and to consider m as a separate constant for each case. Generally it may be stated that both m and n (and consequently Cd) are greater, the greater the departure from the circle, or the greater the ratio of perimeter to area, and this holds good also for rectangular orifices, which are frequently used in practice. Sufficient accurate data are not, however, available to determine a general law for rectangular orifices, though it is certain that the law $Cd = m + \frac{n}{\sqrt{h}}$ holds equally well for such orifices; and what evidence there is, is in favor of assuming that n varies as $\left(\frac{\text{perimeter}}{\text{area}}\right)^{\frac{3}{5}}$. It is, of course, easy to see that the value of Cd would be greater for elongated rectangles than for squares, as the end contractions produce a relatively smaller effect. As rectangular orifices are much used, it is desirable that a series of careful experiments should be made on such orifices, preferably on sets of orifices of the same perimeters but of different areas, or of the same areas with different perimeters. As indicated before, however, the first step towards the determination of a general expression for the values of Cd should be to ascertain the variation of the coefficients of contraction, and of velocity.

Although a vast number of experiments have been made on the discharge of jets from various orifices, it will have been seen that, like those described in this paper, they are of a disconnected nature; and it is therefore desirable that further experiments be carried out on a connected scheme. The author has indicated points on which further experiments are particularly required; and has described his own experiments and offers the formulae derived therefrom, not on account of any merit they may possess, but rather as a guide to future workers in the same field.

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