

THE GREATEST BUSINESS CONCERN IN THE WORLD.

The postal establishment of the United States is the greatest business concern in the world, handling more pieces of mail, and employing more men and women than any other government or corporation. The immense size of the country, the lack of concentration of the inhabitants in a few large cities, all help to make the Post Office service of the first magnitude, and, as a matter of fact, only one corporation, a combination of railways, earns and disburses as much as the Post Office Department. Probably no branch of the government service comes into as close contact with the average citizen as the Post Office. The postal service is pre-eminently one of detail, and it may, perhaps, be interesting to take the report of the Postmaster-General and analyze some of the figures.

Some idea of the wonderful perfection and system which makes the service possible may be obtained when it is stated that a letter can be sent from Florida to the Klondike, a distance of over 7,000 miles for two cents, thirty days being consumed in its transmission. If it were carried by courier the time would not be lessened and the cost would be increased to something like \$300. It is this remarkable cheapness which makes the service so interesting, for, of course, on this hypothetical trip of the letter, its delivery in the gold fields costs much more than was received for its transmission; but the government makes a handsome profit on much of the first-class matter; enough, in fact, almost to make good the deficit caused by transporting inferior classes of matter.

According to the report of the Second Assistant Postmaster-General for the fiscal year ending June 30, 1899, there were 34,298 routes of domestic mail service in operation upon that date. The total length of these routes was 496,948 miles, or more than a round trip between the earth and the moon, as is shown graphically on our front page. The number of miles traveled per annum is 445,744,845 miles, or more than two round trips to the sun. The annual rate of expenditure for the transportation of the mail is \$53,076,413. The rate of cost per mile of length of the route is \$106.80. The rate of cost per mile traveled is 11.90 cents; the average number of trips per week is 8.62.

The inland service can be divided into ten classes, and a comparison is made in our engraving of the length of the various routes. By "star route" is meant a route where the means of transportation is other than railway, steamboat, street car, or pneumatic tube. There are 22,482 star routes and their length is 269,452 miles. The annual rate of expenditure for this service is \$5,114,943. The annual travel is 132,068,807 miles. The daily travel for 365 days is 361,830 miles, or seventeen times around the world. It is upon the star routes that much of the romance of the Post Office Department rests, and many of the carriers have performed heroic deeds.

Next on our diagram comes the railway service, which amounts to 176,726 miles, divided among 2,617 routes. The annual rate of expenditure for carrying the mails on the railroads is \$31,942,150. This does not include the salaries of 8,388 railway post office clerks, who receive the sum of \$3,610,732. The annual travel upon the railroads is 296,782,270 miles. Dividing this total by the number of days we obtain the daily travel on railroads, which amounts to 813,000 miles, or thirty-one trips around the world. There were handled by railway postal clerks during the year 7,118,422,840 pieces of first-class matter, and 6,233,569,885 of all other classes of matter, making a total of 13,351,992,725 pieces, which includes 519,870,465 pieces of city mail separated in railway post offices. In addition there were handled by the railway postal clerks 17,537,058 packages, cases and pouches of registered mail. With 1,312,388 errors made by the clerks in distributing this matter, there were over 10,000 correctly forwarded pieces of mail to every error made, constituting a remarkable record. There were 799 casualties during the year to railway postal employes, and of this number 6 were killed and 50 seriously injured.

The number of routes of steamboat mail carriers is 178, and the length is 31,169 miles. The annual travel amounts to 4,387,028 miles and the annual rate of expenditure is \$550,454. The street car service amounts to 1,926 miles and includes 267 routes. The annual travel is 4,978,130 miles and the rate of expenditure is \$275,448. The pneumatic tube service is only 8.05 miles in length, so that it would hardly show upon our diagram. The pneumatic tube service cost \$222,266, and it is confined to the cities of Boston, New York, Brooklyn and Philadelphia. The service has proved highly efficient and has done away with many thousands of miles of wagon service. Letters for branch offices can be forwarded at once by the pneumatic tube instead of being held, as formerly, for the next regularly scheduled wagon or car trip. The labor of closing, recording, and verifying pouches is also done away with. There are several minor means of transportation known as special office routes, mail messenger routes and wagon routes in cities. While some of them are very extensive they do not call for special attention.

