type flume is called U type. The object was to have a flume which has a constant graph of C above the modular limit, for various values of H so that it could be used as a meter. Further experiments on U type flume showed that an increase in length of throat makes the graph of C less variable and is independent of head 'H'. In this flume the higher value of H gives slightly higher modular limit while in all flumes with shorter throat length including Crumps model 'L' the reverse was the case. Calibration test for U flume 2 feet wide showed that for H = 2 feet the correct value of Co is 2.96. In this type of flume we get uniformity and approximate modularity with H up to 2.5 feet. The flume with a throat length of 2 H gave poor results as regards uniformity than with a flume with a throat length of 2.5 H.

Amended U flume type UF has wing walls with a combined radius of 3H and 2H. As regards modularity there is an improvement on U type. Further improvement in geometric shape of flume leads to P type flume. It has a crest length of 9 feet and upstream wing walls 4 feet in radius. Thus the length of throat and upstream wing walls in this flume is about 1.5' less than in the case of UF flume and it shows better results as regards modularity and uniformity. Practically speaking it is a perfect meter flume.

Crumps 'L' flume with crest 4' long and upstream wing walls about 12 ft in radius had a throat 4.8' long and its modularity was distinctly better than 6" flume with throat length ranging from 4.8 feet to 7.5 feet. Therefore results which Crumps obtained without raised crest, do not apply to a raised crest flume. From this it appears that if flumes were made with high raised crest and more bottom contraction it would be more difficult to obtain modularity. It is, therefore advisible to adopt a setting of 9/10 which gives a flexibility of 1.0.

Finally these experiments on flumes 2' to 4' wide with H up to 2.5 and with a setting of 0.9 show that :

a. If the crest length is 2H—the flume performs unsatisfactorily as regard modularity and uniformity and its modular limit varies with H.