of two adjacent blocks, or, more properly speaking, in the height of the basis of two adjacent chairs, converts that three feet of rail into an inclined plane, rising 1 in 144.

With respect to placing the blocks diagonally, this is a less stable position in the line of rails than when they are placed square, for the resistance of the ground to the sinking of the block, whether conceived to be similar to a collection of springs acting under the block, or a collection of weights acting above it, must in either case be referred to the centre of gravity of each half of the block, considering it as moved by the passing weights about a line drawn through its middle at right angles to the line of the rails; that is to say, in a block two feet square, and one foot thick, there are 12 inches in the direction of the rails, 24 inches across them, and 12 inches in depth, acting on each side the axis of motion when the block is laid square, the surface of each half being 283 inches. Now, any uniform effect on these 288 square inches drawn into the distance of their centre of gravity from the axis of motion, gives for the stability of each half 1728. Any uniform effect on the 288 inches of a diagonal half block will give a less number; for the distance of the centre of gravity from the axis of motion was 6 inches in the square block, but it will be only 5·65682 in the diagonal, being 1-3d the altitude of the triangle, and hence we have only 1629·16416 for the stability in the direction of the rails. The diagonal block will consequently have its maximum resistance to sinking at 45° from the line of the rails, or in the position where stability is least required. Circular blocks have been proposed in order to get equal resistance in all directions, but the gain would not be equal to the extra expense, and the stability, although a trifle more than that of the diagonal block in the line of the rails, is less than that of the square one; for the area, as before, being 567 square inches, $=\cdot 785398\ d^2$, and d being the diameter, we have $d=\sqrt{733\cdot 386}$ $=27\cdot 0811$, and the radius $=13\cdot 5405$, and as the arc is to the chord, so is $\frac{3}{1}$ radius to the distance of the centre of gravity from the centre, or $3\cdot 14159 \times 13\ 5405 : 27\cdot 0811 = 9.02703 : 5\cdot 74678$ inches, and $5\cdot 74678 \times 288 = 1655\cdot$ $=07264$ for the resistance.

We have experimented on the two positions of the blocks, and found that when placed diagonally, there was rather more resistance to lateral motion than when placed square, and they are more conveniently got at to repack in the former position than they are in the latter; but when placed as close as they ought to be, in order to form an economical road, the diagonal position is inadmissible.

THE CENTRAL GEORGIA RAILROAD.

On the first day of February last, one hundred miles of this road was opened for travelling. This is much more than could have been expected, and is what untiring labor alone could have accomplished. We believe the annals of railroad enterprise in the South afford no parallel to the amount of work which has been done on this road, with so slight means, during the same period of time. The chief engineer, L. O. Reynolds, Esq., and his associates, deserve great praise. Economy has been brought to bear on eve ry point for the perfection of the road, while durability has never been lost sight of. As a resident of Savannah, whose abode, in cloud or sunshine, it will be for life, we feel proud of this undertaking—as a citizen of Georgia, we feel doubly proud, that in the teeth of all croaking, at least, one General Assembly of the State, lent its aid to its projection. But, with sorrow we say it, we feel also humiliated—nay, ashamed, that the last two or three Legislatures of Georgia seemed to have lost every vestage of that li-