

slight error. It is this type of gauge that measures balls and rollers to tolerances of millionths of an inch.

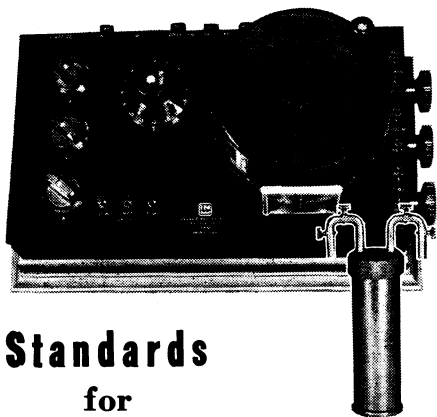
In soundproof chambers, trained testers listen to bearings on rapidly moving shafts. The slightest "foreign" noise—sometimes inaudible to the untrained ear—is detected instantly by unique instruments. The offending bearing, which may have a rough spot, a slight speck of rust or an under-size ball, is discarded.

The picture on the cover of this SCIENCE NEWS LETTER shows workers giving roller bearings a final going over as they ready them for streamlined passenger equipment.

Gloves, masks and gowns, familiar to operating rooms, are standard equipment in making the extremely small bearings. Hypodermic syringes are used when a single drop of oil must be placed on the miniature ball bearings slightly larger than the head of a pin.

The rooms are air-conditioned to filter the dust from the air and keep the temperature and humidity constant. Air-jets like those in a "fun house" remove dust from workers' clothes before they enter the assembly rooms.

To understand how bearings act as
(Turn to page 383)



Standards for Instrument Calibration

The Type K2 Potentiometer and the NBS Resistor shown above are two among many L&N instruments which are ideal for production calibrating. They offer high accuracy and dependability, and a convenience of use which can help to make even precision testing a matter of routine.

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Christmas Conservation

➤ CHRISTMAS wreaths and garlands are on the market again, their glossy green leaves and bright red berries tempting even the thriftiest to open his purse. Yet it is well to eye before you buy, and to refuse certain items entirely because they violate the spirit of the feast by doing real harm to God's gardens, where wild things grow.

No thoughtful Christmas shopper, for example, will ever buy anything made of ground pine, the prickly, fine-leaved plant that is often the only ground cover in great reaches of thin-soiled woods. Gatherers of ground pine rip it up heedless of later consequences, leaving the

trees' precarious roothold open to rapid erosion. Ground pine just doesn't mean Christmas to people who know.

Similarly, when buying holly you should insist on English holly. It is grown for the market in this country, and by purchasing it you help the growers to make an honest living. Native American holly, on the other hand, is always obtained by raiding the woods where it grows. Usually the raiders work in haste, for theirs is an illicit trade, and they break and rip the branches disgracefully. You can tell English holly readily by its bigger, redder berries, by its pricklier, darker green leaves—and by its higher price. But it's worth the difference.

It is all right, however, to buy the synthetic Christmas "greens" made by combining the evergreen leaves of mountain laurel with twigs of the red-fruited winterberry, gathered usually in swampy places. This plant is a first cousin to holly, but sheds its leaves in autumn. Both mountain laurel and winterberry are so abundant in the regions where they grow that once-a-year cropping seems unlikely to do any material harm.

Mistletoe, also, is something you can buy freely without any qualms of your conservationist conscience. In fact, the more mistletoe is harvested the better it is for the woods. For mistletoe, despite its romantic connotations, is a harmful parasite that robs trees of their sap, and the more of it is removed the better off the trees will be.

Science News Letter, December 14, 1946

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