

1, 2] that bacteria were undoubtedly observed and described by Leeuwenhoek as early as 24 April 1676, and *not* 1681, as stated. Further, De Waard [see A. Schierbeek, *Measuring the Invisible World* (Abelard-Schuman, 1959)] has discovered that Zacharias Janssen was born in 1588, and his son Hans, in 1611, so that neither could have invented the compound microscope in 1590.

RAYMOND N. DOETSCH
Department of Microbiology,
University of Maryland, College Park

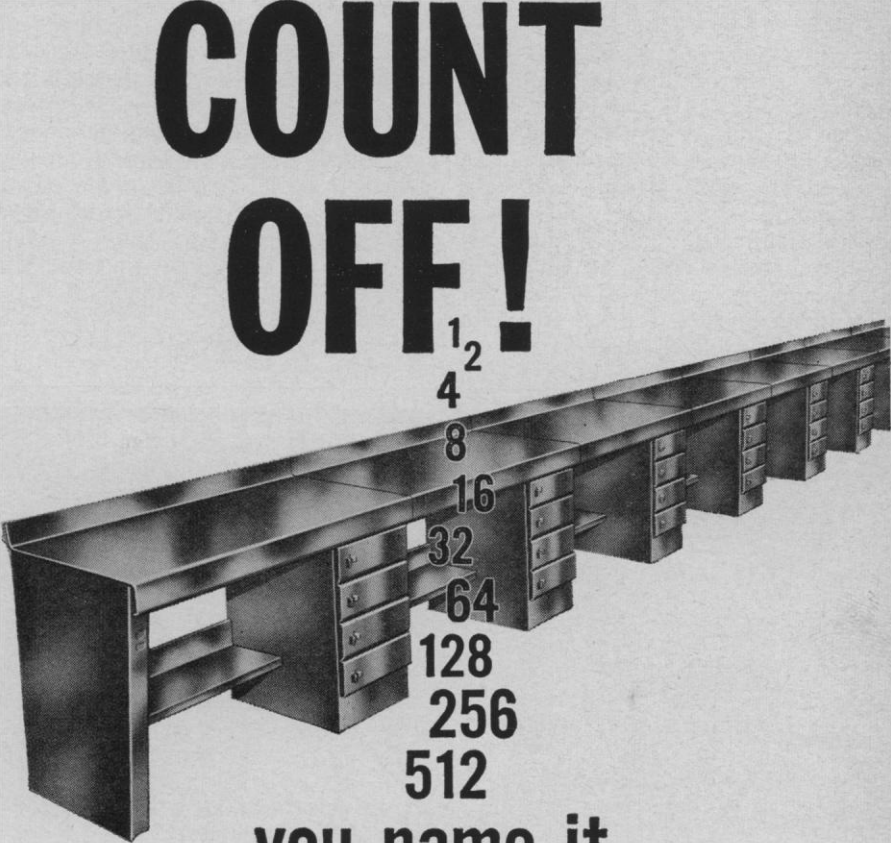
Food Additives

The 27 May 1960 issue of *Science* [131, 1581 (1960)] gave editorial approval to the report of the Panel on Food Additives of the President's Science Advisory Committee. The principal recommendation of the panel was to set up an advisory board "to weigh evidence and make recommendations to the Secretary of the Department of Health, Education, and Welfare on the basis of available scientific data on applications for the approval of food additives." In evaluating this recommendation two facts should be considered. First, the panel probably would be under heavy pressure from corporations who would want exemption *now* for additives for which there is *some* evidence of carcinogenic effect in animals. Second, on the basis of present data and techniques, there is no way to make a reliable prediction of the "safe" level of a carcinogenic compound, and—to quote the report—"definitive answers useful in extrapolation to man may not be expected for many years to come."

While the report discusses a number of the major difficulties in the path of scientific decision-making in this area, there is one particular difficulty (which gets bare mention in the report) that we would like to stress here because it is often overlooked. This difficulty arises because (i) the population at risk is of the order of 10^8 persons; (ii) our primary emphasis is on controlling the *number* (rather than the proportion) of cancer cases; and (iii) direct estimates of the risk probabilities would be based on relatively small experiments (10 to 10^3 animals). Since we would be concerned if an agent produced, say, 100 cancer cases, a "safe" level would require risk probabilities of the order of 10^{-6} . Statistical theory indicates that to obtain adequate direct estimates of such small risk probabilities would require a sample of 10^6 .

From this standpoint, consider the decision rule: If no cancers develop in 1000 test animals, classify the corresponding level of the agent as "safe."

Buy *EQUIPTO* -- Industry's choice for Quality Products



**COUNT
OFF!**

1
2
4
8
16
32
64
128
256
512

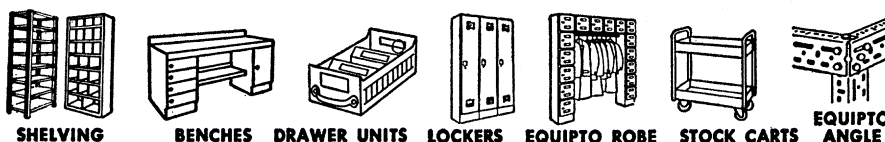
you name it...

**EQUIPTO can supply you one,
or a continuous row of
customized benches!**

Thru EQUIPTO's ingenious design and method of construction, benches can easily be arranged in one continuous streamlined assembly. Additional EQUIPTO Bench Units are available, less one leg, and are easily bolted to adjoining EQUIPTO Bench. You save money on each additional bench, yet sacrifice nothing in the way of strength, convenience or appearance.

There are 264 models in stock — available with many types and styles of drawers, sliding doors, aerial shelves, and a choice of 12 ga. steel, masonite, laminated maple, or bonded wood tops.

Naturally, all drawers ride quietly on trouble-free nylon rollers. Get EQUIPTO'S complete bench story NOW. Write for complete catalog showing all 264 models.



EQUIPTO

618 Prairie Avenue
Aurora, Illinois