A CURIOUS CAUSE OF FIRE.

A singular case of fire, which is of special interest to the fire underwriters, occurred recently in Philadelphia. About ten o'clock one evening smoke was noticed in a house, an alarm was turned in, and the firemen found a blaze between the ceiling of the first floor and the floor of the second. It was burning briskly, but was soon extinguished. The chief of the department, struck with the singularity of the fire, ripped up the boards over the place where the fire was seen and discovered a second fire on the top of a timber through which a gas pipe was cut. This fire was put out and the investigation proceeded. The chief suspected that electricity might have something to do with the case, but the owner assured him that he had no electric wire in the house. While they were talking smoke was seen coming from a closet in the bath room on the same floor. The chief thought at first that this was confined to smoke, but it soon proved to be coming from a third fire. This was quickly got under.

The case was becoming so mysterious that it was decided to rip up the ceilings in the vicinity of the fires. After the firemen had been working fifteen minutes they came on a fourth fire near a gas pipe, which was found to be red-hot. This was plainly the cause of the fire. Next day there was another alarm, this time in the cellar, near the entrance of the gas pipe from the street. An examination showed that the gas pipe was partially melted at this point. The chief, being then satisfied that electricity was in some way responsible, called in the electrical inspectors. The origin of the fires was then explained. Although there was not a wire in the house, some electric feed wires ran up the street in front. The insulation on those conductors had become impaired, current had leaked into the containing iron tube, and passed along the tube to where it rested on an iron gas pipe, which ran into the house. The current followed this pipe into the dwelling and grounded on the water pipes.—*Railway Review.*

FIRE ESCAPES.

A danger too often encountered by fire insurance inspectors and building inspectors, although seldom mentioned by either of them, is a single exit for large buildings, particularly factories. Not infrequently men are employed in the extreme rear of a building, say 300 feet in length, who can escape in case of fire only by traversing the entire length of the building, to the front or street door. Moreover, the passage way is usually filled with inflammable material or refuse which, once ignited, would render it almost impossible to pass. In other instances, engineers, firemen, cleaners and dynamo men are practically cut off from escape by being quartered in sub-cellars, under sidewalks or elsewhere.

Often cellar doors or rear doors exist, but in most every case they are grated and are locked, almost invariably

In the case of the Balmforth Fire, years ago, in Louisville, one man who was burned to death had been advised as many as three times to have a grated window arranged for escape, yet that man was suddenly confronted by a cotton fire in front. In the rear he could have stepped through a window to safety, but the window was covered with three-quarter inch rods of iron. He frantically strove to effect an escape, but perished, with four companions. Many times a fire escape on which to get up is of as much importance as one on which to get down.—*Ins. Press.*

RAILWAY ACCIDENTS IN BRITAIN.

The official report to the British Board of Trade upon the accidents occurring on the railways of the United Kingdom, during the year 1895, is issued. This report, written by Mr. Francis J. S. Hopwood, bears date August 12th this year, and deals with railway accidents from two points of view, viz., the safety of the travelling public, and the safety of the men employed in working the traffic. During the year there have been no serious accidents, and the number of passengers killed in England shows a decrease, although the number of persons injured is in excess of that of 1894. In 1895 only five passengers were killed from causes which were beyond their own control, while the injured numbered 399. In 1894 there were 16 killed and 347 injured. The proportion of passengers killed and injured to the number of passenger trips or journeys was only one in 185,954,182 killed, and only one in 2,330,253 injured.

The accidents to passengers from causes other than accidents to trains, including those occurring through fault of their own, have decreased from the number in 1894. In that year 101 persons were killed and 821 injured, as against 78 killed and 710 injured in 1895. In taking all the accidents on railways into account, the figures show one passenger killed out of 11,202,059 passenger journeys and one passenger injured out of 938,387. The journeys by season ticket holders are not included in these figures, because the number of them cannot be estimated. The number of season tickets issued by the British railways in 1895 was 1,196,827.

A SAMPLE AMERICAN COMBINE.

From the London Spectator.

The American Sugar Refining Company became, in January, 1891, the owner of all the property theretofore belonging to the Sugar Refineries' Company, originally organized in 1887. The capital stock, originally $50,000,000, was increased in January, 1892, to $75,000,000, to acquire the capital stock of the four Philadelphia refineries, and a controlling interest in the Baltimore refinery, etc. In January, 1893, a list was made of all the refineries in the United States neither controlled by nor working on an "understanding" with the company in question. There were but four in all, and their aggregate daily capacity, at an outside estimate, was three thousand eight hundred barrels, whereas "the daily capacity of refineries operated or controlled by the Sugar Refining Company was said to be about forty thousand barrels a day." Here, then, we have a corporation with a capital of £15,000,000 sterling, and assets valued in its balance sheet at £21,000,000 "operating or controlling" refineries which can turn out more than ten times as many barrels as all the other refineries in the United States put together. It is not surprising to find that it has been financially successful. The *Commercial Chronicle*, from which we have gleaned the foregoing figures, tells us that the company's ordinary stock has received the following dividends since its formation: In 1891, July, 4 per cent.; in 1892, 10½ per cent.; in 1893, 11½ per cent. and 10 per cent. "extra:" in 1894, 12 per cent.; in 1895, 12 per cent.

