

(5) using H as centre, describe a quadrant HK of radius HQ; (6) join K to P by a straight line, thus completing the cam-contour.

This simple curve falls slightly within the true cam-curve for a portion of its length, but so slightly as to cause a maximum error of only about 1 per cent. in the virtual length of the short arm of the balance. In the example given this amounts to less than  $\frac{1}{3}$  mm. This makes no difference to the perfect accuracy of the balance; it only makes a slight difference in the perfect equality of the distances between some marks on the scale.

All need of levelling the balance when it is stood upon any nearly level surface can be avoided by suspending the scale so that it can itself assume the correct position by the action of gravity.

A very simple and effective anti-parallax sight is fixed to the pointer. This consists of a needle having an enlarged eye, through which the observer must look at the pointer, and thus note the point it indicates on the scale.

The cam lever, the swivelled scale, and the anti-parallax sight combine to produce a balance of surpassing excellence for accuracy and speed of measurement. This invention the author presents to the society in the hope that some one will be sufficiently enterprising to put it upon the market, to the great advantage of himself and the public at large.

#### ART. XVIII.—*Description of a New Native Grass (Poa).*

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[Read before the Auckland Institute, 22nd November, 1909.]

*Poa oraria*, sp. nov.

Gramen cæspitosum, parce foliosum, 40–50 cm. altum, leve, politum, perenne.

Culmi multi, erecti, glaberrimi, graciles, a basi ramosi, teretes, 2-nodosi, internodiis elongatis, folia longitudine æquantem, foliorum vaginæ pæne ad imam paniculæ partem vestiti.

Folia longe vaginantia, vaginæ inferiores latæ, membranacæ, stramineæ, leviter striatæ; ligula vaginam latitudine æquans, oblonga, obtusa; lamina teres, erecta, involuta, subrigida, gracillima, leviter striata, apice subacicularis.

Panicula strictissima, linearis,  $\pm$  10 cm. longa; ramis 3 v. paucioribus, brevibus, teretibus, glaberrimis, paucas spiculas sublonge pedicellatas gerentibus.

Spiculæ anguste oblongæ v. plus minus cuneatæ, 8 mm. longæ, 3 mm. latæ, 4 v. 5 flosculos gerentes.

Glumæ vacuæ subæquales, spiculis tertia parte breviores, anguste lineari-lanceolatæ, acuminatæ, 3-nervatæ.

Glumæ floriferæ anguste lanceolatæ, acuminatæ, membranacæ, plerumque 5-nervatæ, nervo medio solo ad apicem attinente, basi parvo pilorum brevium flocco prædita, in nervis subsericæ, alibi plus minus scabridæ.

Palea gluma florifera paulo brevior, 2-nervata, nervis delicatule ciliatis.

*Hab.*—Moist and wet stations at the head of several of the sounds of western Otago (Deep Cove, &c.). Collected by Mr. B. C. Aston in mid-January, 1909; it appears to flower towards the end of December.