was obtained from beta-octanol and *p*-toluenesulfinyl chloride. Starting with a dextro-beta-octanol, $[\alpha]^{20}_{5893}$ +9.48° homogeneous, $[\alpha]^{20}_{4359}$ +22.40° in ethanol ($c = 4.992$), Kenyon and his co-workers obtained, through this series of reactions, a levo-beta-octyl thiocyanate, $[\alpha]^{20}_{5893}$ −71.41° homogeneous, $[\alpha]^{20}_{5893}$ −64.68° in ethanol ($c = 5.010$), $n^{17°}_{D}$ 1.4651, $d^{20°}_{4}$ 0.795.

In the series of reactions used by the writers a dextrorotatory octanol yielded a dextrorotatory thiocyanate, while in the procedure used by Kenyon a levo-octyl thiocyanate was obtained from a dextrorotatory octanol. Since an asymmetric carbon atom is involved in both series of reactions, the difference in the results may be explained by the occurrence or absence of the Walden inversion.

The refractive index of the thiocyanate prepared by the writers agrees with that reported by Kenyon and his co-workers, indicating that the compounds are of the same degree of chemical purity. The density of the writers' compound, however, was 0.919, whereas Kenyon reported 0.795.

The molecular refraction of beta-octyl thiocyanate, calculated from the revised values of Eisenlohr for the atomic refractions[2] and employing 13.21 for the thiocyanate radical, is 51.09. The observed molecular refraction for the writers' compound, obtained with the Lorentz-Lorenz formula, is 51.31, whereas with the values for refractive index and density reported by Kenyon 59.31 is obtained.

These results indicate that the value for the density found by the writers is closer to the true value than is that found by Kenyon, *et al.* Since the specific refraction (homogeneous) is dependent on the density, this value is also subject to revision.

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(2) Landolt-Börnstein, "Physikalisch-chemische Tabellen," Aufl. 5, Bd. 2, Julius Springer, Berlin, 1923, p. 985.

DIVISION OF INSECTICIDE INVESTIGATIONS
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
U. S. DEPARTMENT OF AGRICULTURE
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A Stopcock Substitute

BY WALTER C. SCHUMB AND H. IRVING CRANE

In the course of a certain investigation in this Laboratory it was found necessary to devise a means of interrupting the flow of a benzene solution. A stopcock could not be used, since the ordinary organic stopcock lubricants are readily attacked by benzene, and the reactivity of the solute toward moisture or reactive hydrogen made the use of certain other types of lubricant, such as phosphoric acid, out of the question. The device shown in the diagram is an adaptation of Stock's stopcock for gases [*Ber.*, **58,** 2058 (1925)].

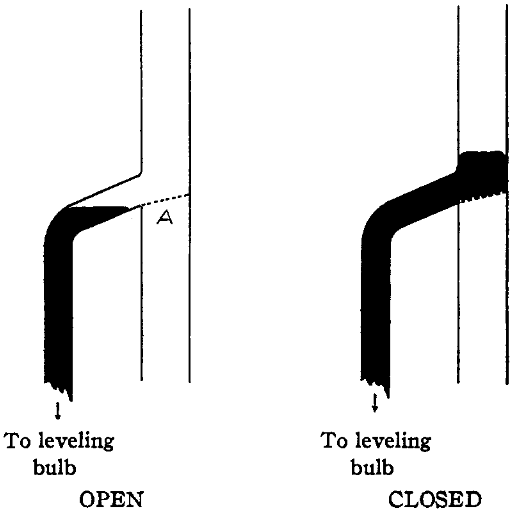

Fig. 1.

The device, constructed of Pyrex glass, consists essentially of a fritted glass plate (A) (80 mesh), so placed that mercury can be flowed over it at will by means of a suitable leveling bulb.

Obviously the device is applicable to any liquid of not too high viscosity, which does not attack mercury. The high surface tension of mercury prevents any of it passing through the fritted plate.

RESEARCH LABORATORY OF INORGANIC CHEMISTRY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASS.
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The Rearrangement of Alkyl Aryl Thioethers

BY WENDELL H. TAYLOR

In a recent study of the reaction between aromatic mercaptals and formaldehyde, the author[1] postulated a rearrangement of formaldehyde diaryl mercaptals involving the migration of the —CH_2 group from sulfur to the benzene nucleus, with regeneration of the —SH groups. Such a change would be essentially similar to the rearrangement of the alkyl aryl thioethers and it was therefore of interest to investigate such thioether rearrangements under conditions comparable to those under which the analogous oxygen com-

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(1) W. H. Taylor, THIS JOURNAL, **57**, 1065 (1935).