There is no need to insist upon the fact that the existence of such corporations as these, holding a position of tyrannical supremacy in a certain industry and paying large dividends on an enormous capital, is detrimental to the interests of the consumer. It is the fashion to abuse competition in these days, and to contend that the race to outstrip one's fellow-creatures in producing a good and cheap article is not consistent with the highest ideals of humanity. Without attempting to soar with modern criticism into the empyrean of transcendental economics, we may perhaps point out that there is something to be said for a system which provides our poorer classes with the necessaries of life and many of its lesser comforts, at a rate which leaves the most modest income some margin to be devoted to culture or other purposes. The effects of the "combine" system, though its organizers have worked it tactfully and discreetly, always endeavoring to stop just short of the point at which their exactions would become intolerable, may be judged from the fact that one of the great parties in the United States has been "captured" by enthusiasts who can see no way to salvation except through the destruction of the whole commercial fabric of the country.

It is not only that the consumer has to pay more for his goods, and that the power of the trusts is closely connected with the truck system which nearly provoked a revolution in England in the days of the Chartists. Owing to the existence of these huge monopolies individual enterprise is crushed; no one can dare to "set up for himself" with the certainty that if he works up a business worth having he will be driven out of the field and his connection will be seized on by a corporation with millions of capital, and a centralized organization behind it; and thus opportunities for the legitimate development of trade are hopelessly lost, because the great corporations, though their existence keeps the small trader from starting, cannot possibly spy out all the openings into which their industry might flow under normal conditions. Assisted by a tariff which prohibits foreign competition, and by the restrictions which legislation (of the United States) imposed upon banking, thus checking the free supply of credit, combination has been developed in America to a point which justifies the existence, if not the methods, of a party sworn to overturn the country's commercial system.

DYNAMITE.

A paper on the use and abuse of dynamite has been contributed by the Commissioner of Mines for the State of Colorado to the *Engineering and Mining Journal*. From it we extract the following: "The safety of the compound is dependent upon purity of the materials used and care in mixing. During the past few years competition among various powder companies has been so keen and bitter that gradually, but steadily, the cost of dynamite to the consumer has been reduced. It is a dangerous contest, and a rivalry in which, sooner or later, if continued, safety will be sacrificed. To be more explicit upon this point—skilled labor commands a certain price, likewise chemically pure nitro-glycerine. The two being the most expensive parts in the compound of dynamite, combined the product is a safe mixture. Unskilled labor and impure nitro-glycerine can be had for less money, but the product of this combination is a mixture subject to decomposition. Decomposition in such a compound is practically explosion. Decomposition may not set in for some time, and the great danger of the competition in the manufacture and sale of dynamite is that of forcing some of the competitors to use impure or cheaper materials and labor in order to meet a lower price, and take chances upon decomposition not commencing before the stock thus manufactured is disposed of. This danger point may not as yet have been reached. The older powder companies have much invested and a reputation to maintain; the newer companies have much invested and a reputation to make. From the standpoint of safety, however, the bottom price is very little below the market price of to-day."

ONE FARM'S YIELD.

Mr. Wilton Wadleigh, of Kingsey, in the Eastern Townships of Quebec, has sent to the Richmond *Guardian* the following returns of crops yielded this season on his farm: 550 bushels of oats from 29 bushels sowing on 9½ acres, showing a yield of 19 bushels to one bushel sowing, or 58 bushels to the acre; 660 bushels of barley and oats mixed from 23 bushels sowing on 8½ acres, showing a yield of 28⅔ to one of sowing, or 78 bushels to the acre.

TO MAKE A RIVER NAVIGABLE.

As an instance of what is being done in the development of English navigable rivers, the record of the work of the Tees Conservancy Commissioners is of considerable interest. During the last five years they have raised the average draught of water in the channel from 25 feet to nearly 29 and the number and tonnage of the vessels in and out of the river have been greatly increased. This has been done by extensive dredging and blasting operations, the erection of half-tide training walls, the reclamation of fore shore, and the erection of breakwaters. The total cost has been, in round figures, five million dollars. Yet the Tees is very far from being the most important of the English rivers. The St. Lawrence is Canada's only river, and if the Dominion is to hold its place in the world's commerce, the St. Lawrence channel must be kept in a position to accommodate the class of vessels doing the world's trade.—*Gazette.*

—Mathematical calculations show that an iron ship weighs 27 per cent. less than a wooden one, and will carry 115 tons of cargo for every 100 tons carried by a wooden ship of the same dimensions, and both loaded to the same draft of water.

—The steamer "Queen City" has broken all grain carrying records on the American and Canadian lakes by taking 134,000 bushels of wheat and 42,000 bushels of rye, equivalent to 174,000 bushels of wheat. This big increase is made possible by the increase of water at the Sault Canal, allowing boats loaded up to 16 feet to pass.