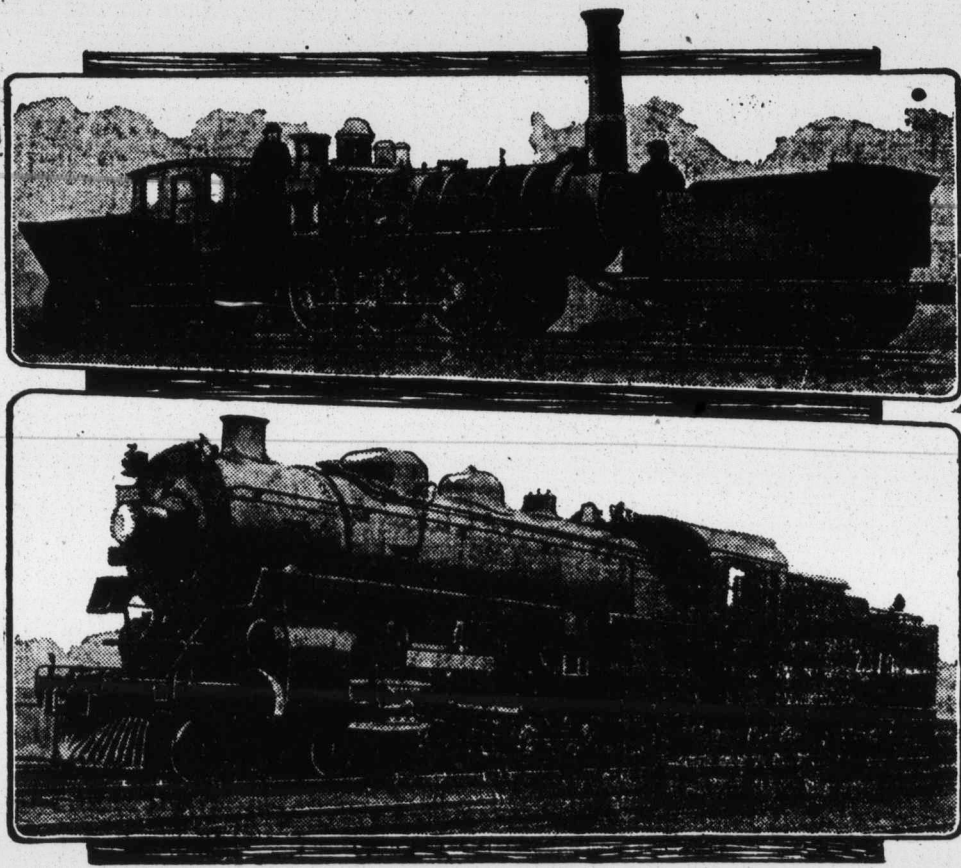


Just a Comparison.



The First Locomotive in America and the Latest.