The question of weight naturally occupies the second place in interest. Before discussing this, however, it

is necessary to consider briefly the various classes of postal matter. "First-class" matter includes letters, postal cards, and anything sealed or otherwise closed against inspection. While the weight of first-class matter is not very great, at the same time it furnishes the greater portion of the postal revenue. "Second-class" matter includes all newspapers, periodicals, and all matter exclusively in print and regularly issued at stated intervals, as frequently as four times a year. This forms the bulk of all mail matter carried and furnishes only a small percentage of the revenue. "Third-class" matter includes printed books, pamphlets, circulars, etc., and does not form a very large portion of the weight carried, although it furnishes almost twice as much revenue as enormously heavier second-class matter. "Fourth-class" matter is all mailable matter not included in the preceding classes, embracing merchandise and samples of all kinds. The weight of first-class matter carried amounts to 128,517,992 pounds. The postage paid amounts to \$65,987,732. The total number of letters and other pieces that are sent at letter rates is 2,917,000,000. In addition to this there were 98,092,000 dead-head and "official business" letters sent through the mail as well as 573,634,000 postal cards, making the total number of first-class pieces of mail matter 3,588,726,000 pieces. There are 9,804,729 pieces of first-class matter mailed daily. This would make a pile 39,219 feet high, or more than 7 miles high, not allowing for the compression caused by the incumbent weight.

In second-class matter the total number of pieces mailed amounted to 2,173,715,000. This is, however, only an estimate, though an official estimate; it is, undoubtedly, very much larger. The total weight of matter paid at pound rates by publishers was 352,703,226 pounds. In addition to this, 62,241,700 pounds were transmitted free, and 25,289,355 pieces of transient matter paid for by stamps were also transmitted, making a grand total of 440,234,281 pounds. The total postage paid amounted to \$5,091,322, and, notwithstanding the great weight of the material carried at pound rates, it paid only \$3,527,032 of this amount. The enormous discrepancy between the weight carried and the postage paid on second-class matter is admirably shown by our diagram. The transportation of second-class matter at such an excessively low rate was, of course, the cause of the postal deficit of \$6,610,776. There are many abuses connected with second-class mail, such as the mailing of novels, trade organs, etc., which conform to the letter, but not to the spirit of the laws. If every Postmaster-General would make strenuous efforts to rectify these abuses, it would put this department on a paying basis. Up to the present time, however, there does not seem to be any prospect of relief.

The weight of third-class matter carried is 68,227,169 pounds, and the number of pieces mailed amounts to 747,695,000 pieces, and the postage paid is \$10,093,882, from which it will be seen that the amount of postage paid in this class is thoroughly adequate to produce a surplus.

The weight of fourth-class matter is 21,776,347 pounds. The number of pieces mailed is 66,174,000, the postage paid being \$3,421,181. The weight of foreign mail carried is 7,760,377 pounds, and the cost is \$2,546,806.

The figures which have just been shown make imposing totals. The number of pieces mailed in the fiscal year which we are considering is 6,576,310,000. If these pieces of mail matter were placed together they would make a band seven feet wide around the world. The total weight carried is 664,286,868 pounds. To transport this enormous weight would require 33,214 freight cars, forming a train 300 miles long, hauled by 500 locomotives, aggregating 500,000 horse power, and the locomotives alone would require seven miles of track. It should be remembered that mail matter carried on trains is not packed tightly, as in the vast train we are considering, where it is estimated that 10 tons of matter are closely packed in mail bags. As a matter of fact, only on very few trains is the mail carried in this way. Sometimes a trailer or supply car is used, which is packed solid with mail bags, and they are brought forward to the sorters as becomes necessary. It is impossible to make any reliable comparison of mail as actually carried, and it is possible to assume that only freight cars are filled with mail, for the sake of argument. One of our diagrams gives a graphic representation of the way second-class matter is mailed. It shows that five cities receive practically all the second-class matter mailed, New York receiving 80,586,745 pounds; Chicago, 43,461,123 pounds; St. Louis, 19,295,297 pounds; Boston, 17,478,873 pounds; Philadelphia, 17,172,533 pounds; all other places receiving 262,239,710 pounds.

