also given and the probable causes of its local advance and recession discussed. In this connection Mr. Wright emphasized particularly the choking and congestion at the valley outlets, as at the mouth of Glacier Bay and locally at Muir Glacier, and the consequent cutting off of warm tidal currents from the ice front. Under such conditions the ice front advanced rapidly, until later on partial removal of the barrier or sinking of the land, the tidal currents regained access to the ice fronts and inaugurated the present period of rapid recession.

FRED E. WRIGHT,
Secretary

DISCUSSION AND CORRESPONDENCE

DOUBLE-ENDED DRUMSTICKS

TO THE EDITOR OF SCIENCE: The impression was received by more than one person who visited the St. Louis Exposition, that one of the Filipino tribes gathered there used a double-ended drumstick, grasping it in the middle and beating alternately with the ends. Professor O. T. Mason, to whom I applied for light, has most kindly informed me that double-ended drumsticks are occasionally employed to produce variations in sound, the two ends being differently constructed. May I ask if any of the readers of SCIENCE can furnish me with the name of a Filipino or other tribe, who handles a drum-beater as above described? I may add that I am especially desirous of knowing of the existence of any photograph showing such a grasp.

H. NEWELL WARDLE

ARE BULLS EXCITED BY RED?

TO THE EDITOR OF SCIENCE: Is there any real evidence to the effect that bulls are excited by the color red? And how is it with other animals? According to the newspapers, a bull in Sunbury, Pa., charged a window in a millinery store containing an exhibition of red hats and wrecked the store. Is this merely a newspaper myth?

X.

NOMENCLATURE OF THE CHIRONOMIDÆ

TO THE EDITOR OF SCIENCE: In 1899 Kieffer proposed *Ceratolophus* (*Bull. Soc. Ent. France,* p. 69) as a new genus of Chironomidæ (Midges) with '*femoratus* (Fabr.)' as type. In 1906 the same author reserved this name (Genera Insectorum. Chironomidæ) for a group not containing the type; he also placed '*femorata* Meig.' in two genera at the same time, viz.: *Palpomyia* (p. 63) and *Serromyia* (p. 65). Further, *Ceratolophus* was preoccupied in 1873 (Bocourt, Reptiles).

It is evident that the nomenclature of certain genera of the Chironomidæ is confused and it is a pity that many authors seem to think that thorough unraveling of the nomenclature is unnecessary, when monographing or revising.

G. W. KIRKALDY

SPECIAL ARTICLES

SPECIFICATION OF DIAGRAMS IN APPLIED GEOMETRY

BY far the greater amount of weariness in reading geometric discussions comes, I think, from the needless labor of searching for and translating the letters describing a figure, into the symbols of the vectors. I have, therefore, been asking myself, whether a few simple rules might not be devised for drawing conventional diagrams, so as to quite eliminate quantities other than those used in the computation. The following plan has assisted me and may be worth remark.

Every vector or arrow is reckoned from a heavy black dot, which I shall call the *but,* to the barb.

When two vectors from the same origin are collinear, the larger vector should step around the barb of the shorter, in the same way in which electrical engineers represent insulated circuits which cross. Conventionally, therefore, a small semicircle, to be called the step-over, is drawn around the arrow point of the shorter vector, *r,* as in Fig. 1.

The barb is generally to be drawn *on one side* only, as in the harpoon, and the letter or specification of the vector placed near the barb and (when necessary for clearness) on the same side of the shaft with the barb and step-over. Where several vectors coincide the line may be thickened.

Right angles should be indicated by an arc joining the line. Other angles marked.