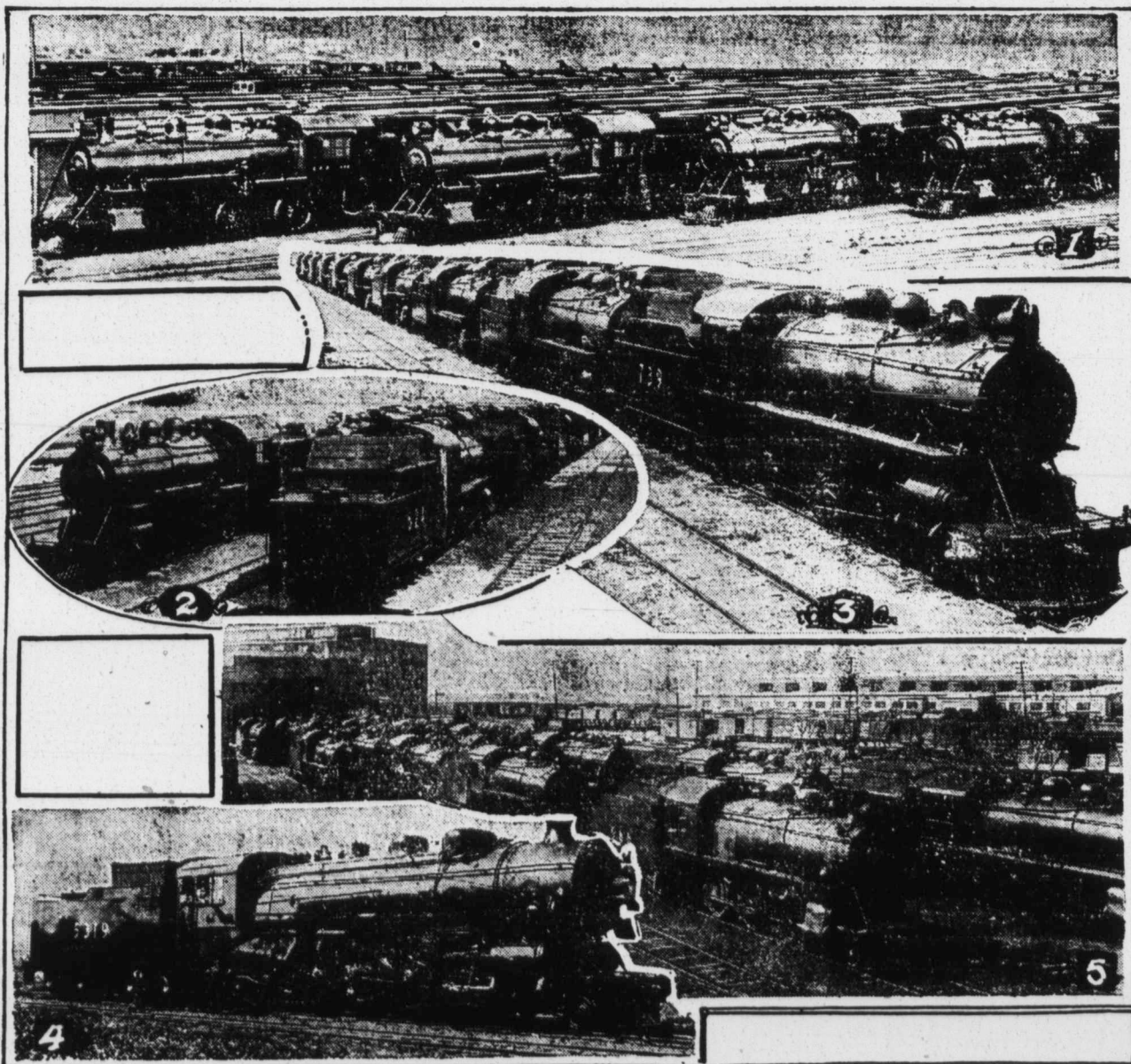
THIS picture might almost be entitled "Ancient and Modern." It shows the "Sampson," first locomotive in America which was first used at Alton mines in 1839, and one of the new Pacific type locomotives which have been placed in commission by the Canadian Pacific Railway on all main lines, and which are chiefly responsible for this company's "on time" feature of service. The Canadian Pacific Railway have now definitely adopted this design for their heavy main line service, as representing the most desirable and efficient locomotive for economy and reliability of service, as this particular design reduces to a minimum, consistent with capacity, the number of moving parts which is essential for reliability of service under the most exacting and severe conditions.

The capacity and weight of these locomotives rank them among the biggest of their type in the world, and the largest of this design in operation in Canada. The haulage capacity of the 2300 series is 42,600 lbs., which

is obtained with 200 pounds boiler pressure, cylinders 25 inches in diameter, 50 inch stroke and with driving wheels 75 inches in diameter. The weight on the three pairs of drivers of engine is 180,000 pounds and the total weight of the engine and tender in working condition is 495,000 pounds, the tender having a capacity of 8,000 gallons of water and 14 tons of coal.

The design of these locomotives was given very careful study, a trial order of engines constructed in 1919 having been made, with tests under all Canadian conditions, which fully justified all expectations for reliability and economy of operation. The boiler has been carefully proportioned and the inter-relationship of grate area, fire box volume, heat absorption capacity of different lengths of tube and gas areas more carefully thought out than is usual in most designs, which, coupled together with an extremely accurate distribution of steam by an improved type of Walschaert valve gear, has given exceptional economy for a locomotive of this size.

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Iron Horses Ready For Grain Rush

HERE are some of the engines and box cars, Canadian made for Canadian traffic, which ~~will~~ in Winnipeg recently to augment the rolling stock of the Canadian Pacific railway. This equipment is now in readiness for the transporting of western Canada's crop, which bids fair to be one of the largest ever recorded. These additional engines and cars were constructed at the company's shops at Angus, near Montreal, and have been assembled at the Weston shops, Winnipeg, awaiting the call to the harvest fields of the west.

