

illustrated in a heated chamber; wherever there is an opening, at the window, or even the keyhole, there is a warm current outward, and a cold current inward; and woe would be to the inhabitants of a house that would successfully stop this circulation. And thus the air of the polar regions is returned to the equatorial belt by its flow southward, in what we recognize in our latitude as the northwest wind, sliding along under the upper and warmer southwest current.

We have a periodic oscillatory motion of this equatorial heat belt northward and southward from the true equator, manifested in the vernal and autumnal equinoxes, which gives rise to winds and rains peculiar to its motion, and in accordance to the laws of temperature as it affects the air. It also affects the temperature of the sea in its motions as manifested in the various gulf streams, but not in so great a degree, since water is not as elastic as air.

## OUR POSTAL-CAR SERVICE.

An English writer, describing the changes which were wrought in the postal service of Great Britain by the introduction of railroads, and, later, in connection with these, of "traveling sorting-carriages," enthusiastically exclaims that "by means of the extra railway facilities, the letters now pass along this line (the London and Birmingham) in a space of time so inconceivably quick, that some time must elapse before our ideas become accustomed to such a rapid mode of intercourse!" At the time this was written, Palmer's famous mail coaches were yet within the memory of some of the "oldest inhabitants" of England, and Sir Rowland Hill's postal reform was an affair of only yester-

The first railway post-office journey in England was made on the "Grand Junction Railway," between Liverpool and Birmingham, on the 1st of July, 1837; and it was upon the completion of this line to London, in January of the following year, that the railway post-office, or "Flying Mail," first started from the British metropolis for Birmingham. Owing to various circumstances, geographical, political, and otherwise, it was more than a quarter of a century after the success of the "Flying Mail" had been demonstrated in Great Britain, before any attempts were made in the United States to reorganize the mail service, and establish it upon a footing similar to that in England. The first vague efforts in this direction, which were simply experimental, took place under the administration of Postmaster-General Joseph Holt, who, in 1860, effected an arrangement with certain railway companies to run a mail train from New York to Boston, via Hartford and Springfield, by which the Southern mails, arriving in New York, could be immediately forwarded east, instead of lying over in the metropolis until the following day, as the practice had been. This movement may be considered as the germ of the railway postal system in this country. The following year similar facilities were secured on the line between New York and the National Capital; and two years afterwards, the Post-Office Department adopted a plan, suggested by the late Colonel George B. Armstrong, who was at that time assistant postmaster at Chicago, for putting "post-office cars" on the principal railroads, in which mails could be "made up" by clerks, while in transitu, for offices at the termini and along the lines of such roads.

It was on the 1st of July, 1864, that the originator of this system, Colonel Armstrong, was authorized by Hon. Montgomery Blair, who was then Postmaster-General, to "test by actual experiment, upon such railroad route or routes as you may select at Chicago, the plans proposed by you for simplifying the mail service." On August 31st, of the same year, Mr. Armstrong wrote in answer to this letter as follows: "To-day I commenced the new distribution; but it will be confined to the offices on the line (the railroad between Chicago and Clinton, Iowa). This arrangement will so far test the scheme. I have no doubt of its thorough success. I will keep you advised of its pro-The first railway post-office here referred to left Chicago for Clinton on the morning of the 28th of August, 1864, on its trial trip; and on the 31st, the distribution of letters from it to stations along this route was commenced.

This was the inauguration proper of the railway post-office system in the United States, in its present form, which differs materially from the plan proposed and partially carried into execution in 1860. To the late

Mr. Armstrong, therefore, belongs the credit of establishing the railway post-office service in this country on a practical footing, and to him and Mr. Zevely, who co-operated with him in carrying out his project, are due the thanks of the American people for the superior organization of this most important branch of the postal service.

In October of that year (1864), an experiment was made on the route between New York and Washington, on Colonel Armstrong's plan, which gave promise of ultimate The post-office cars used on this line were fitted up under the personal supervision of Mr. Zevely, from hints obtained in Canada and elsewhere; but the interior arrangements, although elaborate, and in some respects almost elegant, were not such as would suit the ideas of the postal clerks at At the outset, the departthe present time. ment selected clerks for duty on the cars mainly from among the more expert officials in the New York, Philadelphia, Baltimore, and Washington post-offices; and it was generally announced, or rather understood, that the service was to be operated on the basis of qualification and merit only. It was acknowledged, even then, that a high standard of efficiency would be absolutely necessary to secure success.

