

works in some places coming in contact or crossing each other, and in other places deviating a few miles, it may do the canal proprietors very serious injury, and that too without materially aiding its own. The actual cost of *freight* by the Rail Roads is perhaps three or four times as high as the actual cost of conveyance on the canal; but yet by carrying goods at cost or but little above cost, it will either strip the canal of those articles from which it previously received the greatest amount of *toll*, or compel the company to reduce their charges materially, in order to retain them. And besides, as the rail road touches some points, or passes through some towns not immediately on the bank of the canal, it will offer peculiar facilities for those places; and though it may charge twice or more than twice as much per mile as the canal transporters charge, it may yet, by relieving the shippers of the cost of transshipment and land carriage on a lateral road, deliver goods at those particular places at a less aggregate cost than they can be delivered there by the canal.

If now the trade of the canal were of a miscellaneous description, and small withal, and the company barely able to meet their expenses and interest, and declare a meagre dividend; and a rival of this sort were suddenly laid along side of it, which at the same time would draw off the most valuable commodities, and reduce the charges on the balance,—the expenses and interest of the company remaining still the same,—it is easy to imagine that there would be but little left for the stockholders' profit, and that the shares would necessarily fall.

But if the canal thus situated had possessed a vast trade, such as is found on some of those of early date in England, it might be able to part with a portion of these high priced commodities, without suffering greater loss than could be compensated for by an improved economy in the administration of the company's affairs, or perhaps by the increase of business in heavy freight, which would be produced by the railway itself, and the competition excited by its presence.

There are numerous examples of both these cases in various parts of England.

On the great line from London to Liverpool, we have first the case of the Grand Junction canal and the London and Birmingham railway.

This rail road was constructed at a cost of more than \$30,000,000, and is the most perfect specimen of a rail road which has yet been produced. The highest grade,—if we overlook a plane at the London terminus which is used only for passengers—is sixteen feet per mile. The rails are of the most substantial description, and weigh about seventy-five pounds per yard, and are intended to reverse when the upper table is worn off. The bridges are of stone, and the superstructure is founded on a bed of gravel ballast two feet in thickness, from one end of the line to the other.

The washing of the slopes is adequately guarded against by a well cultivated sod, and the drainage appears to be perfect. The