The upper picture shows four trains leaving Weston with a string of approximately 100 box cars per engine. Each car has a capacity of 60 tons. (2) and (3) some of the new freight engines which will be used to haul the grain throughout the three prairie provinces. (4) One of the 55 new P-2 class engines. These engines have a total weight of 282 tons, exerting a traction

effort of 55,000 pounds. Their driving wheels are 5 feet 3 inches in diameter; cylinders 26 1/4 in. diameter by 35 in. stroke; the total length being 81 feet, 4 1/2 inches. The tender has a water capacity of 8,000 gallons and 14 tons of coal, which is equal to the average citizen's winter supply of fuel. These engines are known as the P-2 class, numbered in 5,300 series. They have vestibule cabs for the comfort of the engine crew and are electrically equipped throughout. The complete weight of one train hauled by one of these engines, including the engine, is 4,476 tons, of which 3,020 tons would be the carrying capacity for wheat, or 100,660 bushels in each train. The carrying capacity of the 45 engines of this standard is 4,529,700 bushels per trip. Each engine makes one trip a day. Picture No. 5 shows another group of the new Canadian Pacific locomotives. Their capacity and weight rank them among the biggest of their type in the world.

MR. MEIGHEN TO TOUR WEST

Rt. Hon. Arthur Meighen, leader of the Conservative opposition in the House of Commons, will tour the western provinces this fall, but detailed arrangements are not yet available. It is announced, however, that he will arrive in Winnipeg on Sept. 5th and will spend the two following days in that city.

School Inspectors Discuss Subjects Related To Work

The annual conference of school inspectors of New Brunswick was held Thursday at the Education Office, Fredericton, with Dr. H.V.B. Bridges, principal of the Normal School, and Dr. W.S. Carter, chief superintendent of education, also in attendance.

Inspectors of the province are, F. A. Dixon, Sackville; P.G. McFarlane, Chatham; J. F. Doucet, Bathurst; Charles V. Hebert, Dupuis Corner; T.A. Moore, Woodstock; M. G. Fox, Gagetown; L.K. Hetherington, Cady; S.A. Worrell and G.I. Marr, St. John. Mr. Worrell is retiring to become superintendent of schools for St. John and Mr. Marr is his successor as inspector.

In addition to the general subjects for discussion which come up at the suggestion of the Education Department, the conference discussed insurance, flags, libraries, physical exercise, painting school buildings, salaries, local licenses, district bounds and teacher's institutes.

WARNED BY PHONE

Telephone Transmitters Give Alarm of Breaking Dam.

Disaster May Be Averted by Spoken Word That Travels Faster Than the Flood.

Terrible disasters have been caused by the irresistible swift of rushing floods, in which unsuspecting persons were caught without warning. In one instance, years ago, a gay party on a four-horse tallyho was enthusiastically exploring the wonders and beauties of Turkey Creek canon, near Golden, Colo. Gaudy rainclouds failed to cast a shadow upon their high spirits, and no serious thought was given to danger from the rapidly approaching storm, because the tourists were not familiar with the characteristics of the local tempests, nor with the topography of the surrounding country.

The storm suddenly burst with great fury upon the unprepared pleasure seekers and the deluge of water caused them quickly to abandon the tallyho and hunt for shelter. Closely huddled against the towering sides of the canon, they soon realized, with anxiety, that they had not reckoned with the forces of nature. The terrific rush of water down the canon sides swept them from their feet, and down to the bed of the canon, where a torrent of water now raged. Despite their struggles, many of the party lost their lives, and those surviving were seriously injured.

Another instance was the great flood at Johnstown, Pa., and the more recent was the disastrous flood at Pueblo, Colo., where the toll of lives, and property damage, reached enormous proportions.

As a protection against such terrible events as these, a system of huge telephone transmitters and amplifiers has been produced which will throw the human voice a distance of four miles. Extensive tests have been made with this apparatus, which have proved the practicability and success of the endeavor. These tests were conducted in the Catskill mountains by a specially trained group of operators. A tower, thirty feet high, was erected to hold the gigantic amplifiers and the immense projectors which measured fifteen feet in length and four feet in height.

To determine just how far the human voice could be heard with these aids, was accomplished in rather a weird manner, because the time selected was at night. Four men took up previously agreed-upon stations, at distances of one, two, three, and four miles from the tower. As the time drew near for the experiments, the four men applied matches to specially prepared torches, which gave large flaring flames.