We now come to the financial side. The postal revenue is represented in our engraving by a pile of ten-dollar gold pieces 47,000 feet high. Total revenue for the fiscal year 1899 was \$95,021,384. The total expenditures amounted to \$101,632,160, leaving a deficit of \$6,610,776. Had 176,351,613 pounds of mail matter, which was really third-class, been transmitted at the pound rate, and paid for as it should have been, the

financial statement would have exhibited a surplus of \$17,637,570. Or, if this matter would pay only a nominal rate of eight cents a pound, there would have been a surplus of \$5,733,836 in the year we are considering. The amount of postage actually received for a pound of first-class matter was 85.6 cents; second-class matter, 8 cents; third-class matter, 14.7 cents; foreign matter, 46 cents; postal cards, 188.2. The expense of the transportation of the mail matter is reckoned at eight cents a pound.

The number of registered pieces carried was 16,086,022. There were 29,976,371 Post Office money orders issued, the aggregate value being \$224,958,363. The Dead Letter Office received 6,855,983 pieces of mail matter. Of this amount 367,469 were misdirected, 71,919 were without an address, 4,903,700 were unclaimed, and 113,917 had fictitious addresses. The number of stamps issued was 4,917,269,025.

The total number of Post Offices in the United States is not far from 75,000, and the number of employes is estimated at 200,000. It should be remembered in dealing with postal figures that they are apt to be slightly erroneous, and in nearly every case the weights are greater than those which we have given, though they are sufficient to show the wonderful magnitude of this most important branch of the government service.

Automobile News.

An automobile show will be held at Madison Square Garden, November 3 to 10. All of the floor space has been taken and the boxes on the north side of the Garden will be floored over to give additional space. There is every prospect of a successful exhibition.

The idea of utilizing a motor haulage in connection with the market gardens near the metropolis has been suggested in the general and automobile press of late, and it is satisfactory to see such a journal as *The Gardeners' Magazine* giving the notion its approval. It recognizes that motor vehicles would obviate some of the difficulties that market gardeners have now to encounter in getting their produce to market, and considers that it would certainly pay some enterprising carrier to make the venture.

The Schwabischer Mercier says:—"Our Swabian industry has a gratifying success to record. The military motor wagons manufactured by the Daimler Motor Company at Cannstatt, with which, as already mentioned, exhaustive tests were made with various kinds of weapons by the Ministry of War in the presence of officers of high rank, in the neighborhood of Quedlinburg and on the Brocken, were also exhibited to the Emperor." The Berlin local paper reports as follows: "We congratulate the Daimler Motor Company, which, as is well known, is bringing out the patents of G. Daimler, on this new and grand success. Four benzine motor wagons have been built experimentally for the conveyance of the baggage of the troops and for the speedy conveyance of the troops. They were brought to notice by Major Madlung, of the Ministry of War. Before exhibiting them to the Emperor they were carefully tested in the country. The trial began at Quedlinburg, and extended over the Harz territory to Gernrode, Suderode, Thale, and Blakenburg. The baggage wagons, the largest of which was loaded with 45 cwt., had not only to travel over the good, but steep mountain roads to Harzgerode, Hexentanzplatz, and Friedrichsbrunn, but had also to go over stony and sandy field roads and loose plowed lands for long distances. Two baggage and two passenger wagons, heavily loaded, undertook the daring feat of crossing the Brocken from Quedlinburg, over Hexentanzplatz, Treseburg, and Schierke, in which they successfully competed with the Brocken Railway. From the summit of the Brocken the four wagons performed the journey over Ilsenburg, and Halberstadt to Magdeburg, in six hours. On the second day, at midday, they reached Berlin. A large number of officers accompanied the trial journey from the beginning to the end. As already mentioned above, the driving power was a benzine motor. The baggage wagon has the appearance of the goods van of a train. The passenger wagon is similar to the motor cabs in use in Berlin. The Emperor ordered the wagons to drive in front of the New Palace, and made inquiries of Major Madlung as to their construction. It is said that the troop wagon intended for quick service can travel 40 kilometers per hour. Mr. V. Gossler, the Minister of War, and General V. Hahnke were present at the inspection. The Emperor was not sparing in his praise of the unusual performance." Since the above was written we understand, says *The Automotor Journal*, that as a result of these trials the German War Office has placed an order for five motor lorries with the Daimler Motoren Gesellschaft. Curiously enough, an offer to submit the same type of vehicle to trial by the British War Office was curtly rejected. Before, however, condemning the War Office, we must remember that the type of motor referred to implies an abundant supply of petrol. In France and Germany such a supply could always be relied upon, even in war time, but petrol is, we fancy, a scarce commodity in South Africa, and hence a petrol motor would have but a very small chance of successful operation.

