

*Instruments fed by cœlostat.*

16-ft. coronagraph	...	...	J. Brooks
42-in. spectrograph	...	...	H. Winkelmann
Telephoto	...	...	H. Winkelmann
Steward (dismounted)	...	...	E. Jeffs

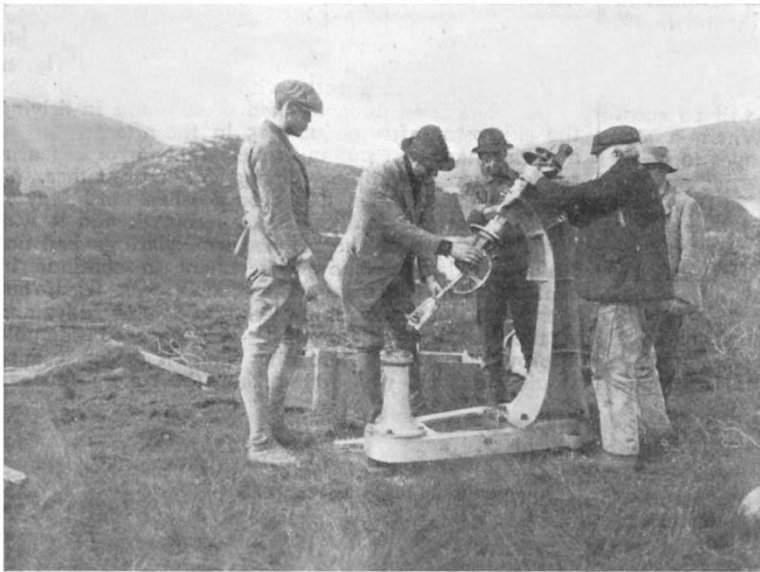


Fig. 2.—Setting up the 21-inch Siderostat.

Figures from left to right—A. Young, F. K. McClean, S. Dowsett, J. Brooks, J. Worthington.

*Equatorial.*

Short's equatorial mount carrying telephoto & Worthington camera	J. Worthington
and	
Time caller	A. Young

"Owing to the resilient nature of the ground, it was found advisable not to allow anyone to move about, and shutters were fitted to the 16-foot and De la Rue coronagraphs, which could be worked from the dark-slide ends. Winkelmann, who has two instruments in his charge, has only a step or two to make, and it is impossible to prevent him moving. In the following programme for the eclipse, the times mentioned are standard time (ten hours east), as given by Dr. A. M. W. Downing, F.R.S., and also local time at Pyramid Rock in the entrance to Port Davey, which is long.  $145^{\circ} 55'$  E. and lat.  $43^{\circ} 22'$  S. As the position of the observatory is long.  $146^{\circ}$  E. and lat.  $43^{\circ} 20'$  S., the eclipse will start a little later, and finish a trifle earlier. The time was again checked on May 6 by Messrs. Brooks and Young, and the chronometer error found."

(Here follows a large table showing the exposures to be made in the various instruments. This is omitted here.)

"Port Davey, May 9, 1910.

"Rain commenced on the afternoon of May 8, and continued steadily all through May 9. No drills were possible. On the night of May 8 the dark slides were filled, and all were taken up to the ob-

servatory on the Monday afternoon, and, in spite of the rain, the instruments were made ready; but exposures were limited to one slide, which was opened at 5 seconds and closed at 200. There was a tremendous downpour during the eclipse, but it cleared a little afterwards. During totality there was a stretch of bright sky on the western horizon, and soon after sunset the clouds dispersed and a bright, starry night followed.

"Immediately after eclipse the barricades were pulled down and the ground prepared for the final packing."

Since the receipt of the above communications both Mr. McClean and Mr. Young have arrived home. They have both suffered from the effects of the hard work and inclement weather, and the former is still in the doctor's hands. While Mr. McClean has had considerable experience in roughing it, he describes his recent work in Tasmania as the most trying that he has yet had to contend with. Nevertheless, his keenness for eclipse work is by no means damped, for he is now looking forward to the eclipse of next year, which will be visible from islands in the Pacific Ocean, and is already commencing arrangements to observe it.

WILLIAM J. S. LOCKYER.

*JOHN B. CARRUTHERS.*

WE regret to have to record the death, at the early age of forty-one, of Mr. J. B. Carruthers, assistant director of agriculture in Trinidad. Mr.



Fig. 3.—Adjusting the Cœlostat.

J. Brooks on the left, F. K. McClean on the right.

Carruthers only took up his new appointment last autumn, and with characteristic enthusiasm entered at once very energetically upon the task of making himself familiar with his fresh surroundings. The possibilities of rubber cultivation was the principal subject to occupy his attention, and to this end he visited most of the chief estates in Trinidad. Thence

he proceeded to Tobago—the dependency of the larger island—and here prosecuted his work under very adverse climatic conditions, with the result that on returning to Trinidad he was prostrated with a severe attack of malaria. After some four weeks' illness complications ensued, and he passed away on Sunday, July 17, from septic pneumonia following an operation.