The next step taken in this new direction was on November 9th, when railway postoffice cars were placed upon the lines between Chicago and Davenport, Iowa; and Chicago and Dunleith, Ill. On January 17th, 1865, the Chicago-Burlington and Galesburg-Quincy lines were established; and on May 22d, the first railway post-office service was put in operation on the Philadelphia-Pittsburgh route. About the same time, or a little later, postal cars were placed upon all the principal lines leading out of Chicago; and also upon the Hudson River and New York Central Railroads, between New York, Albany, and Buffalo, carrying and distributing along the line the Northern and Western mails.

While the railway post-office service rapidly spread and gained in public favor all over the West, its progress in the East was comparatively slow. For a long time the routes between New York and Washington, and New York and Albany-Buffalo, were the only two upon which postal-cars were running. After a period of nearly two years, however, the increasing success and popularity of the new service in the West, with Chicago for its central point and headquarters, began to affect the East, and infuse into that section of the country some of its own activity; and

thence onwards it continued to extend all over the United States, until, at the close of the late fiscal year (June 30th, 1872), there were in successful operation 57 lines of railway post-offices, or "post-offices on wheels," as they have sometimes appropriately been called-the routes of which extend, in the aggregate, over 14,117 miles, and employ a force of 649 clerks. The aggregate number of miles upon which service is at present performed is about 33,690 miles a day; or annually, a distance of 12,296,850 miles! In the contemplation of these facts and figures, collected from the official reports in the Post-Office Department, one may well exclaim with Lord Macaulay: "Our Post-Office is a splendid triumph of civilization!"

Wm. Lewins, Esq., in his interesting work on Her Majesty's Mails, published in London, thus defines the English railway post-office or postal car system: "It is like a gigantic machine, one part interdependent on another, and all alike dependent on the motive power of the different contracting parties." applies exactly to our own railway post-office service, but gives a very inadequate idea of the operation of the system. This will be better understood by first ascertaining the object of It is, briefly, to give to mail the service. matter of all kinds-letters, newspapers, packages, etc.—identically the same several advantages and speed in transportation as is accorded to first-class passengers; so that, for instance, a letter may travel from New York to Chicago with the same degree of speed as a passenger, and without being subject to any extra delay at any station on the Under what was known as the old "route agent system," although large postoffices and cities enjoyed the advantages of through mail-bags or pouches, by fast trains, smaller offices were restricted to way-service on slow or accommodation-trains; and mail matter going any considerable distance from one small post-office to another, was subject to a delay of from twelve to twenty-four hours at one or more points of its journey. used also to be the case with the southern mails for Boston, previous to the temporary arrangement of 1860, which was subsequently improved by the adoption of Mr. Armstrong's

This plan, as subsequently carried into practical operation, constitutes the principle of the railway mail service, or system of "traveling post-offices." The car used at the opening of the first line between Chicago and Clinton, Iowa, on the morning of the 28th of August, 1864, was built and owned by the

