paper. In Massachusetts, clay is cited as occurring at Northampton, and at Martha's Vineyard. Granular quartz, another important ingredient of the body, is mined in Berkshire County.

The early exportation of samples of clay from the Southern States to England, has been noticed. No doubt extensive deposits of valuable clays exist there. Good clays are found in California.

Extensive deposits of the finest clays for pottery purposes are found at many points in the State of New Jersey, and including the varieties known as fire-clay, paper-clay, and alum-clay, they form a continuous belt extending obliquely across the State from Raritan Bay and Staten Island Sound on the east, to the Delaware River on the west.* The pits dug for these clays are chiefly within areas of no great extent near Woodbridge, Amboy, Bonhamtown, Washington and Trenton, but explorations have shown the existence of other places where they can be dug with profit. They are, in general, overlaid with superficial beds of drift of sand and gravel. The beds are extensively mined, not only for pottery and fire-brick, but for shipment. Large quantities are used in New York, Philadelphia and Boston, for the manufacture of alum. Much of the whitest and purest is sold to the manufacturers of paper-hanging for facing wall-papers. By far the greatest consumption is in the manufacture of fire-brick, especially at Perth Amboy, South Amboy, and at Trenton. In one township, Woodbridge, over fifty thousand tons of clay were raised in 1865.

Fire-sand, moulding-sand, kaolin and feldspar, often occur with these beds of clay and in workable quantities. The materials used for fire-brick consist of about five-eighths raw

* The limits of this belt are defined by the state geologists of New Jersey, as follows: "The northern limit is marked by the outcropping red shale and sandstone of the triassic formation, following an almost straight line from Woodbridge, south-west by Bonhamtown, to the mouth of Lawrence's Brook on the Raritan River; along this stream, nearly to the Monmouth Junction, and thence north of the railroad near Penn's Neck and Baker's Basin, to the Delaware River at Trenton. The southern boundary of this sub-division of the cretaceous formation is not well defined in consequence of the superficial beds of drift which cover it. Near Raritan Bay they are not so thick, and the division line between the plastic clays and the clay marls is accurately located near the mouth of Cheesquake Creek. But towards the south-west the overlying drift is so deep that it is impossible to draw the southern boundary with much certainty."—*Cook, Geol. Rept.*, 1873, *p.* 103.