arrises. They are to be dressed and laid to a batter of one in twelve, or such other batter as may be required, and are to be straight or curved as the position of the wall in which they are to be placed renders necessary.

When dressing the stones, their arrises must be kept good, their upper and lower beds made parallel, and the end joints in all cases kept full for at least two-thirds the depth of the beds.

The back parts of the stones must be hammered or picked off to such lines that the backing stones, when laid, may form with them joints not exceeding 1¼ inches in width.

They are to consist of headers and stretchers, the latter to be at least 3 feet long in line of wall and not less than 2 and 3 feet depth of bed in the alternate courses. In each course there must be headers of at least 2 feet length of face and 4½ feet depth of bed, placed not more than 11 feet from centre to centre.

The headers in each course are to be arranged, as nearly as possible, midway between those in the course immediately below.

The faces of the abutments are to be boucharded, and must be carried up with a header and stretcher alternately.

No two vertical joints in adjoining courses are to be nearer to each other than 12 inches, and care must be taken that the bond in rear of the face stone is properly formed throughout.

When the face stones are over 24 inches in height, the depth of bed of the stretchers in alternate courses must be at least 1½ times their height, and the headers 2¼ times their height, and in all cases the tail of a header must have a width ⅔ the length of its face.

The north connecting wall is to be 10 feet thick or more at bottom, with counterforts 2½ x 5 feet and 10 feet apart; it is to be carried up plumb in the rear to within 5 feet of the top, where a frost batter will be commenced, and terminate at the top of the coping, which is to be 3½ feet wide. At the ends it is to be bonded into the abutment walls of the present aqueduct, the toothing checks for which are to be included in the price for masonry. The south connecting wall is to be completed as shown on plan.

If directed, two checks, each 12 inches wide and 12 inches deep, are to be formed in the face of the south connecting wall.

The wing walls on the west side are each to terminate in a pier at its outer end. The coping upon them is to be 3½ feet wide, from which a frost batter is to increase downward at the rate of 4 inches each foot for the first 5 feet; thence the back is to be plumb. The thickness of the wall at the bottom will, however, depend on the height at which a proper foundation can be obtained.

For those parts of the wall above referred to, namely, the abutments, the wing walls on the west side and walls connecting the old and new structures, the backing must consist of large, well shaped stones, not less than 9 inches in thickness and 3 square feet area of bed, laid level in full mortar beds, and properly bonded throughout the wall. When the depth of the face stone equals or exceeds 18 inches, two thicknesses of backing may be used, provided their joint depth does not exceed that of the face work.

The beds and joints, when necessary, must be scabbled or picked to admit of laying the stones close, and to insure an uniform and equal bearing on the course below and for the course above; no pinning will be permitted. The backing stones must, in all cases, be laid on their broadest beds, and the stone against a face header must occasionally extend to the rear line of the wall.

The rear sides of the abutments are to form horizontal, elliptical arches, which, at the sides, will correspond with the inner line of a continuation of the retaining walls.

The stones of these arches must be of large dimensions, roughly dressed or scabbled, so as to radiate fairly to the curve; this arched form to be continued up to within 4 feet of the crown of the arches of the water ways; and care must be taken that the hearting of the walls up to that height shall consist of large sized stones, well jointed and bedded throughout.