this. In walls over three feet in thickness, headers will be built in front and back walls alternately, and great care must be taken in the arrangement of the joints, so as to give perfect bond.

67. Every stone must be set in a full bed of mortar, and beaten solid; the vertical joints must be flushed up solid, and every course must be perfectly level and thoroughly ground.

67 (*C.*) First class masonry laid in Portland cement will only be required on the bridge over the Ottawa River at Lapasse, or near that point

68. *Second class masonry* shall be built of good, sound, large, flat bedded stones, laid in horizontal beds. It may be known as random work, or broken coursed rubble. The stones employed in this class of masonry will generally be not less in area of bed than three superficial feet, nor less in thickness than eight inches, and they must be hammer-dressed, so as to give good beds with half inch joints. In small structures, and in cases where stones of good size and thickness cannot be had, they may, if in other respects suitable, be admitted as thin as five inches. All stones must be laid on their natural beds.

69. Headers must be built in the wall from front and back, alternately, at least one in every five feet in line of wall, and frequently in the rise of wall. In the smaller structures headers shall not be less than twenty-four inches in length, and the minimum bed allowed for stretchers shall be twelve inches. In the larger structures all stones must be heavier in proper proportion. Every attention must be paid to produce a perfect bond, and to give the whole a strong, neat, and workmanlike finish.