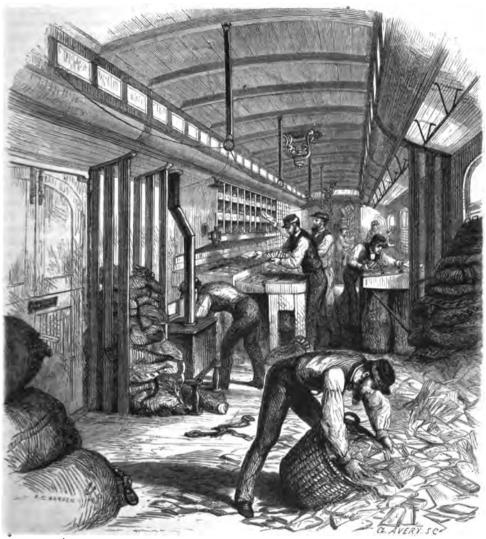
railroad company, but was under the direct control of the Post-Office Department while in use, as is the case with all the postal-cars now running on lines in the United States. Competition among the various lines, which has manifested itself in the improvements and luxurious appointments of passenger coaches, such as palace-cars, sleeping-cars (and, quite recently, on some enterprising lines, bathing-cars, or cars containing alcoves with bath-tubs and all appurtenances for the convenience of passengers), had also a beneficial influence upon the postal-cars, which are now built by some companies without regard to cost, and solely with an eye to the convenience of their occupants and dispatch of business. It is especially on the Western lines that we meet with the modern postal-car in all its glory of latest improvements, fine upholstery, varnish and gold leaf. specimen is one I saw on the Central Pacific Railroad, at Ogden, which might justly be called a palace postal-car. It was built in the company's shops, at Sacramento, Cal., under the advice and suggestions of Messrs. Barstow and Alexander, of the post-office department, and constructed in a very ingenious manner, with a view to economize space and facilitate the dispatch of business; while due regard had also been taken to the comfort of those who, on the long journey over the road and back, would have to occupy it as their home - bed-room, parlor, diningroom and work-room combined. One end of this car was taken up by a semicircle of boxes or large pigeon-holes, receptacles for newspapers and packages, each of which bore a label with the name of a station on the route, and connecting or distant routes. boxes were so arranged that the person distributing the mail matter had every box within convenient reach. At the opposite end of the car were a number of smaller receptacles or pigeon-holes for letters, to the number of several hundred, all arranged in a certain order, and labeled with the names of stations and connecting routes. In the middle of the car was an apartment for the use of the clerks, with wash-stand, wardrobe, beds for three, a table, chairs, and other conveniences, not unlike the cabin of a vessel. There was also a place where a cooking-stove could be arranged for the convenience of the clerks, if they desired to keep their own The remaining portion of the car was set apart as storeroom for the mailpouches, bags and packages, containing the through mail from San Francisco to Ogden, and further east, or vice versa, which does not !

require assorting on the road. Several cars of the same pattern—all finished in the highest style of the art of car-building—have since been constructed by the same company and put upon their road, where they give universal satisfaction to the post-office employes and all others interested.

If any one desires to get a perfect idea of the sort of work performed in these railway post-offices, let him with me make the journey from Buffalo to Chicago, over the Lake Shore and Michigan Southern Railroad, in one of the postal cars attached to that route. I single out this line because it forms the highway, so to speak, over which the bulk of the western mails is transported, and therefore affords an excellent opportunity for observing the operation of the service. On this route, railway postal service is performed twice a day, and the number of letters handled on each single trip of the postal car averages from fifty to sixty thousand. There is some difference in this respect between the Western and Eastern mails, that while the former are frequently much above these figures, the mails going in an opposite direction seldom quite reach them; but the above may be set down as a fair average. This makes about one hundred thousand letters for the round trip; or two hundred thousand per day handled and distributed on this route alone.

It must be borne in mind that in the above figures is included only the *letters*; the *newspaper mail* is quite a separate feature, averaging about three tons a day. Toward the middle of the months, when the magazines are published and sent to mail subscribers throughout the country, the newspaper and package mail often reaches the enormous quantity of ten tons on a single trip. Wednesdays and Fridays, when the leading weeklies that have a national circulation are issued, are also "heavy" days on the postal cars.

If the reader will accept my invitation to make this trip, upon which he will find much to interest him, we will make the tour together at once, starting from Buffalo, which is one of the great postal centers of the country. The post-office cars used on this route show marks of the rough service they have to perform, and are not the dainty, elegant coaches I have seen on some of the western lines; as, for instance, the one on the Pacific road, already described. They are constructed with a view to hard work and durability, for they must resist the wear and tear of a speed of from thirty to sixty miles an hour, next to the engine and tender, and the concussion



INTERIOR OF A POSTAL-CAR

of numerous "catchings." But what conveniences there are for the comfort of the inmates have been freely placed at our disposal, and I can guarantee every courtesy and facility that may contribute toward making the orp agreeable. We may as well begin with the beginning, and go through the entire performance. The western mail train does not leave the depot till twenty minutes past twelve o'clock; but early in the morning the ralway post-office clerks have assembled at the Buffalo city post-office, in the room set spart for them, where each head clerk (there are usually three clerks on each postal carone "head clerk" and two "assistants"), in his turn, receives from the "register clerk" VOL VI.-13

of the office the registered matter destined for points along his respective route, and lines beyond with which he connects.

