In view of the nature of the data from which this formula is derived, it is desirable that a series of accurate experiments should be carried out by one observer with one set of apparatus under uniform conditions, when it is probable that the values of m and k may be somewhat modified. The formula is offered as a first approximation only, for orifices of diameters up to 3 inches, and for heads up to 20 feet. It has the merit of being fairly simple in form, as, given the values of m and k, the values of Cd may be obtained very quickly by the use of a slide rule.

It will now be useful to examine the table of values of Cd for square orifices, given on page 81 of Merriman's treatise. Taking as before the orifices of medium size, the approximate values of m, n, and k are as follows:

l inches	m	n	$k = n\sqrt[3]{l^2}$
.48	.598	.029	.0178
.84	.598	.020	.0178
1.20	.598	.015	.0170

As the values of the coefficient are given to three places of decimals only, the values of m and n (and consequently k) are necessarily approximate; but it may be stated that m is approximately constant, but has a higher value than for circular orifices, while the figures in the last column show that, as before, $n = \frac{k}{\sqrt[3]{l^2}}$ where the average value of k may be taken as .0175, or practically the same as for circular orifice. This agreement is in favor of the theory that the value of the coefficient depends upon the ratio of the perimeter to the area of an orifice. This is supported also by the value of n for the only other equilateral orifice for which the values of Cd are available, this orifice being triangular in form.

A series of experiments is needed on a set of equilateral triangular orifices of different areas, in order to determine the values of m and n for such orifices. The dependence of n upon the ratio of perimeter to area could then be verified, and some idea be obtained of the variation of m with the number of sides of the regular polygon. Experiments on other regular polygonal orifices would also be useful in throwing light on these points.

Fortunately, however, in practice, the variation of m and n with the shape of the orifice is not of great importance in the case of regular polygons, as circular and square orifices are the only ones generally used. It is therefore better for practical purposes to define n in terms of the diameter or length of side respectively,