by tapping the tube, or with the finger. It will be found advisable to have tubes made up with various sizes of holes, one for small seeds such as tobacco, with openings as small as can be made with a No. 7 needle; one with medium-sized holes of .5 mm., which are best adapted to seeds of the size of radish, clover, etc., and one with holes of 1 mm. in diameter. Seeds with a very rough exterior such as beet seed do not lend themselves well to this method of counting as the surface is too uneven to be held by the suction. Large seeds—beans, peas and corn for instance—are too heavy to be held by the suction produced by the small Richards pump, but there is no doubt that with a stronger suction such as that produced by a vacuum cleaner this method could be used in counting these heavier seeds.

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THE JOURNAL "ISIS"

TO THE EDITOR OF SCIENCE: I beg to call your attention to one of the incidents of the war which is likely to be overlooked in the midst of all the excitement of daily battles and the destruction of life and property. I refer to the devotion to scholarship, to duty, and to educational ideals shown by Dr. G. Sarton, of Wondelgem-lez-Gand, editor of *Isis*, in continuing the publication of this im-

portant journal in spite of the invasion of his city and country, and under circumstances that must be most trying. *Isis* was founded in 1913, its purpose being to consider the historical development of all the various human disciplines, a field not covered by any other publication. It appears about four times a year, is edited in a dignified and thoroughly scholarly manner, and takes rank with the best scientific periodicals of the day. Its articles appear in the four languages of the various international congresses, but the editorial matter is in French. It should have place in every general reading room, and particularly in the libraries of all institutions of higher learning.

It occurs to me that this is the time of all times to encourage a Belgian scholar of international standing, struggling to continue so important a publication. I have been glad to send my own subscription in advance, and I shall be glad to forward such subscriptions as may be sent to me. The price is \$3 a year (\$6 for Vol. I.) and if one should wish the journal from the beginning, \$12 would pay for the back numbers and one year in advance.

I undertake this work merely to help a worthy cause, but without any personal guarantee as to the effect of the war upon the enterprise. I have been glad to send my own money, and I hope others will join in the worthy cause.

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SCIENTIFIC BOOKS

Anesthesia. By JAMES TAYLOR GWATHMEY, M.D., and CHARLES BASKERVILLE, Ph.D., F.C.S. New York and London, D. Appleton and Co. 1914. Pp. xxxii + 945. Illustrated.

The subject of anesthesia in surgical operations has attracted the attention of medical men and others for three quarters of a century. Between 1840 and 1850 the successful use of ether was introduced in this country, and of chloroform in Great Britain. Although other substances were soon after recommended for general anesthesia, some of

which came into limited use, these two well-known liquids have remained the standard agencies for the production of insensibility to pain in operations practically down to the present time.

In recent years, however, there has been a widening of the field, largely because of new discoveries and the introduction of local anesthetics to supplant, in many cases, the earlier ones with profound general effects. A voluminous literature has been accumulating, not only in the way of papers, but also in the form of longer treatises. Most of this has been of interest to medical men only and has been written for those engaged in some field of medical or surgical work.

But in this country the whole subject of anesthesia has become of more popular interest, as witness the discussions in the monthly magazines, and even in the daily press, on the subject of the "twilight sleep" in its relations to midwifery. At the present time the newspapers bring us many accounts of the difficulties of surgery on the European battlefields, where the supply of ether and chloroform is sometimes insufficient for the needs. Medical men and laymen alike have been ready for a discussion of the whole subject of anesthesia along somewhat broader lines than obtained in the past literature, and such a discussion is found in the work which is the subject of this review. The authors bring a wide range of experience to the task. One of them is a specialist who has done much to perfect the technique of the administration of certain anesthetics, and who has been one of the foremost advocates of the proposition that the administration of an anesthetic is in itself an operation calling for special skill and experience, and which should not be turned over to any interne or advanced student who happens to be at hand. The other author is one of our well-known chemists who has had an extended and unique experience in the preparation and the study of the properties of a group of pure anesthetics. He is the author of a number of valuable articles on the subject of pure anesthetics.

The work, therefore, brings evidence of