

inhabitants of the Western States are the worst, and New England the best. It is found, by a comparison of the census returns of 1870 and 1880, that the colored race are becoming more exact, having decreased their excess from 1267 per cent. to 647 per cent. in ten years. Some parts of Jastrow's summary sound like readings from the book of judgment. "There is nothing hidden which shall not be revealed."

PIPE ORGANS.

IN the various kinds of musical instruments known to-day, we find represented four different methods of producing sound—by vibrating reeds, strings, plates, and columns of air. Under the head of reed instruments are included the cabinet-organ, the concertina, and the clarionet; among stringed instruments, the piano, the violin, the harp, and the guitar; among those having vibrating plates, the drum, cymbals, and bells; and among those having vibrating air columns, the flute, the cornet, and the pipe organ. Each class of instruments has its own peculiar merits and demerits; but in this paper we wish to consider a few points of interest in connection with the last class mentioned.

If I take a test tube, and blow quietly over the mouth of it, I obtain a certain sound. By blowing harder, I get another higher sound; and by blowing still harder, I get a very shrill note. The shorter the tube, the higher in pitch is each of these sounds respectively. Suppose, now, that we take such a tube, capable of giving us three different sounds. In the first case, all the air in the tube vibrates as one body. The tone thus produced is the lowest that the tube is capable of sounding. If I blow harder, the sound will be higher. This is because the air in the tube vibrates in two parts, which are called ventral segments, and which are separated by a plane called the nodal plane. The sound heard is that given by the vibration of the air above the nodal plane, and is of the same