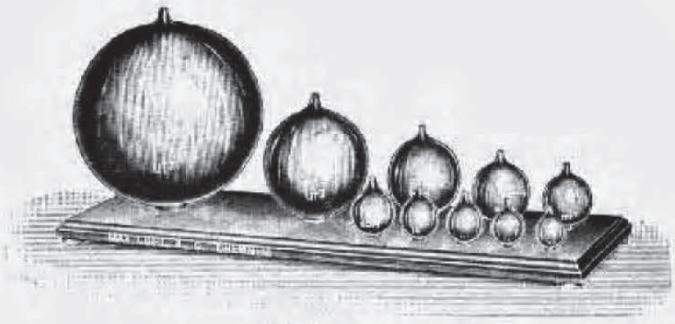
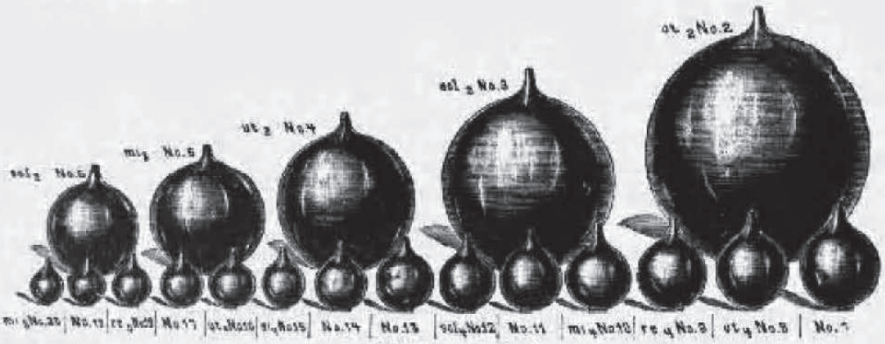
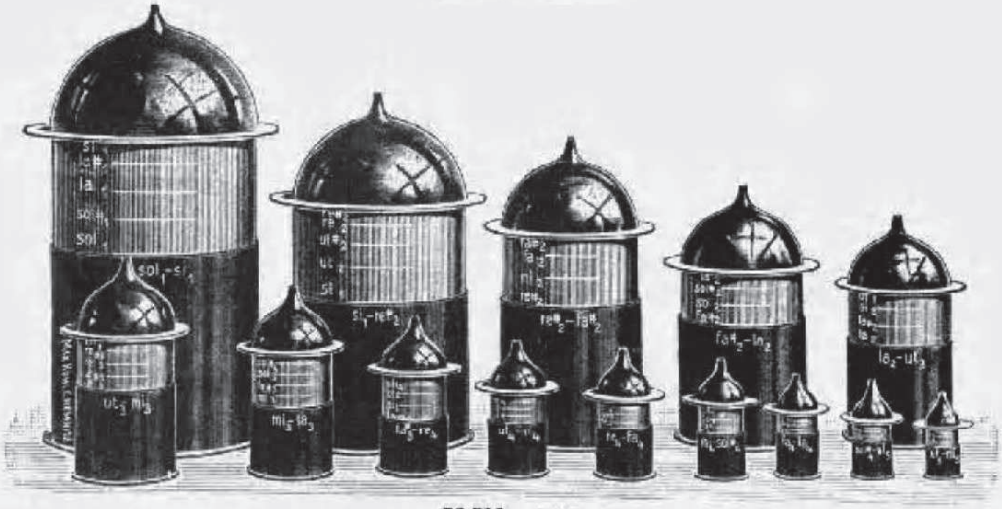
53514. 1 : 10.



53517. 1 : 10.



53516. 1 : 7.



53518. 1 : 6.

53,282. **Reed Pipe,** Figure 53,282, p. 429, with sound horn, $c_{-1} = 64$ compound vibrations ($ut_1 = 128$ v. s.), deep tone . . . . . £ 1. 6. 0

53,512. **9 Resonators for above, spherical, open,** of sheet zinc, accurately adjusted, from 2nd to 10th overtone of c_{-1} (ut_1) 1. 10. 0

53,513. — idem, **closed** 1. 12. 0

53,514. **11 Cylindrical Resonators,** of pasteboard, Figure, covered, for the 2nd to 12th partial tone of c_{-1} (ut_1) 1. 0. 0

53,515. **15. Resonators for Pipe No. 53,282, conical,** covered, from 1st to 15th overtone (2nd to 16th partial tone) of c_{-1} (ut_1) 2. 5. 0

53,516. **19 Resonators for Pipe No. 53,282,** after Helmholtz, Figure, spherical, for the first 19 overtones of $c_{-1} = 64$ compound vibrations ($ut_1 = 128$ v. s.), guaranteed accurate in tone and well constructed, on board, with wood handles 7. 10. 0

