farmers who plow and sow and reap as their fathers did and who are suspicious of innovations, of book-farming, and of new ideas in general.

It remained for the National Agricultural Department, by a stroke of that common sense which we call genius, to begin the work of 'demonstration' on the farms of farmers who themselves work them. A report has been published by the Bureau of Plant Industry which explains the 'farmers' cooperative demonstration work' done in Texas and Louisiana under the direction of Dr. S. A. Knapp; and that is a pamphlet which seems likely to show a new hope for mankind.

The method of instructing farmers is simplicity itself. A demonstrator goes to a farmer and persuades him to do two or three such simple new things as to prepare his land in the fall or winter, to plow it deep, to practise intensive farming—that is, to cultivate it better—and to select his seed. This pamphlet is made up of reports from these 'demonstrators.' Wherever one farmer has once done these things on a small area under the direction of a demonstrator, the results have caused a change in the general agricultural practise of the neighborhood. The whole problem is to do such work in every neighborhood. These reports contain such remarks as these:

Six years ago an average yield of 30 per cent. of lint cotton was considered very good. Now we often have cotton that yields as high as 38 per cent. of lint. That alone in the cotton crop of the South means a profit of about $30,000,000. (From Palestine, Texas.)

The seed we gave out last season produced from a third to three times as much as the old varieties. At Grosbeck, where 7,000 acres of cotton will be planted this year, a good season will produce 1,000 more bales than the same acreage would have yielded planted in the old way. (From Houston, Texas.)

In 1904 I had to be very careful how I approached a farmer. He would say he cared nothing about our book farming. Now they insist on my going to see them. There is 50 per cent. improvement in our agriculture as compared with a few years ago. (From Shreveport, La.)

The area over which this kind of instruction is carried on has this year been greatly extended. If this be not education that tells, then what is? One philosophical observer of this movement has called it 'the most important work in the world.'—*The World's Work.*

OBSERVATORIES AND ASTRONOMERS OF THE WORLD.

THE Committee of Bibliography and of Astronomical Sciences of the Royal Observatory of Belgium has undertaken to publish a list of the observatories and astronomers of the world. A request for information, in the form of a list of questions, with a model reply relating to the astronomical service at the Uccle Observatory, Belgium, has been addressed to all the directors of observatories. In addition the list will include such astronomers (university professors, amateurs, etc.) who are not attached to any observatory, but are, nevertheless, actively engaged in astronomical research. The information already sent will enable the committee to draw up not only a list of observatories, with their geographical coordinates and the members of the staff, but also a table showing the astronomical activity of the world, thanks to the facts given as to the instruments at the disposal of each institution, the pieces of research undertaken, and the papers published. The directors of those observatories who have not received the question-form, or who have not yet forwarded a reply, as well as unattached astronomers, are requested to send the information desired, as soon as possible, addressed to the chairman of the committee, Professor P. Stroobant, astronomer at the Royal Observatory of Belgium, Uccle, Belgium.

ELIZABETH THOMPSON SCIENCE FUND.

THE 31st meeting of the board of trustees was held at the Harvard Medical School, Boston, Mass., on June 25. The following officers were elected:

President—Henry P. Bowditch.
Treasurer—Charles S. Rackemann.
Secretary—Charles S. Minot.

Professor Bowditch offered his resignation as trustee, since he had now withdrawn from active participation in scientific work. The

trustees expressed their reluctance to accept this resignation, because of the long and valued service of Professor Bowditch, yet they desired to relieve him of burdensome responsibility. It was voted to accept the resignation to take effect when through correspondence a successor has been elected.

The secretary reported that on December 12, 1905, a grant of $1,000 had been awarded to Professor Angelo Mosso for the establishment of an American table at the International Mountain Laboratory, founded by Professor Mosso under the auspices of the Italian government, on the Col d'Olen of Monte Rosa. It was specified that appointments to this table should be made by the trustees of the Elizabeth Thompson Science Fund. Of the sum granted, $500 was received as a special contribution for this purpose from the Bache Fund of the National Academy of Sciences in Washington.

It was voted to close the records of the following grants, the work having been completed and publications made: No. 60, F. Kruger; No. 110, H. S. Grindley; No. 114, W. Rosenthal; and to close upon receipt of publication grant 113, made to S. P. Fergusson.

Reports of progress from the following holders of grants were received:

No. 94. A. M. Reese.
" 96. H. E. Crampton.
" 98. J. Weinzirl.
" 101. T. A. Jaggar, Jr.
" 103. E. Anding.
" 105. H. Kronecker.
" 106. W. Valentiner.
" 107. M. Travers.
" 108. B. L. Seawell.
" 109. A. Nicolas.
" 111. R. Hürthle.
" 115. H. S. Carhart.
" 116. W. Bateson.
" 117. E. Salkowski.
" 118. Th. Boveri.
" 119. J. P. McMurrich.
" 120. E. H. Archibald.
" 121. A. Debierne.
" 122. J. J. Frič and Fr. Nušl.
" 123. E. C. Jeffrey.

No report was received from Professor P. Bachmetjew concerning grant 124.

The treasurer announced that $1,300 was available for new grants. It was necessary to decline several applications which the trustees would have favored if the resources had permitted. The following new grants were made:

No. 126. $250 to Professor L. Cuénot, Nancy, France, for researches on heredity in mice.

No. 127. $250 to Professor E. Wiedemann, Erlangen, Germany, to study the behavior of gases at high temperatures for astrophysical purposes, and to determine their illuminating value.

No. 128. $50 to Dr. L. J. Henderson, Boston, Mass., to study the compressibility of muscle.

No. 129. $50 to Dr. G. W. Hall, Boston, Mass., to investigate the oxidation of glucose and allied substances in the organism.

No. 130. $125 to B. G. Smith, Esq., Ann Arbor, Mich., for the study of the embryology of *Cryptobranchus*.

No. 131. $100 to Dr. F. W. Thyng, Boston, Mass., to complete the study of a human embryo of 13.6 mm.

No. 132. $200 to Professor W. G. Cady, Middletown, Conn., to investigate the electric arc between metallic electrodes.

Final action regarding the application of Dr. H. H. Field, concerning the card catalogue for physiology, was postponed.

Charles S. Minot,
Secretary.

SCIENTIFIC NOTES AND NEWS.

Professor van't Hoff, of Berlin, was elected an honorary member of the German Chemical Society at the recent meeting at Nuremberg.

Lieut.-Colonel D. Prain, F.R.S., director of the Royal Gardens, Kew, and late director of the Botanical Survey of India, has been appointed a Companion of the Order of the Indian Empire.

M. Gernez, professor of general chemistry in the School of Arts and Manufactures, Paris, has been elected a member of the Academy of Sciences, to succeed the late M. Curie.

Jesse B. Mowry, B.S., has been appointed, by Governor Utter, commissioner of forestry for Rhode Island.