

upon these data the number of fecal bacteria per cubic centimetre in the water under examination is calculated.

A part of the results thus far obtained by the use of this method, together with a more detailed account of the method is published in the 1892 report of the State Board of Health of New York.

BRITISH STONE CIRCLES—V. OXFORDSHIRE, SHROPSHIRE, AND WELCH CIRCLES*.

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THERE is a well-known circle called the Roll-Rich, better known locally, however, as the "King-stones," four miles from Chipping Norton, Oxfordshire (Great Western Railway). It is 100 feet in diameter, and consists of fifty-four stones and fragments, varying from one to seven and a half feet in height, one to five and a half in width, and one to two in thickness. Many of these stand close together, giving the idea that the circle when complete may have been a continuous wall of enclosure; but this is a point on which the visitor can form his own opinion. Two hundred and fifty feet from the circle, in a direction 55° north of east, is a stone called the "Kingstone," 9½ feet high and from 1½ to 5 feet broad and thick; it is on the other side of the road which divides Oxfordshire from Warwickshire, and is therefore in the latter county. Though very similar in position to the "Friar's Heel" at Stonehenge, it would appear to be too far north to mark the point of sunrise; but it may have marked the point of the first appearance of light on the longest day. About 300 yards from this circle, in a direction 10° south of east, stand five stones called the "Five Knights," which are from eight to eleven feet in height and one to four in breadth and thickness. As they now stand they enclose a small square space, three of them standing in a contiguous line facing S. S. E., one standing four feet behind them, and the fifth forming the northeast side of the enclosure, but it is possible that the latter was originally a capstone on the top of the others, and has fallen into the position which it now occupies. The ground enclosed by these stones is two feet higher than that outside them; they may have been designed in connection with the circle, or they may not; this is a point for the consideration of the visitor. There is a monument very like the "Five Knights," some four miles south from Chipping Norton, at a place called Enstone. These stones are called the "Hoarstone," and are four miles from Charlbury Station (G. W. R.).

On a hill above Penmænawr, on the north Welsh coast, there is a circle called "Y Meinen Hirion" (the long stones), eighty feet in diameter; seven stones from three to five and a half feet high remain upright, and one, eight feet long, lies prostrate; there are also sundry fragments and stumps. This monument, described in Gough's "Camden's Britannia" as one of the most remarkable in North Wales, is not unlike the Roll-Rich in character, but is smaller, and, as regards the circle itself, even insignificant. The ground toward the northeast falls rapidly away into a deep hollow, on the other side of which are lofty hills; but about 500 feet to the northeast, down in the valley, is a stone, now prostrate, nine feet long, five feet wide and two feet thick, and in the same direction, but about 400 further, is another prostrate stone of the same length and width, but twice as thick. These stones, placed like the "Friar's Heel" at Stonehenge and the "Kingstone" at the

Roll-Rich, being down in a valley, do not themselves show up on the horizon against the rising sun, but they lead the eye directly to a hill on the other side of the valley, over the top of which the sun would probably rise on the longest day, as it is between 45 and 50 degrees east of north, and not very much higher than the circle. This hill, one on the north side of it, and the Great Orme, form a group of three, and we shall find that in the hilly districts of Great Britain triple summits or groups of three hills are often to be seen to the northeast of circles, from which it may be inferred that the circles were, for some reason or other, intentionally placed in such positions as to command views of triple summits in that direction.

There are two other circles which are only just over the border of Wales, in Shropshire, and are most conveniently reached from Minsterley, to which there is a railway from Shrewsbury. The farther and larger of the two is about seven miles from Minsterley, and is called Mitchellsfold; it seems to be slightly oval, the diameters being 86 and 92 feet; it consists of thirteen stones, varying from six to two feet in height, and one to three feet in thickness. There are also some fragments, but the original number of stones may have been from 27 to 30. Two hundred and fifty feet from the south side of the circle are two stones, fifty feet apart, the dimensions of which are from two to three feet each way; and half a mile due south was formerly a monument of some kind called the Whetstone, which may or may not have been planned in connection with the circle. The top of a high hill, called Stapeley Hill, is 50° east of north from the centre of Mitchellsfold (the same direction as the "Friar's Heel" at Stonehenge), and about three-quarters of a mile from it. Between the two is a single stone, now fallen, eight feet long. Still farther, in exactly the same line, on the other side of Stapeley Hill, and at the same distance from its summit on the northeast as Mitchellsfold is on the southwest, is another circle, called the "Hoarstone," or Marshpool, circle; and beyond this, looking northeasterly, may be seen three low hills. The Hoarstone circle is about 74 feet in diameter, and consists of 33 stones and fragments, the general size of which is from two to three feet in height, width and thickness. The largest stone is in the middle of the circle, a little to the southwest of the centre, and is only three feet and a half high; but, as the ground is soft and swampy, the stones may be sunk to some depth in it, and their original height may have been greater, and, if so, the bottom of the central stone, which now leans to the southwest, may be nearly at the centre of the circle. Many of these stones have artificial holes in them; these are not ancient, but have been made by the miners, who fill them with powder and fire them when a wedding takes place in the neighborhood. Mitchellsfold, otherwise Madge's Pinfold or milking fold, is said to have received its name from a legend connecting it with a cow which gave milk enough for all honest people who wanted any, until some wicked person drew her milk into a sieve, from which time the cow disappeared. The fallen stone between the circle and Stapeley Hill is called the "Dun Cow," probably in connection with the same legend.

There is another circle on Penywern Hill, two miles south from Clun in Shropshire, but it is nearly destroyed; it appears to have been about thirty yards in diameter, and to have had an outlying stone ten feet high, 120 yards or so to the southeast†.

There is also a circle at Kerry Hill, in Montgomeryshire, eight or ten miles west of Clun, which, I am told, is about thirty feet in diameter, with a central block, like the Marshpool circle†.

*No. 1 Abury appeared in No. 529, March 24.

No. 2 Stonehenge appeared in No. 537, May 19.

No. 3 Derbyshire Circles appeared in No. 545, July 14.

No. 4 Somersetshire and Dorsetshire Circles appeared in No. 555, September 22.

†I have not seen either of these, and am indebted to Mr. Luff, a former resident of Clun, for the above information concerning them.