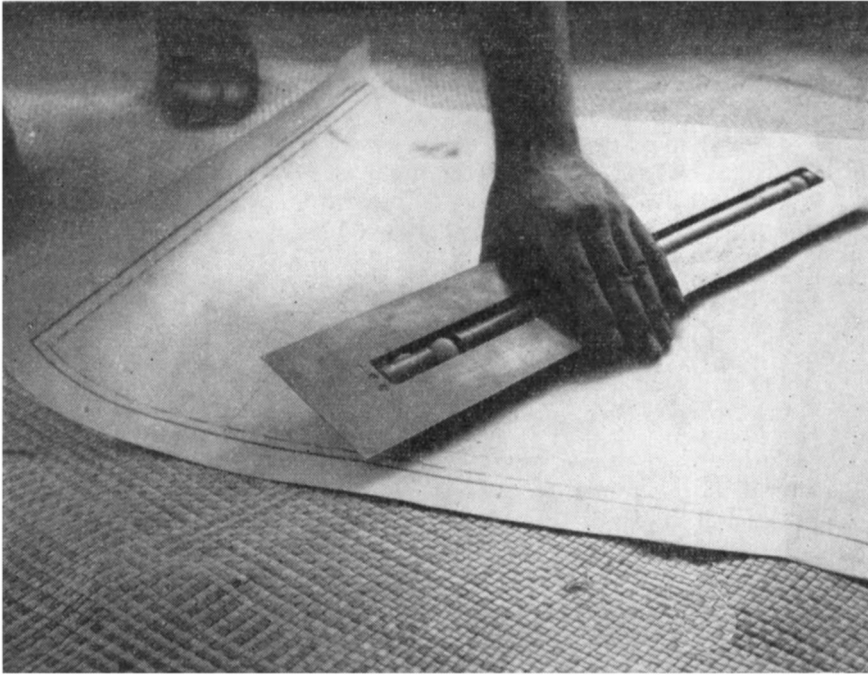


It is proposed to fit a perspex scale of degrees around the ruler, so that the chart can still be seen through it. There is also the possibility of fitting scales of distance in clips along one edge, but not for marine use.

I am assured that the moving parts and bearings, made of nylon, are self-lubricating and also unlikely to wear appreciably over a period of years.



*Fig. 2*

In regard to the most useful length of the ruler, we come up against the fact that the size of the chart table varies in different ships and in different services. At present it is being made in three lengths, 15, 18 and 21 in. The longer rulers would be best in large merchant ships, while the shorter ones would be more popular in smaller vessels, whether naval, merchant or fishing vessels.

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## The Brest-Canaries Race

*from* Commander Mario Bini, Italian Navy

IN the Brest to Las Palmas de Gran Canaria race held last August by the Sail Training Association I was skipper and navigator of the 7-ton yawl *Artica II* of the Italian Navy (which incidentally obtained the best corrected time of all three classes). From the navigational point of view the race offered no particular difficulty because although long—1400 miles—we were on a reach most of the time, a condition that makes the navigator's job much easier. It might in any case

be interesting to those who are keen on ocean racing, to hear about some of the dodges (certainly not new to them) used on board *Artica II* :

- (a) A gnomon pin (about two inches long) had been welded in the centre of the compass rose: when the Sun was low and the boat sufficiently steady the shadow of this needle enabled us to have very good compass checks.
- (b) Tables H.O. 249 (AP 3270) were normally used for star fixes, because of the advantages they offer not only in the reduction of sights but especially in the identification of stars. When the altitude and azimuth of the stars are accurately known and the sextant set, the stars can be picked up on the horizon, and sights are possible when sea conditions would make it impossible to bring the stars down to the horizon.
- (c) Three well-rated watches were used, so that they could be controlled by their daily differences. This old system proved most useful when time-signals were not received for several days: one might gather from this that as soon as conditions become 'old'—such as not having time signals for days—the 'old' systems prove to be quite up to date!
- (d) Although our charts fulfilled all our needs both in the open sea and in sight of land, it was found convenient to use plotting sheets on which to draw a suitable scale map for landfalls.

I would like to end these few remarks by suggesting an idea to instrument makers in the form of a device enabling the micrometer screw to be operated with the hand that holds the sextant, for instance a flexible transmission attached to the sextant handle and operated by the right thumb. This would leave, in the final and most delicate moments, the left arm completely free for keeping one's balance by holding on to a shroud, a stay, or anything else. I think such a device could considerably help navigators fight their biggest enemy in star shooting from small boats—the instability of the platform—and would be most heartily welcomed by them.

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## The Beaufort Scale

*from* E. L. Delmar-Morgan

I WAS particularly interested in Commander C. E. N. Frankcom's note on the Beaufort wind scale at the end of the article by the Hydrographer of the Navy on Admiral Sir Francis Beaufort (this *Journal*, 11, 266).

Commander Frankcom states that from time to time attempts have been made to abandon the Beaufort scale and adopt some other form of scale but that efforts to do this have failed. Efforts to improve on or change the form of the Beaufort scale are, in my opinion, likely to continue to fail for the very good reason that the existing scale is almost flawless mathematically. I touched upon this subject in an article entitled 'Selecting Equipment by Numbers', in *Yachting World* in March 1955. The general theme of what I then wrote is as follows:

The attached table shows the four principal series of Preferred Numbers. The first use of the Preferred Number series, or Renard series, took place in France