The head clerk has receipted for his "registered" packages, say two hundred in number, for this trip, locked them safely in a pouch used for this special purpose, and is impatiently waiting for the signal of "all aboard!" which is regularly given by the mail dispatcher as the wagons are being loaded with mail-bags and pouches for the respective stations and connections. Soon the cry "Chicago—all aboard!" is sounded, and the three or more clerks who with us are to make the journey in the railway postal car, pick up their "traps," consisting of post-office

directories, maps, schedules of distribution, wooden or metallic tags and labels for pouches, working clothes, blankets, lunch baskets, etc., -in fact, a complete outfit, suitable for the journey which lies before us, -and jump into the mail wagon, which is loaded to its utmost capacity with leather bags and iron-bound wooden boxes, en route for the depot.

A fine pair of sorrels soon bring us to the depot of the Lake Shore Railroad. a substantially-looking, but somewhat dingy car, with the words "U. S. RAILWAY POST-OFFICE" painted in large letters on the side, over the entrance, awaits our arrival, standing on a switch or side track, in close proximity to the outgoing express train. wagon is backed up to the car door, the bags, pouches and boxes composing our load are rapidly "piled" in, the clerks and ourselves jump after; and now business commences in good earnest. Such luxuries as hats, coats and vests are dispensed with, sleeves are rolled up, and leather pouches and canvas bags (the latter containing the newspaper mail) fly about in all directions. "through," or direct sacks and pouches are piled up in the "through mail-room," in one end of the car, while the matter for distribution and overhauling along the road is stacked up in the working-room, in the fore and middle part of the car.

While all this is going on, we had better ensconce ourselves in a corner by the stove, behind the stacks of mail matter of all descriptions, and watch operations. We cannot possibly extend any aid to the clerks in assorting their loads of mail matter, for it requires a thorough knowledge and practice to handle the contents of the bags and distribute them in their proper places. Here, however, we are out of the way, while at the same time we have a good view over the field of operations, and can watch the modus operandi of

distributing the mail.

To begin: the head clerk, who is in charge of the postal-car, and upon whom devolves the duty of distributing the through letter mails, stations himself before the letter case, numbering upwards of five hundred pigeonholes, and commences operations by unlocking a pouch and dumping its contents,—consisting of some six or seven thousand letters, all tied up in packages of some eighty to one hundred or more each,—out upon the floor. The clerk picks up an armful of these packages, places them edgewise on the table or shelf in front of him, cuts open the strings by which they are held together, and "squares"

himself for further operations. These consist in assorting the letters of the loosened packages and placing them in the pigeon-holes in front of which he stands, with a degree of dexterity that fairly puzzles us. While the head clerk is thus engaged, his assistants are not idle. One of them has emptied out another leather pouch and is engaged in distributing the contents of this in a smaller case of pigeon-holes placed on the side of the car, adjacent to the newspaper case. Upon inquiry we ascertain that this is the "way mail," destined for delivery at points along the route. Not only are "direct packages" made up for all the stations along the line, but also for connecting lines for points and routes beyond; nearly each of the more prominent stations on our line forming a distributing post-office for numerous smaller offices adjacent. The other assistant, who glories in the technical appellation of "paper jerker," is engaged in distributing the bulky newspaper mail in the other end of the car, and fires away at and into the tiers of labeled boxes in front of and all around him like a good fellow, seldom missing his aim or "jerking" a paper into the wrong box.

Meanwhile, bags and pouches are rapidly thinning out; but others are being filled with the assorted matter, and, after being tied up, or locked and "tagged," are dragged into the "through" room, ready for delivery at the larger stations. Indeed, we think that the work is well-nigh over, when a heavy pound-



ing on the door attracts our attention, and there is a wagon loaded to the top, outside, backing up against our car. The door is opened, and we are again flooded with mailbags and pouches, to the number of upwards of a hundred. This is the late New York mail, by the Erie road. If we had missed it here, which sometimes happens when the train is behind time, it would probably have overtaken us at Dunkirk. But it just reaches us in the nick of time; the horses attached to the wagon which brought it are steaming and foaming, and have evidently had a hard run. Bump, bump, in come the pouches, belter-skelter, one on top of the other; bang goes the door, the receipt for "registered matter" is handed out through the open window: the gong sounds and in a moment, by some unseen agency, is our car attached to the train with a heavy thud which nearly throws us off our feet; the bell rings, passengers are running to and fro on the platform; the whistle shrieks; a jerk and a grating, jarring noise, and we are off, slowly moving out of the depot, at exactly twenty minutes past noon, on our way to Chicago and intermediate stations.

