

IN THE WORLD OF PROGRESS

At Cheboygan, Mich., is the largest sawdust pile in the world. It is a hill, 1080 feet long, 875 feet wide, 3625 feet in circumference, ranges from 20 to 50 feet in height, and covers 12 acres. It is the accumulation of one lumber company since 1877.

The state railroads of Belgium have instituted a system of railroad hospitals. Each car in the service contains eight movable couches, a dispensary and an operating room. The cars are being distributed at convenient points of the system.

The business of the Equitable Life Assurance society shows a loss of \$15,000,000 as compared with last year, but the income for the first six months of 1905 was \$38,799,138, an increase of \$386,810 over the corresponding six months of last year, according to a statement which was submitted to the board of directors yesterday.

A police canvass of the voting lists of Philadelphia developed nearly 32,000 bogus names on the registry. A subsequent canvass by unofficial people produced a total of 70,000 spook voters. The impression is quite general that Philadelphia's vote will suffer a severe shrinkage next fall.

Chicago automobilists are facing the real thing when they wish to pass through the government reservation at Fort Sheridan. Orders have been issued that no machine can go through the post faster than five miles an hour, and the sentries have been ordered to stop all who try to. If any chauffeur refuses to stop, the soldiers are further ordered to shoot holes in the tires and stop them, whether or not.

Veterinary surgeons know, but the general public probably does not, that some animals are as liable to meningitis as are human beings. Goats and horses are the principle sufferers in the dumb creation, and from them the infection may be transmitted to man. In horses the disease is known as "hydrocephalus acutus." Of horses affected with the disease, 78 per cent die, and the remainder have a chronic tendency to relapse.

Health Commissioner Darlington of New York has made a report to Mayor McClellan in which he recommends the expenditure of \$17,000,000 for a filtration plant to purify the city's water supply. Dr. Darlington declares that the only way to put an end to the growth of typhoid in New York is the creation of such a plant, and states in this connection that the deaths from typhoid fever in New York during the last five years have reached the total of 16,360. The alternative plan of New York's buying the watersheds around its various sources of water supply is estimated by the health commissioner to cost \$200,000,000, and even this would not, in his opinion, eliminate all chance of pollution. He further argues in favor of the filtration plant on the ground that in time New York will be compelled to take water from the upper Hudson, as the demand grows, and that such water, with its sewage contamination, could only be used if filtered.

Recently an imprint of a finger tip in place of a seal, to establish indisputably the identity of the maker of a will, was taken as evidence by Mr. Fast, a New York lawyer, in an important will contest. He will present a bill in the next session of congress and the state legislature to legalize finger imprints and give them the weight a seal now possesses. Discussing his plan to give a legal status to finger tips, Mr. Fast said the seal, which formerly was an indubitable attestation of a document, was fast passing into disuse. "I suggest," he said, "that as a guarantee of genuineness every person choose one of his ten fingers—which I shall call my 'ego' finger—and place an impression of its tip after his signature, especially on documents requiring a seal by law. In that case the impression should be made after the seal, and in addition to it. Not alone are the lines of each of every person's ten fingers different, but the 10,000 finger tips of a thousand persons all vary. Thus, the impression of a man's finger tip would be incontrovertible evidence that he was present when a document was signed. As we have ten names and also ten fingers, the impression of each different finger may be

adopted for a different figure. If I want to certify by finger tip evidence that a document was executed by me, say on June 14, 1905, I make the following impressions: First, after signing my name, I imprint my 'ego' finger, my left thumb; this means, 'I myself'; then I imprint my right thumb (the sixth finger), for the sixth month; then the little finger of my left hand for 1; then the index finger of my left hand (the fourth finger), for 4; then the little finger of my right hand (the tenth finger), for 0, and finally the thumb of my left hand (the fifth finger), for 5, reading: 'F. R. Fast, his "ego" 6-15-'05.' The adoption of finger imprints would save a great amount of litigation. I specially recommend that impressions of one or more finger tips be placed on documents which are signed by illiterate persons with a cross, also on checks, on letters of credit, and on identification cards."

Intense excitement was created at the Illinois Chautauqua at Springfield when resolutions were introduced disapproving of the bitter attack made by Senator La Follette on John D. Rockefeller. The resolutions were laid on the table by almost a unanimous vote amid a stirring scene. The majority took the position that the subject was a delicate matter and that the assembly should keep its hands off. This incident, coupled with the departure of Rev. R. S. McArthur, the noted New York divine, without defending the character of the oil king, as he publicly announced he would, caused a sensation. The Chautauqua managers declared that the action on the resolution does not mean that the assembly believes Rockefeller is the greatest criminal of the age, as he is stamped by La Follette. They say the Chautauqua should keep silent and that the introduction of the resolutions was a grave mistake.