SCIENTIFIC AMERICAN

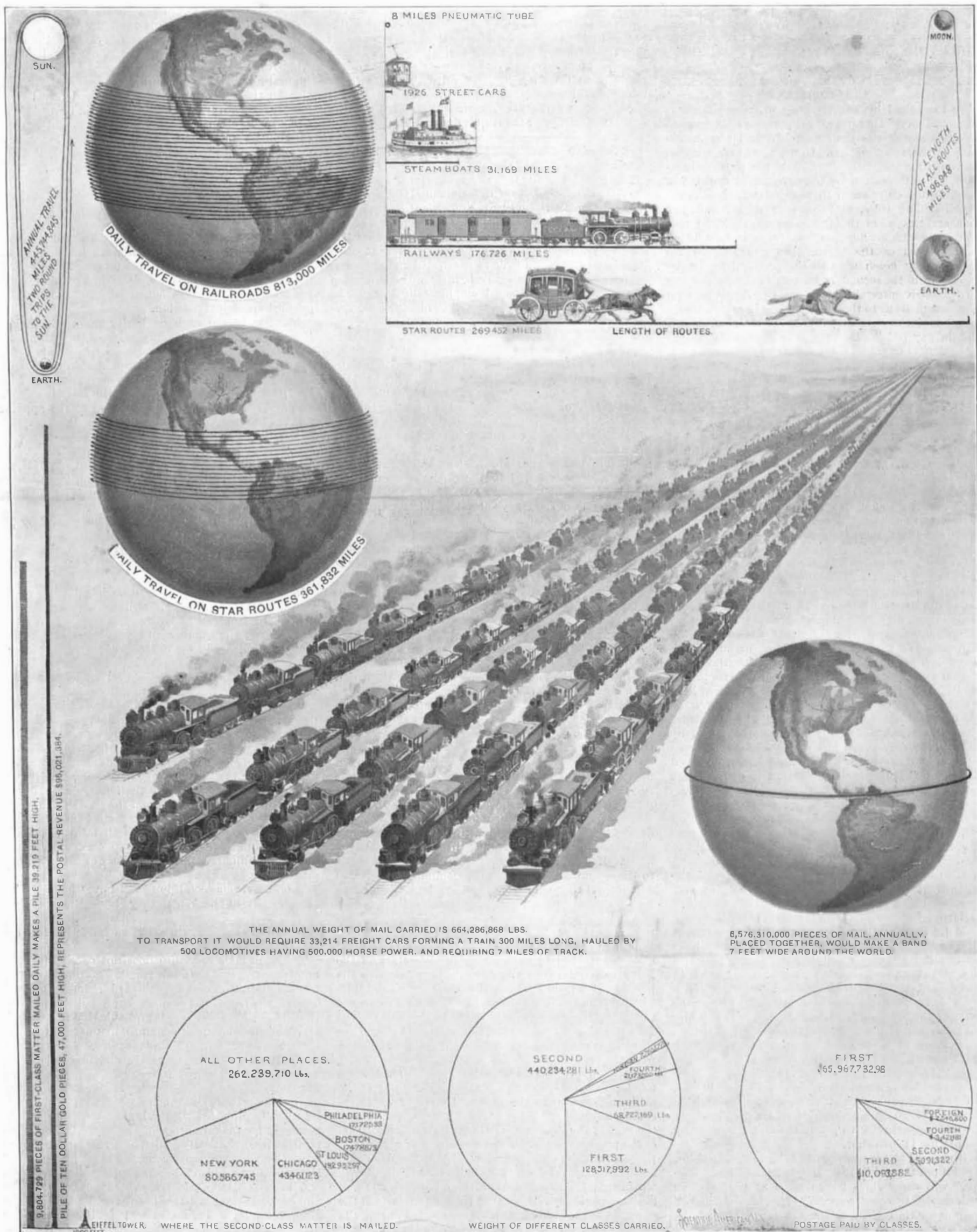
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