Clap, clap, clap, how it jars and rattles as we rush along at thirty miles an hour. The clerks are not idle; in less time than it takes to tell it, two pouches have been made up for delivery at Angola and Silver Creek—the two first stations on the road. As we dash past the depot at Angola, a bag is thrown off and another is caught without stopping. This is quickly opened and assorted; a work finished long before the bell migs, indicating a stopping-place, and we hear the brakemen shouting in the passenger cars, "Silver Creek!"

This place, on the shore of Lake Erie, about thirty miles from Buffalo, was once a prosperous harbor; but its trade and importance were long ago destroyed by the too close proximity of the larger cities of Dunkirk and Buffalo. The mail for this place, once quite buffy, has dwindled down to a single pouch of rather slim proportions, and the bag which we receive in exchange is slimmer still. We stop only about two minutes, and then are off again at a rattling rate, tearing along the shores of Lake Erie.

Dunkirk, forty miles from Buffalo, is the next point reached. During the five minutes we stop here, we receive fifty or sixty additional bags of mail matter, as this city is an important "accumulating" point in the railway mail service of New York State; "Dunkirk—all aboard!" shouts our head clerk; a

letter pouch is quickly closed, locked, and thrown off from the car, followed by two canvas bags containing newspaper mail. These are for Dunkirk City. In another minute two more bags are made up, closed, and labeled "Buffalo, Corry and Pittsburgh line," which road connects here; and are pushed off the car down upon the truck in waiting just as we are moving out of Dunkirk station.

Station follows station in rapid succession; but we do not stop, this being the through mail, or express train. Bags containing mail matter are thrown off at some places, and pouches are caught with a sudden thud and a jerk as we fly past. The interior of our car presents a more confused and busier aspect than ever. The clerks, working in their shirt-sleeves, scarcely speak a word, but work, work incessantly, like beavers. and pouches are opened, emptied, and their contents distributed, with wonderful dispatch; the bundles of letters in the waypouches are carefully picked out from among the mass of newspapers and other printed matter, and handed to the head clerk for examination and assortment, and the "paperjerker" is desperately battling with a veritable avalanche of newspapers and magazines.

The "catcher" now adopted in the railway mail service is the one known as "Ward's catcher," and is chiefly remarkable for its simplicity and effectiveness. It operates in conjunction with a "crane," on which the pouch to be exchanged by the post-master of a way station is suspended shortly before the train is due at that point, in such a manner as to be easily caught by the apparatus attached to the postal car of a passing train, no matter how great may be the speed at which it is running, The "catcher" consists simply of a large, two-pronged iron fork, like a >, with one arm considerably longer than the other. The shorter arm is attached to the side of the car, just outside the door, in such a manner, that, when the catcher is not in use, or "down," both arms, or prongs, are placed vertically against the side of the car. When ready for use, the short arm is turned in its bearings by means of a lever, which operation causes the longer arm to project from the side of the car at an acute angle, the opening in the direction in which the train is moving. The moment the crane is reached, the pouch is caught with a jerk, the lever is turned, and the pouch relieved from the iron grasp of the catcher. The apparatus is easily worked, and seldom



fails to do its work effectually; but great care and circumspection are necessary on the part of the operator, so that the catcher is applied at the proper time and places only, where the track is clear and nothing but a crane is in the way. It happens occasionally, on dark and stormy nights, when it is impossible to see any distance ahead, that the catcher is applied at the wrong time, and things have been caught which it was very undesirable and rather embarrassing to have anything to do with under the circumstances. Such things as telegraph-poles, lamp-posts, or switch-lights, are well enough in their way, if left to perform their proper functions; but rather awkward when in the way of a catcher. One of two things inevitably fol-Either the misplaced apparatus, with appurtenances, including door, windows, and sometimes a large portion of the solid woodwork of the car, is torn away, or some incongruous and occasionally injurious article will suddenly enter the car through the windows or the panels in the door.