According to figures compiled by the state board of charities at Albany the poor dependent on public charity in New York City are steadily on the increase. In 1876 the percentage of this class of the city's whole population was 3.22; in 1904 it was 8.69. The figures were prepared for C. A. Locke, a charities expert of Great Britain, who is collecting statistics for all large cities of the world. Secretary Hebbard of the state charities board said: "It is due largely to the increase in population, which has gone up from 1,041,886 in 1875 to 4,437,202 in 1900. It is due also to what is evidently an increase in dependency which has resulted from the great influx of immigrants to New York, and finally the increase is in part due to the more adequate methods of supplying relief to the poor. In early years vagrants were cared for at police stations; now they are cared for at municipal lodging houses. The public medical relief is better organized today." At the percentage given the total poor of New York would be in round numbers 385,000.

A single-phase electric locomotive has been designed for the Swedish government railroads, and experiments are to be carried out therewith, on the application of the electric power to the trunk railroads. Externally, there is no departure from the design of the conventional electric locomotive. Current is drawn from an overhead conductor, and is designed to work at a line pressure of 18,000 volts as a maximum, though arrangements are made to use several lower pressures, the lowest being 3,000. The locomotive carries an oil-cooled auto-transformer to reduce the pressure for the motors, and an oil circuit breaker. The electro-pneumatic control system is used, a compressor driven by a single-phase motor supplying air for all auxiliary power purposes, such as switching, braking, sanding, etc. The locomotive and equipment weigh twenty-five tons, and are carried on four 11-inch wheels. Each pair of these is driven by a 150-brake-horsepower single-phase motor at twenty-five periods, with a gear reduction of 18 to 70. The locomotive will handle a train at 40 miles an hour, and has been built by the British Westinghouse Co., limited.

The Chicago, Burlington & Quincy Railroad company has bought 1 1/2 acres of land west of Chariton, Ia., and will build a reservoir on it this summer that will hold between forty and fifty million gallons of water to supply the needs of the railroad at this point for one year, even though there should be no rainfall in that time. The land was bought from Mr. and Mrs. Carl Sigler, of Indianola, and the sum of \$100 per acre

was paid for it. The road is also negotiating for thirty acres adjoining the above tract, which now belong to E. E. Carroll, which will make a tract of 40 acres, and forms one of the nest reservoir beds in the state. Work on the reservoir will be commenced in about thirty days. The road is spending about \$5,000 on land adjoining its yards here, and additional thousands to build a large reservoir and waterworks of its own. While it is not known what the intention of the officials is with regard to the action taken, it is conjectured that Chariton may some day be an important point on the Burlington, as it is favorably located for either a passenger or freight division.

Attention has been called by technical writers to the fact that the wheels of vehicles intended for driving roads have not kept pace in development with the other parts of carriage mechanism. Experiments with heavy vehicles indicate that wheels should be made both higher and broader. In England it has been recommended that with a maximum axle load of eight tons the width of tire should be about 10 1/2 inches. Increase in the diameter of the wheel is said to be more effective in preventing damage to roadbeds than width of tire.

In announcing that he had solved the problem of the electric propulsion of auto vehicles, Thomas A. Edison took occasion to discredit recent extravagant assertions attributed to him concerning an electric storage battery, which he says he has perfected. The report said the battery might run a pleasure vehicle at a rate of twenty miles an hour for a distance of 150 miles. The best he would guarantee on a single charge was 100 miles. "The troubles with the battery I have been trying for two years to remedy have been purely mechanical," said Mr. Edison. "They have been due chiefly to the swelling of the nickel element. I have succeeded in reducing the weight of the battery to about forty pounds per horse power. With a proper motor and wagon equipment we can take the cells and operate an ordinary delivery wagon at 58 per cent of the cost of maintaining a horse." The inventor said he has worked with the particular object of applying the power to auto trucks for commercial purposes and that he can drive a two ton truck at the rate of thirty-three miles an hour.

The immigration figures for the past fiscal year, just published, show an inpour of 1,07,421 for that period—this being the first time that immigration into the United States has reached or passed the million mark. The nearest approach to this previously was made in the fiscal year 1903, when 857,046 immigrants arrived. The present figure further compares with 812,870 in 1904, 648,700 in 1902, 229,299 in 1898, when the low record of recent years was made, and with 788,992 in 1882, when the high record of all time previous to the present was established. During the decade of the '80s the average yearly immigration into the United States was 520,000; during the next decade, which included a long period of hard times industrially, the average was only about 381,000. Since 1899 with the recurrence of "boom" times, the average has been 713,760 a year. Since 1820 the number of immigrants admitted to the country reaches the remarkable total of 22,932,905, and about one-fifth of this total have come here within the past six years. This vast exodus has been contributed to by countries as follows:

Great Britain	7,286,350
Germany	5,187,090
Italy	2,000,250
Austria (all since 1861)	1,971,430
Scandinavia	1,730,720
Russia	1,452,620
France	428,891
China (mostly between 1853 and 1883)	491,455
Switzerland	220,200
Netherlands	146,168
Japan (all since 1893)	88,909
All other countries	2,059,636

Ireland, of course, has been the heaviest contributor from Great Britain, with England next, and those countries led in the great movement of population westward. Then came Germany, whose emigration to the United States was heaviest in the early '80s. Now it is the countries of southern and southwestern Europe which lead the procession.