this could not be the case, as practically it has no joints, being of uniform strength throughout its length. In this view of the case I cannot be far astray in estimating, that the improved rail compared with the common rail would not require more than half the number of track men to keep it in repair, and that in this service a saving of not less than $120 per mile would annually be effected.

Again, the ends of the common rail bars laid in the ordinary way, being deficient in strength, are invariably the first portions of the iron to laminate and give way, it may very reasonably be argued that the wearing surface of the improved rail, being equally supported at all points, would not be so much exposed to percussive blows and unequal wear as the common rail, and would, as a natural consequence, last longer. However just this conclusion may be, it will at once be apparent, that the improved rail may undoubtedly claim very much greater durability and usefulness for other reasons. The lower half being an exact counterpart of the upper, by simply inverting both when the wearing surface of the upper is destroyed, we have a fresh surface brought into play, which in all probability may last quite as long as the first. In view of both these circumstances we may, in all fairness, claim that the improved rail will serve its purpose not less than double the period that the common rail would endure, and hence the annual deterioration of the latter should be reckoned as being very much greater than the former. To illustrate the financial value of these advantages possessed by the improved rail, I present an approximate estimate of the annual saving it would effect.

Assuming that the improved rail, including wrought iron cores, weighs 80 lbs. per yard, and that the common rail weighs 65 lbs. per yard exclusive of chairs, the first cost of a rail track constructed with the former will exceed one with the latter by about $800 per mile:

	Annual excess per Mile of Improved Rail over Common.	Annual excess per Mile of Common Rail over Improved.
Annual interest on $800 excess in first cost of improved Rail	$48	
Annual excess of cost of track repairs	.....	$120
Annual excess of deterioration of iron rails	.....	260
	$48	380
Saving per mile per annum in favor of Improved Rail...	.....	$332