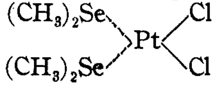
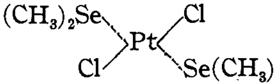
Finally, under the head of complex compounds mention must be made of further development of the work of Tschugajew (*Compt. rend.*, **154**, 33) on the platinum bases containing organic sulfides and of Fritzmann (*Z. anorg. Chem.*, **73**, 239) on analogous selenium compounds. The addition of dithioglycoldiethylether to potassium bromo-platinite gives a gray salt, $[Pt.2(C_2H_5.S.CH_2.CH_2.S.C_2H_5)].PtBr_4$, a salt of the type of Magnus' salt. On warming this goes over into the monomeric form, $Pt(C_2H_5.S.CH_2.CH_2.S.C_2H_5).Br_2$. Since the sulfide is bivalent, only the *cis* form is possible, and no isomer of the monomeric form was found. With methyl (and other) selenides, three isomers (with chloro-platinite) were found, the *cis* and the *trans* forms,  and , and also the dimeric form corresponding to Magnus' salt, $[Pt((CH_3)_2Se)_4].PtCl_4$. With diethyltrimethylene diselenide only two isomers were formed, since here, where there are two selenium atoms in the same group, no *trans* form is possible. This corresponds to the case with ethylenediamine. Many other papers on complex compounds must be passed over, but it is evident that this is to-day the most active field of investigation in inorganic chemistry. In the past, while many of these compounds were known, chemists had to pass them over with possibly an empiric formula. To-day, armed with all the modern refinements of research the chemist is beginning to bring order out of chaos.

In conclusion it may be noted that nothing further has been heard regarding canadium, the new metal of the platinum group, supposed to have been found in British Columbia. Nor have the efforts to confirm the results of Flint in splitting tellurium by hydrolysis had any positive outcome.

NOTES.

Substitution of Ground Glass Stopper in Combination Barometer and Manometer.—In the *Bull. soc. stiinte. Buc.*, **20**, 288, a manometer is described, of which the special feature is the substitution of a ground glass stopper for the usual sealed end. According to Radulescu the limit of accuracy of this instrument is 1–2 mm. for differences in level of 10–20 mm.

A similar device has been in use in this laboratory for over a year on a combination barometer and manometer. The presence of a simple mercury seal around the ground glass stopper increases the efficiency to such an extent that practically no leakage occurs.

The larger tube which constitutes the mercury cup—capacity 10–15 cc.—may be fused to the main tube if desired, and is easily stoppered to prevent volatilization of the mercury. No lubricant is needed for the ground glass joint. ROSS ALLEN BAKER.

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A New Coverglass Support.—A convenient coverglass support, which is also adapted to many other uses, is made as follows:

Three glass rods of equal size and length are held firmly in a bundle while being melted together at one end in a small blowpipe flame. This union is then drawn to a point by touching with a piece of glass, and the rods immediately bent apart at equal angles and to any depth desired. The now central joint should be reheated and annealed, but this does not require a temperature sufficient to deform the triangle. The ends are bent downward at a convenient angle. ROSS ALLEN BAKER.

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TRIPHENYLMETHYL. XXII. ETHERS OR OXIDES IN THE TRIPHENYLMETHANE SERIES.[1]

BY M. GOMBERG.

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It is now generally accepted that the compounds of the supposedly hexaarylethane type tend to dissociate while in solution into two free triarylmethyl radicles, this spontaneous dissociation being complete in some individual instances. Moreover, accumulated experience shows that such a tendency towards dissociation with the production of triarylmethyl radicles exists even in compounds where the two triarylmethyl groups are not linked directly to each other, but through the medium of some other simple group. Thus Anschütz[2] found that the triphenylmethyl ester of triphenylacetic acid loses carbon dioxide on heating to its melting point, and that the resulting product is not hexaphenylethane but triphenylmethyl, or rather the decomposition products thereof:

$$(C_6H_5)_3C.CO.OC(C_6H_5)_3 \longrightarrow CO_2 + (C_6H_5)_3C + C(C_6H_5)_3.$$

Wieland[3] attempted to prepare azotriphenylmethane by the oxidation of the fairly stable corresponding hydrazo derivative. While triphenylmethyl-azo-benzene was found by Gomberg[4] to decompose at 100°, Wieland's azo-body was found by him to break down spontaneously even at 0° into triphenylmethyl and nitrogen:

$$\begin{array}{l} (C_6H_5)_3C\text{—}N \\ \qquad\qquad\;\; \| \\ (C_6H_5)_3C\text{—}N \end{array} \longrightarrow \begin{array}{l} (C_6H_5)_3C \\ \\ (C_6H_5)_3C \end{array} + N_2.$$

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[1] This communication constitutes the larger part of a paper read at the Eighth International Congress of Applied Chemistry, New York, September, 1912. The remaining portion not published at this time dealt with the unsuccessful "Attempts to Prepare *p*-Hydroxytriphenylmethyl Oxide."

[2] *Ann.*, 359, 196 (1908).

[3] *Ber.*, 42, 3020 (1909).

[4] *Ibid.*, 30, 2043 (1897).