

TRAIN COMMUNICATION.

The subject of communication between trainmen and signal men—while trains are in motion—is one of such importance that any improvement of practical utility is always welcomed with deserved interest as a step in the right direction. Many improvements have of late years been introduced for such communication on passenger trains, but very little seems to have been done for goods or freight train service.

Above we give some illustrations of a very simple device introduced upon the Great Western Railway of Canada, and designed by Mr. W. A. Robinson (the locomotive and car superintendent of that railway), which promises to be of valuable assistance in the operating of goods trains, and would also be a useful adjunct for passenger-train service. The device consists of the introduction of a mirror placed on the engine weather plate immediately in front, and over the heads of the driver and fireman, at such an angle as to reflect a view of the whole of the wagons or carriages attached to the engine, and thus render the train behind as distinctly visible to the driver and fireman as the line itself in front.

Figs. 3 and 4 illustrate the arrangement of the mirrors as adapted to the American type of locomotive, and as in use on the Great Western Railway of Canada. The mirrors are shown at *a*, and are secured in a kind of bottomless boxes *b* which are placed over holes *c* cut through the roof of the engine cab or house. The back ends of the boxes next the tender are provided with plain lights of glass *d* for admitting the view of the train, and the frames of the glasses *d* are so fixed on hinges or swivels that they may be conveniently opened on the inside for cleaning.

The arrangement of the mirrors is such that the driver and fireman may, when in their usual position on the foot-plate, have an instantaneous view of the whole of their train as often as desirable. Instead of two mirrors being applied as shown, viz., one on each side of the weather plate or engine cab, one mirror only may be used and extended across the width of the plate (or, in American engines, the width of the cab), and thus afford the desired view of both sides of the train.

Figs. 1 and 2 show the same invention, also suggested by Mr. Robinson, for American conductors' cars or English guards' vans, by means of which the guards of a goods train could from within watch the condition of the train and see if all is right with it. In the case of guards' vans the mirrors are placed at opposite ends of the box, so that the mirror on one side will serve for the van going in one direction, while that on the other side will be used when moving in the opposite direction, unless the van be turned round to accommodate each trip.

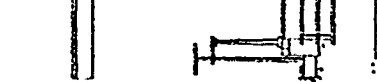
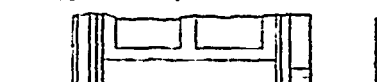
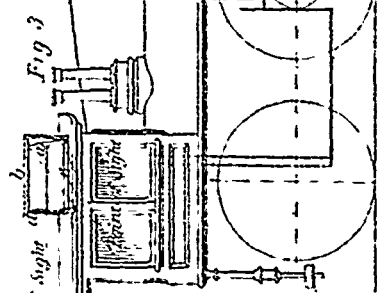
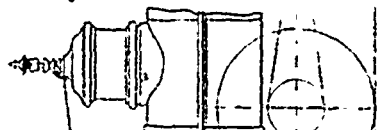
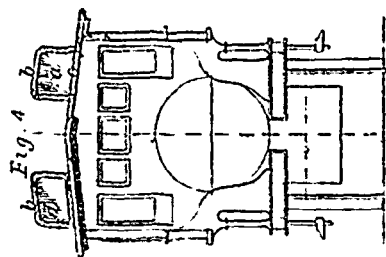
Besides the value of these arrangements for the purposes of transmitting signals to the driver, and the oversight of train from the guard's van, there is the very important knowledge at once gained by the driver of any accident to the vehicles in his train, whether by their getting off the rails or any casualty arising from sparks or fire. We have known of many instances where valuable lives and property could, and would, have been saved from burning vehicles, &c., had such an appliance as the one we now illustrate been in use at the time.

With a desire of giving the public the benefit of the device, we understand that Mr. Robinson places this improvement free for the use of all railroads desirous of adopting it.

The *Independence Belge* gives some curious statistics relative to the consumption of wood in France. A large quantity of soft wood is used for making toys, and to give an idea of the magnitude of this trade it will be sufficient to take one article alone, children's drums, of which in Paris alone 200,000 are sold every month. The total number made annually in France is estimated at 30,000,000, while a considerable quantity of wood must be consumed to supply 60,000,000 drumsticks.

A TEASPOONFUL of powdered borax dissolved in a quart of tepid water is good for cleaning old black dresses of silk, cashmere, or alpaca.

The *Chignecto Post* says:—A block of coal weighing a quarter of a ton was sent from the Spring Hill and Parisboro' Coal and Railway Company's mines, which had been taken from a new seam, between 40 and 50 feet below the surface.



TRAIN SIGNAL MIRRORS.