FIG. 1.

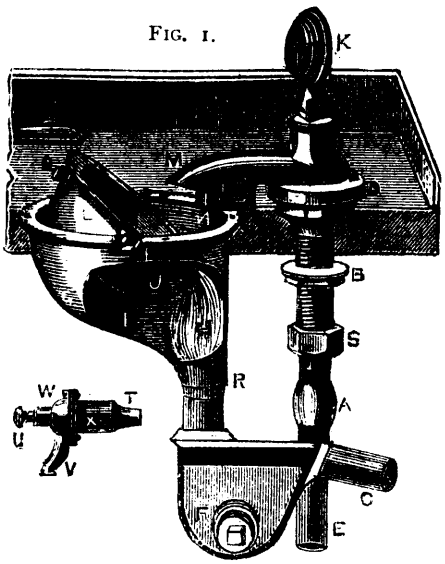


FIG. 3.

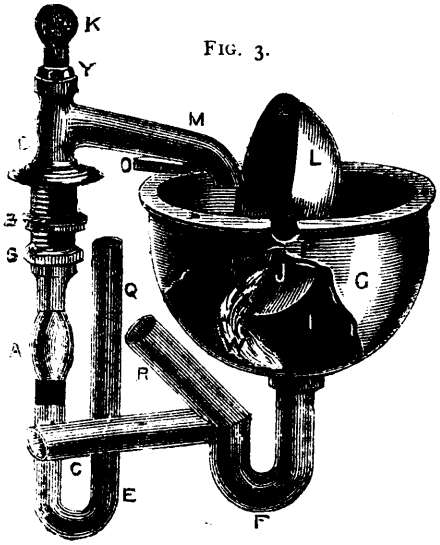


FIG. 2.

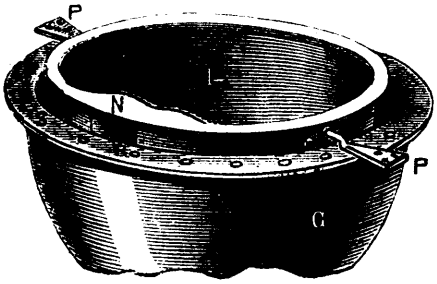
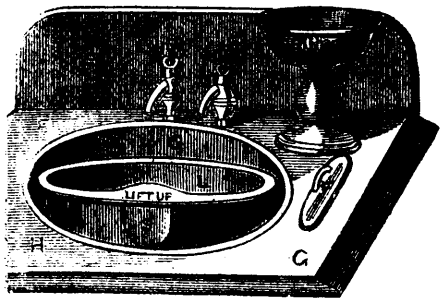


FIG. 4.



PRACTICAL NOTES ON PLUMBING.

FULFILLMENT OF AN ENGLISH PREDICTION.

The following remarkable prediction of the growth of America every word of which has been fulfilled, appeared in the Edinburgh *Review* in 1853, based upon the census of 1850, which showed the then population of the United States to be 23,000,000, of which 18,000,000 were native whites, over 2,000,000 foreign born, 39,000 were of unknown nativity and 3,200,000 were slaves. "It cannot be doubted that, versatile as they are, they soon will give the same attention to art which they now give to more solid but less grateful matters. The incorporation into the community of so large an amount of emigration from Continental cities, educated in art of design, and contributing by the pencil and chisel to the national love of show, will hasten the result. When, in no very distant day, the prairies of the lake country and the Valley of the Mississipi shall be peopled with 50,000,000, gathered from all nations, but guided by the English race and governed by English traditions—when the slopes of the Alleghanies and the Green Mountains shall be covered with sheep and their valleys filled with the best bred stock ; when the plains of the South shall be entirely devoted to the production of cotton (let us hope without the curse of slavery); when the higher and more delicate branches of manufacture shall have taken root in Massachusetts and the mechanical arts found a firmer stay in Pennsylvania ; when the white man shall have driven the buffalo from the fields which each setting sun shadows with the peaks of the Rocky Mountains ; when cities shall fringe the Pacific, towns line the banks of the Oregon, and farms dot the surface of California and the Valley of the Willamette; when skill shall have subdued the mineral wealth of Lake Superior ; when commerce shall whiten every lake and ascend every river of the country and shall carry its productions to every clime ; when railroads shall unite the Atlantic with the Pacific and bring every part of this vast nation into close contact with every other ; when opulence shall have given a home to art in these cities and literature shall have created the traditions which they lack—what a spectacle may they not present to the world if, despising the allurements of ambition and disregarding the erroneous advice of interested leaders, they are content to reap the rewards of their peaceful industry and to enjoy the blessings which Providence places within their reach.—*St. Louis Miller*.

PRACTICAL NOTES ON PLUMBING.

BY P. J DAVIES H.M.A.S.P., &c.

This kind of lavatory basin is shown at Fig. 224 G is the container with its trunk shown bedded into the dip-pipe of the ⊃-trap ; L, is the basin. This basin swings upon two pivots at P, suitable bearings being fixed on the sides of the container ; the basin has suitable stops or buffers to prevent the too sudden closing ; in this case the rubber buffer is shown fixed under the spout of the cock at O, and held there by the claw. The container should be fixed below the top slab, and the hole in the slab made of sufficient size to allow the basin to swing without touching. In fixing these basins take care that the pivots are properly fastened ; othewise when the basin is jammed or bumped against the buffers, the basin will become loose and probably get broken. For another method of fixing the pivots see PP, Fig. 225. This is for screwing up to the top or slab, or it may be fixed to the false bottom, the latter method usually being adopted.

Fig. 226 illustrates a skeleton of the round container tip-up basin, as fixed over the ordinary half ∩ trap. When such basins are fixed over these traps, take great care to well ventilate the outlet of the trap, *but not* as shown at R ; for reasons, see *Building News*, page 753, December 9th, 1881.

Fig. 227 illustrates the basin properly fitted up, and a little tilted to show the stop S, so that it is not always necessary to have the stops on the cocks.