Meanwhile at the tower were gathered a party of men chosen to observe the tests, and who interestedly watched the tiny flickering torches in the distance. When the "zero hour," or time set for tests, arrived, the operator at the tower took his place before the transmitter of the apparatus, and in a natural tone of voice, ordered the far-off men to wave their torches.

Breathlessly the watchers at the tower peered through the inky blackness at the flickering points of fire, and the nearest torch was seen to describe vigorous circles in the air. Exclamations of satisfaction came from the watchers, which rose to a shout, as the second, then the third, and finally the fourth torch was seen to dip and wave wildly in the darkness, thus showing plainly that all the men had heard the command. The operator at the transmitter then spoke to the men again, in reply to their ready signals, and bade them wait for further instructions.—H. A. Lane in Popular Mechanics Magazine.

\$100,000,000 for Toys.

The people of the United States spent more than \$100,000,000 for toys and games during 1921. The National City bank announces that the factory value of toys manufactured here more than trebled when the war cut us off from Germany, formerly the chief source of our toy imports. In 1919, the value of toys made here was \$46,000,000 as against \$14,000,000 in 1914. Toy imports fell from \$8,000,000 in the year before the war to \$1,000,000 in 1918. In 1920 imports rose to \$6,000, and this year to \$10,000,000. Capital engaged in the industry here advanced from \$10,000,000 in 1914 to \$25,000,000 in 1919. Exports of American toys advanced from less than \$1,000,000 in the year before the war to \$4,000,000 in 1920.—New York Sun.

Wifely Solitude.

"Jack, dear," said Mrs. Youngbride, "I fear you are worrying about the household details."

"What do you mean, Helen?"

"You were talking in your sleep again last night and every little while you'd say, 'Give me some more chips.' You really must get your mind off the woodpile, dear."—Boston Transcript.

In Days Beyond Recall.

"Talking about expensive drinks," said Boozem, "what about the one in which Cleopatra dissolved the pearl?"

"That's nothing!" returned Joakley. "I have put a whole mint in a julep myself."—Boston Transcript.

Houses Built to Last.

Except those that have been built in a hurry since the war, the houses and office buildings of Belgium are constructed of stone and brick and intended to serve at least 100 years.

MAGIC BAKING POWDER

Magic Baking Powder is scientifically made and has never failed to give the maximum leavening efficiency. Because of this and the uniformly satisfactory results obtained by its use we recommend it as Canada's perfect baking powder.



Insulin Saves Life Of South African Boy

Insulin has saved the life of a 5-year-old South African boy who was brought to London a few weeks ago in a diabetic coma nearly dead. Today he is a plump and jolly little chap and looking forward to returning to his home in Johannesburg. Hospital experts regard this as the most remarkable example of the efficacy of the insulin treatment in connection with their experience.

Vancouver To Get \$1,200,000 Elevator

A building permit for the new 2,000,000-bushel grain elevator to be erected adjacent to the new Government dock in Vancouver by the Board of Harbor Commissioners, has been granted by the city. The structure will cost \$1,200,000. The object is to complete the elevator so that it will be ready to handle part of the 1923 crop. It is estimated that it will take at least four months to complete the structure.

EXCRUCIATING PAINS, CRAMPS

Entirely Remedied by Lydia E. Pinkham's Vegetable Compound

Eberts, Ont. — "I started with cramps and bearing-down pains at the age of eleven years, and I would get so nervous I could hardly stay in bed, and I had such pains that I would scream, and my mother would call the doctor to give me something to take. At eighteen I married, and I have four healthy children, but I still have pains in my right side. I am a farmer's wife with more work than I am able to do. I have taken three bottles of Lydia E. Pinkham's Vegetable Compound and I feel that it is helping me every day. My sister-in-law, who has been taking your medicine for some time and uses your Sanative Wash, told me about it and I recommend it now, as I have received great relief from it."—Mrs. NELSON YOTT, R. R. 1, Eberts, Ont.

Lydia E. Pinkham's Vegetable Compound is a medicine for ailments common to women. It has been used for such troubles for nearly fifty years, and thousands of women have found relief as did Mrs. Yott, by taking this splendid medicine.

If you are suffering from irregularity, painful times, nervousness, headache, backache or melancholia, you should at once begin to take Lydia E. Pinkham's Vegetable Compound. It is excellent to strengthen the system and help to perform its functions with ease and regularity.

