

siderable amount of work will no doubt be done, not only construction of new lines and extension of existing ones, but also double tracking in order to handle the ever growing traffic, and improving the gradient and alignment of our trunk lines will, I think, be necessary in order to bring down the cost of hauling freight to the lowest possible figure.

The tendency is to increase the weight and power of the locomotive in order to haul as heavy trains as practical, and also to increase the capacity of the freight car, so that we have now for ordinary road service locomotives weighing 150,000 lbs. on the drivers, hauling 60 to 70 cars weighing as much as 2,000 tons.

With regard to the passenger traffic the demand is for better riding track and higher speed.

Now let us see what this means to the railway engineer. In means to the engineer in charge of maintenance of the way, that he must strengthen the track and bridges, replace the rails with heavier ones, increase the number of ties, so that to-day the rail employed weighs from 73 lbs. to 100 lbs. per yard; he must improve his switches and signals, and apply interlocking plant at all grade crossings so that trains may not lose time by having to stop. The crossing tracks must be lengthened, and additional ones must be put in between stations.

To the construction engineer it means

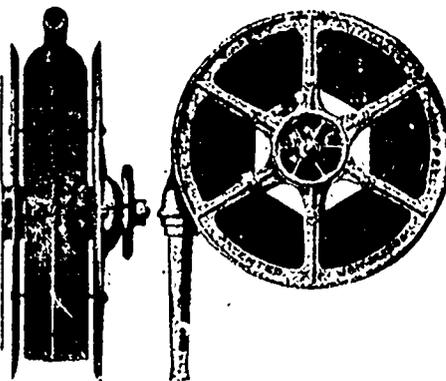
improving both alignment and gradient, which in many cases involves rebuilding of the line on an entire new location for miles.

This goes to show that even if the con-

struction of new lines were to stop entirely, there would still be work for the railway engineer. I have dwelt somewhat lengthily on railways, as railway engineering has

(Continued on page 6.)

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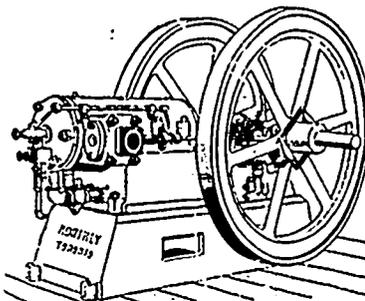
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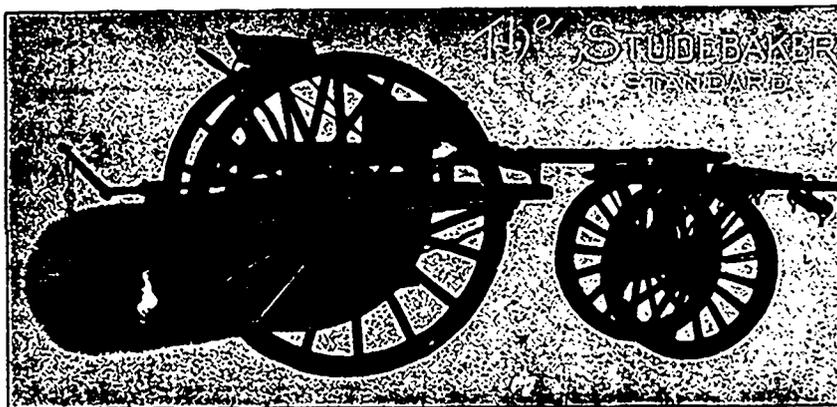
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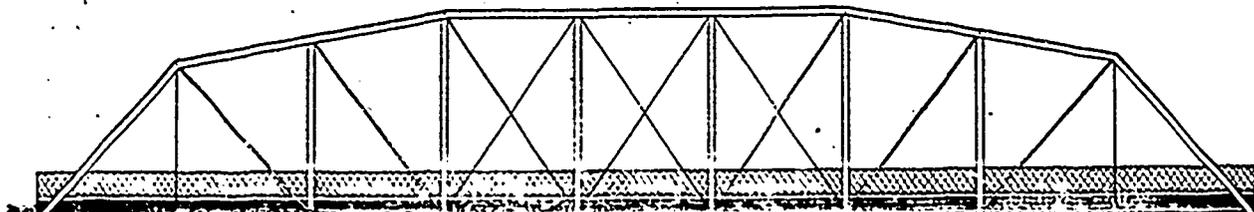
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