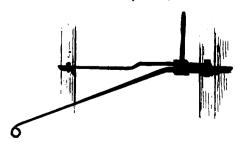
To prevent accidents of this kind, the engineer always blows his whistle in a peculiar manner when a catch station is approached, and upon this signal the catcher is let down, and, if everything is all right and properly timed, a mail pouch is the result. The bag with the mail for the station is simply thrown off the car through the open door while the train is passing—an operation that is to all appearances simple enough, but really, like that of catching, requires considerable skill, and not a little physical force. The pouch must be thrown just at the proper time, for a few moments too soon or too late will leave

it on the ground a considerable distance from the station. It must be thrown with considerable force against the wind caused by the moving of the train, as, otherwise, it will be blown under the cars and its contents ruined

by the trucks passing over it.

On a cold, stormy winter night, it is no joke to serve these small way stations with the night-mail. At every opening of the door, - and the catcher cannot be operated, nor can the way mail be delivered, unless the door is wide open,—an avalanche of snow and icy sleet comes rushing in, half smothered in the steam and smoke from the locomo-The force of the wind, with the train running from fifty to sixty miles an hour, is terrific, and one must have a good and firm grip at the iron bars at the side of the door when leaning out to see how far we are from the station. Presently there comes a short, hoarse shriek from the locomotive, the door is thrown all the way back, the catcher quickly let down—thud!—a slight shock; and bang goes the door again, shutting out the wind and snow, while the pouch that has just come aboard is being rapidly unlocked, emptied, and its contents properly examined and distributed. By the time this is done, the bag which we threw off with the made-up mail for the station just passed, has been picked up by the messenger in waiting, and is in all probability on its way to the country post-office.

This American arrangement of "catching" and "delivery," notwithstanding its draw-backs, is an improvement upon the system The British postal cars used in England. have a net attached to the side, which, by some complicated mechanism, is supposed to open out and catch the mail-bags at stations where the train does not stop. While the American arrangement sometimes catches too much, but is rarely known to fail to catch something, the English mechanism, it is said, misses the mark quite as frequently as it hits For this reason it is being gradually abandoned, and other systems, more or less



MAIL-BAG CATCHER

like our own, are being introduced. In India, the American system has been exactly copied; and it is now being introduced on the Australian railroads.

Arrived at Cleveland, at seven o'clock in the evening, we stop twenty minutes for supper. Hastily they throw on their coats, and before the train has come to a full stop, two of the clerks (one being left in charge of the car) may be seen at the bar of the restaurant, devouring cold ham, sausage and pie, at a terrific rate. Soon the gong sounds again, the bell rings, the conductor shouts "all aboard!" and off we are once more, postal car and all, the clerks busy at work arranging and opening the dozen or more pouches taken on board at this point.

It is almost midnight when we reach Toledo. Here the three postal clerks with whom we made the journey all the way from the Buffalo post-office bid us good-bye, and another "set" come aboard to take their places. Receipts are exchanged, a few explanatory remarks made, and our new friends begin work immediately where our fellow-

travelers left it.

And so all through the night work continues. Every once in a while a mail-pouch is caught and another thrown off; the stoppages are few and far between, and we tear along through dark pine forests where the snow and hoar-frost glitter on the branches, illuminated by showers of sparks from the engine. The clerks courteously offer us the use of their berths; and while they are busy at their work, we retire and try to sleep; but are all the time conscious of the peculiarities of our situation, and recognize the thud and par every time we make a catch.

As morning dawns we approach Chicago, the terminus of our route. The clerks pack up their "traps," and prepare to deliver the last of their way-mail, and the pouches, bags, and boxes which have been stowed away in the "through" room in the rear of the car. A few minutes after seven o'clock we are at Englewood, the last station before Chicago, and precisely at a quarter of nine we enter the depot in the latter city, and our journey in a railway post-office is at an end.