John Bennett Carruthers, born in 1869, was the younger son of Mr. William Carruthers, F.R.S., until recently the keeper of the Botanical Department of the British Museum. He was educated at Dulwich College, the Royal School of Mines, and Griefswald University, Prussia. During this period appeared his first botanical contribution, "The Cystocarps of Some Species of *Callophyllis* and *Rhodymenia*" (*Journal Linn. Soc.*, xxix., 77-86), and "The Canker of the Larch" (*Journal Roy. Agr. Soc.*, 1891, Ser. iii., vol. ii.). A period as demonstrator in biology at the Royal Veterinary College, London, was followed by his appointment as professor of botany at Downton College, Wilts. Soon, however, he transferred his energies to the tropics, where his chief work was done.

In 1898 Carruthers went out under the joint auspices of the Ceylon Government and the Planters' Association to investigate a disease of cacao-trees. He proved successful, not only in ascertaining the cause of the disease, but in the frequently more difficult task of finding an effective remedy practicable under estate conditions. His successful work was recognised by his appointment in 1900 as mycologist to the Government of Ceylon and assistant director of the Royal Botanic Gardens.

In these days, when we regard a mycologist as necessary to any well-equipped agricultural department, it may come to many as a surprise that Carruthers's appointment, only ten years ago, was the first of its kind. He worked in Ceylon for five years, and in 1905 took up the directorship of the newly-formed Department of Agriculture for the Federated Malay States. Here he remained until he was invited to fill the Trinidad position, where it was expected that his special knowledge of cacao rubber and plant sanitation would prove of great value. These hopes have unfortunately been frustrated by his untimely death, but in the short space of time which intervened he initiated several important projects, and so recently as May contributed two papers to the Brussels International Congress on Tropical Agriculture and Colonial Development, whilst an account of rubber in Trinidad appears in the last issue of the *Trinidad Agricultural Bulletin*, of which he was joint editor.

Carruthers possessed the happy gift of "getting on well" with people, and officials and planters in many parts of the world, the members of the Royal Society of Edinburgh, the Linnean Society, the Association of Economic Biologists, the West India Committee, and a wide circle of friends unite in regretting his loss.

#### NOTES.

SIR E. RAY LANKESTER has been elected a foreign associate of the Paris Academy of Sciences in succession to the late Prof. Robert Koch.

The following men of science have been elected foreign members of the Royal Society:—Dr. Svante Arrhenius, Dr. Jean Baptiste Édouard Bornet, Dr. Paul Ehrlich, Prof. Vito Volterra, and Dr. August Weismann.

A REUTER telegram from Wellington states that a new crater is in eruption near the dormant geyser of Waimangu (Rotorua), and is ejecting mud and pieces of rock. Its proximity to the volcano of Tarawera renders the outbreak significant.

NO. 2126, VOL. 84]

MR. JOHN RAMSBOTTOM has been appointed an assistant in the Department of Botany, British Museum. Mr. Ramsbottom was lately exhibitor of Emmanuel College, Cambridge, and Robert Platt biological research scholar, Victoria University, Manchester. He will devote himself to the fungi.

IN the course of a reply to a question asked in the House of Commons on Monday with reference to the Advisory Committee on Aërial Navigation, Mr. Asquith said that a further report of the committee will be laid before Parliament within a few days. Captain Murray Sueter, R.N., representing the Admiralty, and Mr. Mervyn O'Gorman, superintendent of the Balloon Factory, have been appointed additional members of the committee. The total approximate cost of the committee to the present date is 10,000l.

THE property in the centre of the Cheddar Cliffs, on which the quarry occurs that has caused much disfigurement to the gorge, has been purchased by the National Trust. Certain existing contracts, which expire in 1912, will be performed exclusively from the loose stone lying fallen in the quarry. No further blasting will take place. The National Trust hopes that by the purchase of this property the cliffs have been secured from all danger of further spoliation. The immediate and pressing danger to the finest part of the gorge arising from the vibration caused by blasting has now been stopped.

ACCORDING to a communication from Mr. J. T. Jenkins, published in the *Field* of July 23, there is reason to believe that the fur-seals on the Pribilof and other islands of the North Pacific are in imminent danger, if not of extermination, at all events of being so reduced in numbers as to be no longer of any commercial value. It will be remembered that the Anglo-American Commission of 1896 insisted upon the repression of pelagic sealing, and it was eventually agreed that, while this was to be absolutely prohibited to Americans, it would be permitted to British subjects only outside a sixty-mile limit from the Pribilofs. The Japanese were, however, no party to the arbitration by which this was arranged at Paris, and their vessels have for the last few years been actively engaged in pelagic sealing around the Pribilofs immediately outside the three-mile limit. In 1907 Canadians had fifteen vessels engaged in pelagic sealing, which took 5240 skins, while in 1908 there were eight vessels, which secured 4452 skins. On the other hand, the Japanese had thirty-six vessels in 1907 and thirty-eight in 1908, of which the respective takes were 9000 and 13,197. If the latter rate of killing be continued—especially when it is recalled that the great majority of seals killed in the open sea are females—it will not be many years before the herds will be practically annihilated. The case is one where international action is urgently demanded, and that at an early date.

AN article upon the character of King Edward VII. in the current number of the *Quarterly Review* gives much interesting information upon the early life and training of the late King. Queen Victoria and the Prince Consort appear to have considered the minutest details of the physical, intellectual, and moral training of their son, who was to become our King. The German blood and upbringing of the Prince Consort led him to attach great importance to thoroughness of educational training, while letters and notes "record the Queen's anxious solicitude that no boyish longing for excitement should interfere with the Prince's 'adherence to and perseverance in the plan both of studies and life' laid down by his father." Every hour