MOULDINGS.

MR. Gambier-Bousfield's paper on "Mouldings," read before the Toronto Architectural Club last November, was, as we have previously remarked, illustrated by a number of diagrams and sketches, but without reproducing these—which, being very complete, were a lecture in themselves—the paper printed here in its entirety would not be so easily understood. The following is, however, an outline of the paper:

Although students in this country had not ancient examples to measure and study for themselves and were consequently unable to see the effects produced by the combinations of mould forms, in the situations for which they were originally designed, yet it is of the utmost importance that students should master the principles of mouldings, and become familiar with the characteristics of the outlines peculiar to each period of architecture. It is a mistake in speaking of the various styles or orders to consider each as separate and apart from others—styles are really inseparable; each period grew out of the one before it, and to comprehend any particular period some knowledge must be obtained of all previous periods, in order that the cause, the why and wherefore of every detail may be understood.

Every detail, whether constructional or ornamental, had its origin in actual necessity; there was no such thing as a feature being introduced originally simply for effect. The column was a constructional necessity, and its ornamental cap and base were originally mere blocks for the purpose of distributing pressure, improved into ornamental features as the art advanced. So again, if there was an opening in the wall, such as a window or a door, it was a necessity to put some projection in the wall above, that would protect the opening from the flow of water down the face of the wall, and here we find the origin of the drip or label mould, the most practical of all mouldings.

The work of an architect of to-day is that of *adaption*. It is his part to adapt old forms to present requirements, not to copy slavishly this or that feature simply because it belonged to the period of which he is designing a building, but to make use of the *principles* of that period, and adapt them to present requirements. Every moulding was originally designed with an eye to the position it was to occupy, and therefore it is a foolish thing now to design a mould that looks well beneath the eye of the designer on his board, that is intended to occupy a position say, twenty feet above his head when carried out, although this is what is constantly done.

But to turn to the forms of mouldings and notice how each grew out of another. There is the "fillet" of classic art by rounding the edge of which the "bead" is formed, sometimes raised on the surface, sometimes sunk, the "quirk" following upon the sinking of the bead, by the cutting off of the right angles of the sinking. Then there is the "torus" or enlarged bead, but used independently of the flat surface of the wall. The "cavetto" is the reverse of the "torus." Resulting from these two, the "torus" and "cavetto," is the combination of the "cyma recta," the half torus forming the lower, while the whole "cavetto" makes the upper portion. The "cyma reversa" is as its name implies, the reverse of the "cyma recta." The "cyma recta" is more generally known and spoken of as the "ogee." Then there is the graceful "ovolo," one of the most beautiful of Greek curves, the small abrupt quarter-circle at the top and the long gentle curve below. The Romans deprived this mould form of its beauty in their adaptation of it—as they did every feature they made use of—and their ovolos were little better than a great quarter-circle. The "scotia," another beautiful Greek line, is the ovolo reversed. These forms in construction variously arranged, and more or less modified, continue in use through all periods of architecture.

Students must remember at the outset the order of the various periods. First, the Classic, or more properly the Greek; then the Roman—a debased classic; after that the Romanesque, an adaption of classic to the requirements of the Christian era, a modification and pure use of classic forms, influenced by the Italian climate and the character of the Italians, as well as by the necessities of the Christian religion and its forms of worship.

Next followed a break when the art made little progress for nearly 300 years, until under Charlemagne at the end of the eighth century we find the art once more revived, but in a new form; the Romanesque has passed away, and the Latin or Norman, or round arch Gothic is being developed. The general plan and outline of the buildings is much the same, but the details are entirely different. Compare the classic constructions with those of the Gothic. In the classic you see occasional curves introduced between wide plain surfaces; rectangular members horizontally disposed seems to be the rule. In the Gothic plain surfaces are suppressed, and the general flow of line is vertical rather than horizontal. You will see how similar are the Norman mould forms to the classic; they consist of beads, fillets, and hollows intermixed with splays.

Early English mould forms consist of the "roll" or "bowtell," the "pointed roll," and the "roll and fillet," and combined with deep hollows, they form the details of the mouldings. When we find distinct additions to these, we draw the line and say another period is commenced, and this we call the Decorated, but we cannot close our eyes to the fact that the additional forms and combinations have been gradually developed from the others, and the period of their development we call "Transition"; so that while the form called the "scroll" is found occasionally in late "Early English," when we find it occur with frequency we say it belongs properly to the Decorated period. Of this second period of the Pointed Gothic are the various combinations of rolls, and fillets; also the plain and hollow chamfers, whether curved or sunk, but towards the end of the second period a very decided change of form is to be noticed; the hollows are getting more shallow, the curves more exactly parts of circles, so that another name for this period is the Geometric period. The rolls are flatter, the chamfers more general, until at last we get to a time when the mouldings are drawn in a "save trouble" fashion. They have become very flat and shallow; the members are extended, so that a single member will cover a surface which a few years before would have been divided into a dozen or more members. To this period—the Perpendicular—belong the "casement," or the sunk chamfer or hollow, widened and flattened out; rolls, often applied like shafs, but without caps or bases; the bracket or double ogee, shows as having been noticed towards the end of the Decorated period. The early form of the casement was simply a widened hollow; there are the "fillets" at each end dividing it from the "rolls," but here the "fillet" is omitted, and the casement is found ending on one side with a "roll" of very slight projection, beyond which, instead of a decent hollow that would throw up the roll, and give a contrast of shade, is the ogee, the roll or outward curve of which touches the roll so that there is neither depth nor shadow. Like other forms, the ogee has not escaped the flattening influence, and we constantly find the bracket (two ogees abutting) made use of, sometimes with a bead between, sometimes in combination with other members.

So much for mould forms. Now the evolutions of these must be noticed. There is the Greek ogee, pure and simple, and its form when with bolder treatment the curves are drawn to almost the half circle, and "quirks" are introduced to connect the ends of these full curves with the flat surfaces beyond them. There is the Early English ogee, which gives us at once the "roll," to which is added the "bead," forming "the roll and bead" mould or the "roll and under cut bead." Then a *point* is left at the angle of the stone, out of which the "roll" has been cut. This point is next seen blunted. The blunted point being a "fillet," while the "roll" has become wider, and is now struck from two centres instead of one, the junction of the curves being covered by a fillet. The "fillet" introduced here to cover the junction of these curves, it was a next step to put it between the other curves to separate the "roll" from its "hollow," and so we arrive at the "roll and triple fillet."

The enrichments of mouldings were next shown to follow the characteristics of each period, examples being shown in the diagrams. The application of these principles of mouldings to buildings for the Canadian climate was next touched upon, and it was shown how unsuitable were such forms as the hollows of Early English base moulds in which water will lie in the severe winters, and therefore what folly it is to introduce such forms simply because they are Early English. Examples of mouldings on recently erected buildings in Toronto where then shown, from which a good lesson could be learned concerning the errors designers of mouldings are likely to fall into when the principles of mouldings are not attended to.