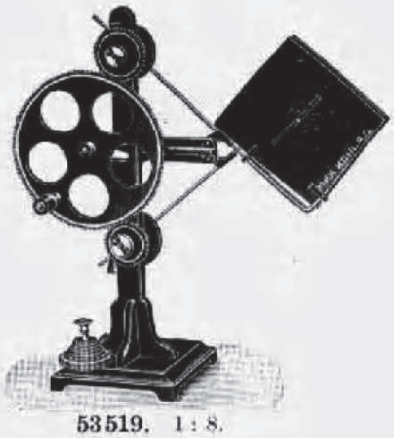
The resonators are constructed of stout sheet brass and accurately adjusted.
In view of its bulky nature the fundamental tone is not included in the set.

53,283. **Reed Pipe** with Sound Horn, cf. Figure 53,282, p. 429, $c_0 = 128$ compound vibrations ($ut_2 = 256$ v. s.), with deep tone 1. 6. 0

Cf. 5311, 5445, 1107, 5033.

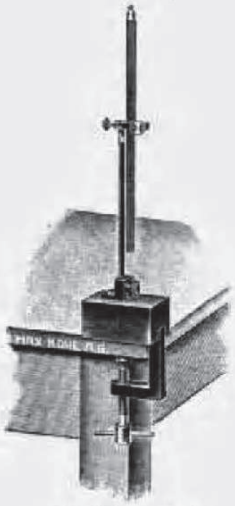
Max Kohl A. G. Chemnitz, Germany.

Max Kohl A. G. Chemnitz, Germany.



53519. 1 : 8.

53521. 1 : 8.



53522. 1 : 8.

53523. 1 : 12.

	£ s. d.
53,517. **10 Resonators for preceding,** after Helmholtz, Figure, spherical, in perfect tone, for fundamental tone $c_0 = 128$ compound vibrations ($ut_2 = 256$ v. s.) and its first nine overtones, on board, with wood pegs	5. 0. 0
In this set of resonators the fundamental tone c_0 (ut_2) (first partial tone) is not included.	
53,518. **14 Universal Resonators** after König, Figure, consisting of two cylinders sliding one in the other, with graduation, to be employed for all tones from g_{-1} (sol_1) to c_3 (mi_5), the tones of the chromatic scale being indicated singly	18. 0. 0
The compass of the individual resonators is as follows: (1) g_{-1} to b_{-1} (sol_1 to si_1); (2) b_{-1} to d^+_0 (si_1 to re^+_2); (3) d^+_0 to f^+_0 (re^+_2 to fa^+_2); (4) f^+_0 to a_0 (fa^+_2 to la_2); (5) a_0 to c_1 (la_2 to ut_3); (6) c_1 to e_1 (ut_3 to mi_3); (7) e_1 to a_1 (mi_3 to la_3); (8) ais_1 to d_2 (la^+_3 to re_4); (9) c_2 to e_2 (ut_4 to mi_4); (10) d_2 to f_2 (re_4 to fa_4); (11) e_2 to g^+_2 (mi_4 to sol^+_4); (12) f_2 to a_2 (fa_4 to la_4); (13) g^+_2 to c_3 (sol^+_4 to ut_5); (14) c_3 to c_3 (ut_5 to mi_5).	

Demonstration of Lissajous Curves.

* 53,519. **Apparatus for Demonstrating the Lissajous Curves** by Crank Motion, Figure, for projection as well as for drawing the curves on blackened glass plates (Fr. phys. Techn. I, 2, Fig. 3393 [I, 494]; W. D. Fig. 234, 220), with wheels for obtaining the ratios 20, 24, 30, 36, 40, 48, 50, 59 and 60 : 60	4. 4. 0
53,520. **Kaleidophone** after Wheatstone, simple, one steel bar with spherical mirror on metal base (M. P. I, Fig. 704, 728)	0. 10. 0
53,521. **Kaleidophone** (Wheatstone's), Figure, with 6 rods having spherical metal mirrors, on iron stand with levelling screw, for producing 6 phases (M. P. I., Fig. 706 [730])	2. 10. 0
When struck, the differently shaped rods give directly the corresponding Lissajous curves. The figures shine well and large on the ceiling under incident light.	
53,522. **Universal Kaleidophone,** after Melde, Figure, with adjustable metal strips and spherical metal mirror (M. P. I., Fig. 707 [731]), with screw clamp	1. 10. 0
52,124. **Double Pendulum** after Airy, Fig. 52,124A and B, pp. 296 and 297	1. 0. 0
53,523. **Pendulum Apparatus** for obtaining the vibration curves of Wheatstone and Lissajous, Figure (Eisenlohr, Lehrb. d. Phys., Fig. 181)	1. 16. 0

* Can be used with the Projection Apparatus.