The importance and value to the public of the railway postal service has not, until quite recently, been generally understood. A merchant in New York receives his letters from Chicago, mailed in that city only thirty hours before they are put into his hands, quite as a matter of course, without bothering his head about thinking how this is accomplished. But for the railway postal service, it would be an



CATCHING THE MAIL-POUCH.

utter impossibility; and the same letter. which now requires thirty hours only, would take perhaps forty hours in transmission. Every year, almost every month, adds to the number of lines upon which railway postal service is placed, and the corps of clerks employed in this most important branch of the postal service of the country is rapidly augmenting. The service is under the direct supervision and control of the "General Superintendent of the Railway Mail Service" in Washington,—an office most ably filled by Mr. Geo. S. Bangs, of Illinois. Bangs is due the rapid and successful development of the service, and he is indefatigable in his endeavors to extend its benefits to all sections of the country.

In his last official report (dated November 15th, 1872), the Postmaster-General says regarding the railway post-office service:

"Railway post-offices continue to receive the special attention of the Department, and the improvement effected during the past year has been most gratifying. Since the 30th of June, 1871, this branch of the service has been largely extended. Eight new lines have been established, with an aggregate length of 2,909 miles. The daily service has been increased 6,094 miles, and the annual service 2,224,310 miles, making necessary the appointment of 136 additional postal clerks of various grades."

about thinking how this is accomplished. But from an interesting table appended to the for the railway postal service, it would be an

amount of railroad mail service, in successive years, from the commencement of such service (the railway mail service, be it remembered, not the post-office service) in 1836, to June 30th, 1872, has increased at an average rate of 1,6262 miles per annum. The report for the first year, 1836, shows the annual transportation on railroad and steamboat routes combined. The length of railroad routes was first reported to be 974 miles at the close of the year ended June 30, 1837. The length in 1872, as has been already stated, was 57,911 miles—an increase of 56,-937 miles in thirty-five years. The largest increase in length for any one year was for 1872, being 8,077 miles. The first report of the annual cost of railroad routes, uncombined with steamboat routes, was \$531,752, on the 4th of November, 1845. The cost in 1872 was \$6,502,771; showing an increase of \$5,971,019, in twenty-seven years, and an average increase of over \$221,148 per annum. The largest increase in cost for any one year was for 1872, being \$777,792.

Although one of the branches of the Government in which every man, woman, and child in the United States is most directly interested, the Railway Post-Office Service, as it is officially called, has matured its plans and brought them into practical operation with so little ostentation, that many of those who derive the greatest advantage from the system were scarcely aware of its existence previous to the recent controversy between the Post-Office Department at Washington, and some of the leading railroad corporations of the country.

This arose from a demand by the railroads running postal cars on their lines for higher compensation for performing that service than they had been paid. The rate of compensation is limited by law to the sum of three hundred and seventy-five dollars per mile per year, and this rate is only paid to the great trunk lines performing "double" service, or running postal cars on two daily trips each way. In a letter addressed to the Postmaster General on the 27th of January last, the agents for some of the leading lines, among which the Erie Railroad, Philadelphia, Wilmington and Baltimore, N. Y. and New Haven, the Connecticut River, Hudson River and N. Y. Central, and Pennsylvania Railroad requested compensation for the Railway Post-office service over their lines at the rate of forty cents per mile run, for an eightwheel postal car, and proportionate payment for less space transported over the roads in this service. In case of non-compliance with

this demand—which would, it is calculated, draw the sum of thirty-seven million dollars from the Treasury annually, in payment for the railway post-office service, exclusive of all the other expenses of the Post-Office Department (amounting to about thirty-one millions annually)—they threatened to withdraw the postal cars from their routes on the first day of last April. In justification of this demand, they contended that the rate of compensation for postal-car service is less than what is paid for second-class freight. Postmaster General has, in his annual reports, repeatedly endeavored to call the attention of Congress to this matter of compensation for running postal cars, with their complement of route agents, clerks, etc.; believing that the present rate of payment is inadequate; and last year a law was passed, authorizing that officer to allow any railroad company with whom "he may contract for the carrying of the United States mail, and who furnish railway post-office cars for the transportation of the mail, such additional compensation beyond that now allowed by law as he may think fit, not exceeding. however, fifty per centum of the said rates. In order to carry this law into effect, an appropriation of about one million and a half would be required; but this Congress failed to make, and thus, of course, the law remained inoperative. Again having its attention called to the matter, and the necessity of some action, Congress, at its last session, passed a law making provision for a pro rata increase of compensation for the transportation of mails in postal cars, of from fifty to two hundred dollars per mile, per annum, according to the quantity of mail matter carried and the frequency of transportation, and appropriating five hundred thousand dollars for that purpose. By the passage of this act, the law authorizing the Postmaster General to increase the compensation of certain routes according to his own judgment was repealed, and the above act, which was approved March 3, 1873, is the only one under which payment can at present be made to the railway companies for performing this service.

