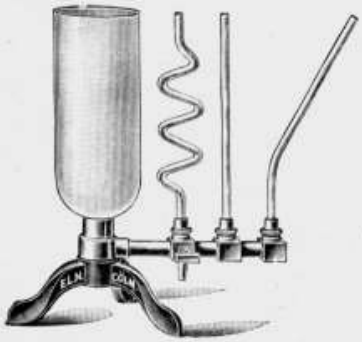
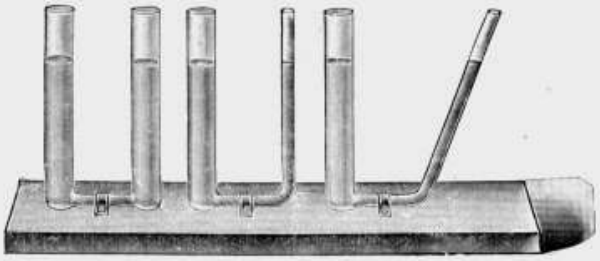


708.



709.

706.

711.

706. **Communicating tubes** on wooden stand with contrivance to explain fountains, simple arrangement. [Fig. 1/8 nat. size] . . . . . $ 0,75

To serve as a fountain one of the side tubes is removed and replaced by a right angled tube with a fine jet. The water in the wide tube is projected upwards through the jet, it does not however reach to the level of the water in the wide tube owing to the friction at the jet, the air resistance and the falling drops.

708. — another more finished form without arrangement to explain fountains [Fig 1/8 nat. size.] » 8,75

709. — consisting of 3 differently shaped tubes of different bore on a common base. (W. D., p. 149.) [Fig. 1/6 nat. size.] . . . . . » 2,00

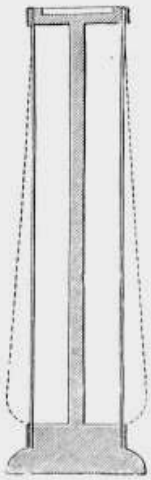
711. **Pipe level** (M. P. I. Fig. 345, p. 368) of lacquered tin, quite simple, with solid support tube to be fitted to stand No. 713. Both glass cylinders are constricted at their upper ends to prevent water spilling and to lessen the influence of the wind; when not in use they are protected by tin covers . . . . . » 1,25

713. **Wooden tripod** to level No. 711, height about 1,2 m . . . . . » 1,50

715. **Apparatus to show increase pressure downwards.** [Fig. 1/3 nat. size.] The vessel the walls of which are composed of caoutchouc is filled with mercury and it bulges downwards in consequence of the weight, taking the dotted outline indicated in figure (W. D. Fig. 109, p. 145). In this experiment about 7 kg of mercury are required . . » 1,50

716. — (W. D. Fig. 108, p. 145.) In the wall of the tin cylinder holes are bored at different heights from which the liquid discharges. The deeper the hole from the water level the greater is the force of projection . . . . . » 2,00

718. **Apparatus for pressure on bottom,** Weinhold's (W. D. Fig. 110, p. 146) with 4 glass headpieces. The squirting out of water is avoided by a glass cylinder placed on the bottom plate of the glass head piece. [Fig. 1/8 nat. size, p. 35.] . . . . . » 16,25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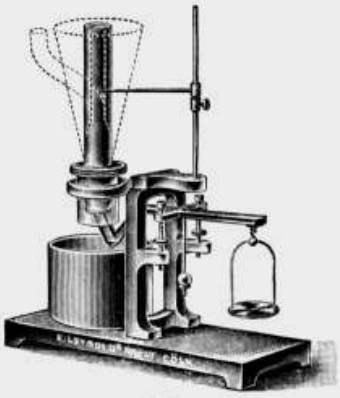
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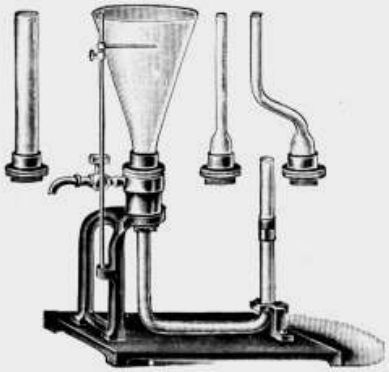
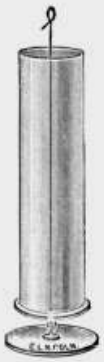

720.


724.

The cylindrical vessel is first screwed on, 100 gr put on the scale pan and water poured into the vessel. If more than a few small drops of water flow out, the point of support of the balance beam is raised or lowered, by turning the two screws until the aperture is sufficiently closed. The 100 gr are now removed and the water allowed to flow away. The vessel, the metal band and the bottom plate are now dried carefully with filter paper; a beaker is moistened, tared and 80 gr of water weighed out therein. The 80 gr weight is now placed in the balance pan and the weighed quantity of water poured into the glass cylinder, without touching it, as shaking easily displaces the bottom plate. With careful manipulation no water runs out. Now mark the position of the water by means of the movable pointer, and pour in some more water; water then flows out until the level indicated by the pointer is reestablished. The other glass vessels are screwed on and it is seen that in one case more, in the other case less water than 80 gr, are necessary to cause the water to discharge, but the same height of water is in each case required.

720. **Apparatus for pressure on bottom,** (Haldat's) the pressure is given by a mercury column. [Fig. 1/10 nat. size.] . . . . . $ 12,50

The U-tube is half filled with mercury to the free limb a movable mark is attached and with this the height of the mercury column is first observed. One of the vessels is screwed on, the stop-cock closed and filled with water, and the new level noted. The water is allowed to flow off by the cock, and one of the other vessels filled with water; the level of the mercury is again the same. The difference in height of the mercury multiplied by two and by the density of mercury gives the height of the water surface in the vessel above the mercury level.

724. **Upthrust apparatus** to show the upward pressure of liquids; it consists of a glass cylinder with ground end and a ground glass plate, the latter with hooks and cord. [Fig. 1/5 nat. size.] . . . . . » 0,65

726. — with outer vessel and reservoirs with glass plate. [Fig. 1/5 nat. size, p. 36.] . . . . . » 1,75

728. **Cylindrical pail** and accurately fitted brass piece to teach Archimedes' principle. [Fig. 1/7 nat. size, p. 36.] . . . . . » 2,15

The apparatus, as is seen in the figure, is hung from the hydrostatic scale pan of balance No. 305 and 308, p. 18 and is brought into equilibrium by placing weights on the lower pan. The massive cylinder is dipped so far into the water that the hanging hook is also wet; the balance because of the upthrust is not in equilibrium. This is again established by filling the pail with water. The upthrust was thus equal to the volume or the weight of the water displaced by the cylinder.

729. — Weinhold's, in order to make experiments with irregularly shaped bodies. (W. D. Fig. 111, p. 149.) Consists of a cylindrical glass vessel with suspension and hooks to hang the glass body weighted with mercury. [Fig. 2/3 nat. size, p. 36.] . . . . . » 1,40