

an apology and the Company resumed their good humour.

And they sip and sip, Have their friends on the  
hip,  
And of foibles and faults and caprices make a  
handle,  
While round goes the room, the liquor, and the  
scandal.

A. M. FERGUSON.

### ECONOMY IN WORKING WIRE SHOOT.

Under this heading a notice appears in the *Ceylon Observer* regarding Michie's Patent "Lubrica" Runner with best cast steel wheels and bodies, a specimen of which and diagram can be seen at our office. Wire Shoot Runners now in use fail and are short lived because of imperfect lubrication of the bearing surfaces of axle and wheel; and many Runners are made without any attempt at provision for lubrication. The new Runner is fitted with an enlarged axle in the body of which an oil cavity is formed. This cavity or lubricant receptacle is filled with oil after the Runner is placed on the rope ready to start and the bearing surfaces draw their supply from it when the journey down the rope has commenced. The arrangement has been formed to work admirably.

### AGRICULTURAL CHEMISTRY.

#### THE NEED OF THE ANALYST AND THE PLANTERS WORKING TOGETHER.

A planting correspondent sends us the following cutting from the *Queensland Sugar Journal*:—

In connection with the general feeling in Queensland in favour of the appointment by the State of an agricultural analytical chemist, the following from the *Planters' Monthly* (Hawaii) is interesting:—

During the late sessions of the planter's meeting in this city, the subject of establishing an experimental station here was brought forward and urged with an earnestness which gives strong assurance to the hopes of all interested in it that an effort will be made to secure it without unnecessary delay. The benefits which have resulted from these centres of agricultural research, have been so great in every country where they have been established, as to leave no doubt of their value in the minds of those who have followed the teachings derived from the scientific investigations made.

We all know that to chemical research is in a large measure due the pre-eminence of European beet sugar culture. But it was not by chemistry alone that this has been achieved, rather by the happy combination of science with practice; the practical beet grower called the chemist in to aid him, and it was by their mutual efforts that the beet finally reached its present high quality. Working alone, neither would have attained such success, or at least not until the grower had become a chemist, or, what is more likely, the chemist had become a grower.

And this is the point we would emphasize here. It is an easy matter to secure the services of a chemist who would be able to analyse our soils and fertilisers, but before he could be of value, beyond that of a mere analysing machine, he must learn the practical and diverse details of our cane culture. How otherwise can he draw an intelligent conclusion; how can he give to each fact its logical meaning, if he must first learn the very rudiments of our practice? And not alone the practice but cane culture in general.

What could be expected even from the most learned doctor of chemistry, if he must at the outset be handicapped by learning such a simple thing as how to plant cane? The true agricultural chemist must first be a farmer, he must conduct his experiments and interpret his results in the light of cane field work, the soils, meteorological conditions, practical necessities, economical considerations, etc.\*

\* True, also of tea. This has always been my opinion.—A Ceylon Planter.

### FLORA AND CULTIVATION IN HADRAMUT, SOUTH ARABIA:

FROM AN ADDRESS DELIVERED BEFORE THE LONDON CHAMBER OF COMMERCE, ON THE 10TH JULY, BY J. THEODORE BENT.

During our stay at Al Katan we had ample means for studying the habits of the inhabitants and their primitive system of agriculture. The cultivation of date-palm is the most important feature in Hadramut, the staple food for man, and in many cases for cattle, for they grind the date stone and feed the cows with the powder. Around the palace of Al Katan the palms extend for miles, and all this cultivated area is irrigated by wells sunk in the sand, the water which is drawn up by bullocks being conveyed to the fields by small channels executed with great skill. A stroll round these cultivated acres is interesting and instructive; there are several spices grown for table use—zamouta, an umbelliferous plant, the seed of which is used in coffee, habatarsoba, a nemopylla, the seeds of which are used for putting in the bread; coriander, fennel, chilis, oress and radishes; lucerne and clover is grown for the cattle; beans, eggapples, cucumbers and water-melons climb about under the shade of the trees; then there are henna trees, the leaves of which the women dry and pound to make a paste for decorating their hands and faces. Indigo for dyeing purposes is largely grown, and outside the town indigo is manufactured in large jars, for the universal dye for all clothes is dark blue, jowari or dourra is the chief grain produced here for cattle and the cultivation of this occupies many acres around El Katan. Then we saw a man going round with an apron full of dried male spathes with which to fructify the female palms. With surprising agility he climbs up the stem, and with a long rounded knife cuts off the bark which encircles the female spathe, and shakes it out into a bushy shape, then he takes the male spathe and shakes into it the dried pollen, and as he does so he sings in a low chant, "May God make you grow and be fruitful." The palm is the life and soul of the Arab, and of all dates those of the Hadramut are reputed the best. On a journey a man carries a skin of dates and requires no other sustenance; the date flower provides the bees of the Hadramut with material for the most delicious honey, honey which is celebrated all over this part of Arabia, the merits of which Pliny extols, and the flavour of which I consider superior to any of the far-famed honeys of Italy and Greece.

The flora of the Hadramut is also meagre and to the casual observer uninteresting. Our botanist only collected a little over 200 specimens during the whole of our expedition, but these contained three new genera, and new species of such genera as Aloe, Adenium, Arthrosolea, Littonia, Statice, and Vellozia; they are now being worked up by the authorities at Kew, and as they are the first received from Southern Arabia eastward of Aden they are of considerable interest and value.—*Chamber of Commerce Journal*.

ROYAL GARDENS, KEW BULLETIN of Miscellaneous information for July has the following contents:—Comino Trees of Colombia—Artificial Production of Citric Acid (continuation)—Supplementary Note to the Flora of British India—Cultivation of Vanilla in Tabiti—Vanilla at Fiji—Flora of the Solomon Islands—Methods for exterminating Locusts in the Caucasus—Preservation of Bocks in the Tropics—Table Oils from Beech and Linden—Cultivation of Vegetables—Production of Pure Turnip Seed—Miscellaneous Notes.