There being no appropriation to pay for the enormous demand made by the railroad corporations on January 27th, the Postmaster General, even if he had been disposed to do so, could not have complied with their request, and the result would have been the withdrawal of the postal cars. It would have been necessarily productive of the most serious results to the entire business commu-

nity of the United States, if they had carried their threat into execution. Mr. George S. Bangs was sent to New York with instructions to endeavor to effect a compromise, temporarily at least, so as to avoid the pending calamity, for the withdrawal of the postal cars from all the leading railroads of the country would have been nothing less. At the same time, the matter was referred to the then newly organized "Select Committee of the Senate on Transportation Routes to the Seaboard" (Hon. Wm. Windom, of Minn., chairman), with instructions to consider and report upon "the nature and extent of the obligations subsisting between the railroad companies and the postal service of the country; and whether any, and what, legislation is necessary to guard the postal service against interruption or injury by hostile action on the part of said railroad companies, or any of them."

Meanwhile, Mr. Bangs had succeeded in effecting an arrangement with the Erie Company, which agreed to suspend action in the matter, and continue running the postal cars under previous conditions, until a settlement could be reached through the intervention of the Senate Committee above referred to.

This breach had the effect of making all the companies agree to continue the service on the same terms and conditions as hereforce, until the matter could be settled by the Senate "Committee on Transportation," as it is now usually called. It was not, however, the prospect that this committee would accede to and report favorably upon their demands, in their present form, which caused the other companies to suspend the threatened withdrawal of the service, although, in the letter which they subsequently addressed to the Postmaster General, it would appear so. But under the law, as it now stands, that officer

has it in his power to contract, if circumstances such as the threatened "strike" should render it necessary, with any one of the great trunk lines, giving to it the exclusive transportation of the mails at a compensation equal to that now paid to all the lines combined for performing that service. The Erie company, appreciating this fact, withdrew from the coali-It is, however, but due to state that, from the first. President Watson, of the Erie Company, seemed disposed to take a view of this matter rather different from that taken by the representatives of the other railroad companies; and, in conversation with Mr. Bangs, repeatedly said that, in his opinion, the roads running postal cars derived considerable benefit therefrom, indirectly, through the increase in traffic along their lines occasioned and encouraged by the frequency and promptness of the mail service in consequence of the postal cars. "The railroads as public servants," said this gentleman, "and in view of the franchises which have been granted them by the people, are indebted to the public to such an extent, certainly, that the withdrawal of the postal-facilities, and consequent confusion and damage, would be little less than a crime." He also expressed himself perfectly willing to run postal-cars on the Erie route without any change in the old arrangement, until the question at issue should be finally decided by the Committee on Transportation. Rather than allow the Erie to enjoy the valuable privilege of monopolizing the carrying of the mails, the companies all withdrew their objections temporarily, awaiting action by the Committee on Transportation, before whom they, as well as the Government, will have a full and fair hearing,—and thus the matter rests at present.

## CORNELL UNIVERSITY.

Conspicuous among our many institutions of learning is Cornell University. This prominence is the result of a combination of causes, among which may be mentioned the peculiar nature and the richness,—actual and prospective,—of its endowments, the liberality of the principles upon which it has been planned and administered, the equality which it seeks to establish among the several

departments of instruction, and the remarkable growth in numbers of its faculty and its body of students. Inasmuch, however, as the University is not situated upon any of the great highways of travel, the number of its visitors is still comparatively small. The great mass of tourists of New York State itself are acquainted with the University merely by reputation. This ignorance can only be