

quarters, which is believed to be a moderate estimate of European requirements for the coming year, there is a deficiency of 47,500,000 quarters, or 380,000,000 bushels. The average European consumption during the past seven years has been 1,624,000,000 bushels, while the average crop for the same period has been 1,405,000,000 bushels, making the average deficiency for the seven years 219,000,000 bushels.

The principal exporting countries outside of Europe, United States, Argentina, India, Australia, and Canada, must be called upon for more than the usual supplies. The estimates of the 1897 crop in the United States range all the way from 450 million to 600 million bushels.

The generally accepted commercial estimate of the wheat crops seems to be 550,000,000 bushels, though figures on the average value of a condition of "100" for 10 years the Government crop report for August indicates a crop of only 450,322,000 bushels. According to an estimate by the Cincinnati *Price Current* the home requirements for the current year may be regarded as approximately 365,000,000 bushels of wheat, for food, seed and other purposes. If, therefore, the spring and winter crops amount to 550,000,000 bushels, the United States will be able to supply 185,000,000 of the 380,000,000 European deficiency. India, it is estimated, cannot contribute more than 8,000,000 bushels, and from the west coast of South America, Asia Minor, and Northern Africa it is not expected more than 16,000,000 bushels of wheat will be received. Australia and Argentina cannot be counted on for their possible 24,000,000 bushels until after the new year has opened.

The crop prospects in Canada are, on the whole, excellent. From a number of districts discouraging reports have been received, but in the main the harvests of the two chief wheat-growing provinces, Ontario and Manitoba, promise to be abundant. The Ontario Government bulletin makes an estimate of 24,268,158 bushels of autumn, based on the very high average yield of 25.5 bushels, as compared with 15,078,441 bushels, and an average of 17.2 bushels per acre a year ago. A significant feature of the report is the increased crop of spring wheat, which amounting in 1896 to 3,519,322 bushels, has increased to 5,480,821 bushels the present year. The reports from different parts of Manitoba and the North-West Territories vary, in some districts correspondents estimating 15 bushels per acre, others 18 to 20 bushels, and so on, until 40 bushels has been given as the probable yield in some districts. The official estimate of the Government places the average yield, per acre, at 16.49 bushels, with a total crop of 21,284,274 bushels. This is thought by some authorities to be too low, and men who are usually conservative have placed the yield at even 25 million bushels.

NEW CAUSES OF FIRE.

A violent thunderstorm, or a succession of such storms, accompanied by loss of life or property, is sure to attract attention to the dangers of fire from such causes. And it may also cause some people to think for a minute or two of the risks of electric light or power-using—for such risks are very real. It is the part of wisdom to reduce these dangers to a minimum by taking necessary precaution. And not the least among such precautions is the having one's house or factory properly wired for either light or power, and

the necessary safeguards placed for lightning discharge or the like. Some of the freaks of lightning are very curious. Not only will it "burn out" a motor on a street car, as it did in a dozen instances last Sunday, but it will interrupt a church choir, as was done during the same storm, by disabling the electric motor of the organ.

The telegraph people can easily furnish a score of cases which illustrate the ever-present danger of fire from lightning discharge, and the power of a lightning flash. Two years since, or three, a "cross" of the telegraph wire with our electric light wire at Yorkville, near Toronto, during a storm, caused the burning of the telegraph office at Aurora, thirty miles away. And the Niagara, Ont., telegraph office was destroyed by fire more recently, the cause being contact of an electric road wire with the telegraph wire on the American side of the river. Still later, Mr. Townsend, the well-known Grand Trunk electrician, tells us of an occurrence at Berlin, Ont., just the other day. On the inside wall of a house were two small wires, covered with a coating of wax and cotton for insulation, and placed in grooves of a board such as telephone and telegraph constructors use. Within an inch and a half of these wires was a gas pipe. Lightning came along the wires into the house, burning off the insulating material, jumped from them across to the gas pipe, and set fire to the house.

Very interesting as well as important are the quarterly reports made by the Electrical Bureau to the National Board of Fire Underwriters in the United States. Novel and suggestive facts with respect to the causes of fires are constantly coming to the surface and proving to us that truth furnishes as strange things as imagination or fiction in the novel conditions of to-day. Who, for instance, but an electrician or a telegrapher would have dreamed of such a cause of fire as dripping water falling on an electric instrument, thereby causing what electricians know as "a short circuit" in a basement?

How many householders are aware that a fire would be likely to arise from such circumstances as the following? An electric wire, properly insulated, lay upon a gas pipe in the interior of a dwelling; rats gnawed the insulating material off the wire, and an arc was established between the wire and the gas pipe, setting fire to the pipe. There are several more instances given, of a character which should serve as warnings to those who use electric lights in house or store. It is related that sparks from arc lamps in a department store set fire to cloaks on a table underneath. This is not an unusual sort of thing. Again, a portable incandescent lamp was allowed to remain lighted lying on a mattress. The heat from the lamp ignited the cloth and the excelsior wood shavings of the mattress, and the fire spread through the basement of the store. More unexpected, probably, is the following: An electric pressing iron was allowed to stand with the current turned on. The heated iron after a time set fire to the table, and the flames communicated to the surrounding combustible material. Take another case, which is a type of several accidents happening in an unlooked-for way: A carpenter dropped a nut on the coils of a rheostat, or resistance coil, short-circuiting them with an iron frame resting against a gas pipe. An arc was formed between the frame and the pipe; the latter was melted by the electric current, and the escaping gas ignited.

So rapid has been the recent progress of electrical