

The Pneumatic Post of Paris

by

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Part 1

Introduction

The first half of the 19th century saw an unprecedented acceleration of communication through the introduction of the electric telegraph. Its principal application was to commercial intelligence for the merchants on the stock exchanges for whom fortunes could be won by the receipt of advance information, but the gain in speed from the telegraph could be lost if a message took a long time to get from the telegraph office to the stock exchange. It was to avoid this delay that in 1853 J. Latimer Clark installed a 220 yard long pneumatic tube connecting the London Stock Exchange in Threadneedle Street with the Central Station in Lothbury of the Electric Telegraph Company which had been incorporated in 1846. There were similar installations in Berlin in 1865 between the Central Telegraph Office and the Stock Exchange, and in 1866 in Paris out of the place de la Bourse.

Other cities followed and tube systems were opened not only for the transport of telegrams but also for individual letters and for letters in bulk. The transport of letters in bulk required large diameter tubes such as exist today in Hamburg and as once existed in a number of American cities. Provision for the transport of individual letters was made in Vienna and Prague, Berlin, Munich, Rio de Janeiro, Rome, Naples, Milan, Paris and Marseilles. There were ephemeral installations for private letters at the South Kensington Exhibition of 1890, at the Karlsbad Philatelic Exhibition of 1910, and at the Turin International Exhibition of 1911.

Today, the pneumatic post survives only in Paris and Italy. Pneumatic tubes are still however widely used for the transport inside many cities of the world of small batches of telegrams, express letters and air mail letters. These tubes are generally of a diameter of about 3 inches and the messages are carried in cylinders which are propelled along the tube by an air pressure differential from the back to the front, attaining speeds of around 25 mph. Letters and cards which have been transported in the tubes are invariably creased where they have been rolled up for insertion in a cylinder.

The Parisian Network

The network in Paris was commenced in 1866 by the construction of an experimental line between the telegraph offices at Grand Hotel and place de la Bourse. This was extended in 1867 into a one-way hexagon from place de la Bourse through the telegraph offices rue Jean-Jacques Rousseau, rue de Rivoli, rue des Saints-Peres, the Central Telegraph Office (rue de Grenelle), rue Boissy d'Anglas, and back to Grand Hotel. During the following decade single line polygonal systems were linked to this hexagonal system and a double tube (two-way) was laid between Central and Bourse, but the network remained always within the limits of the pre-1791 octroi of Paris, roughly corresponding to the inner *arrondissements*.

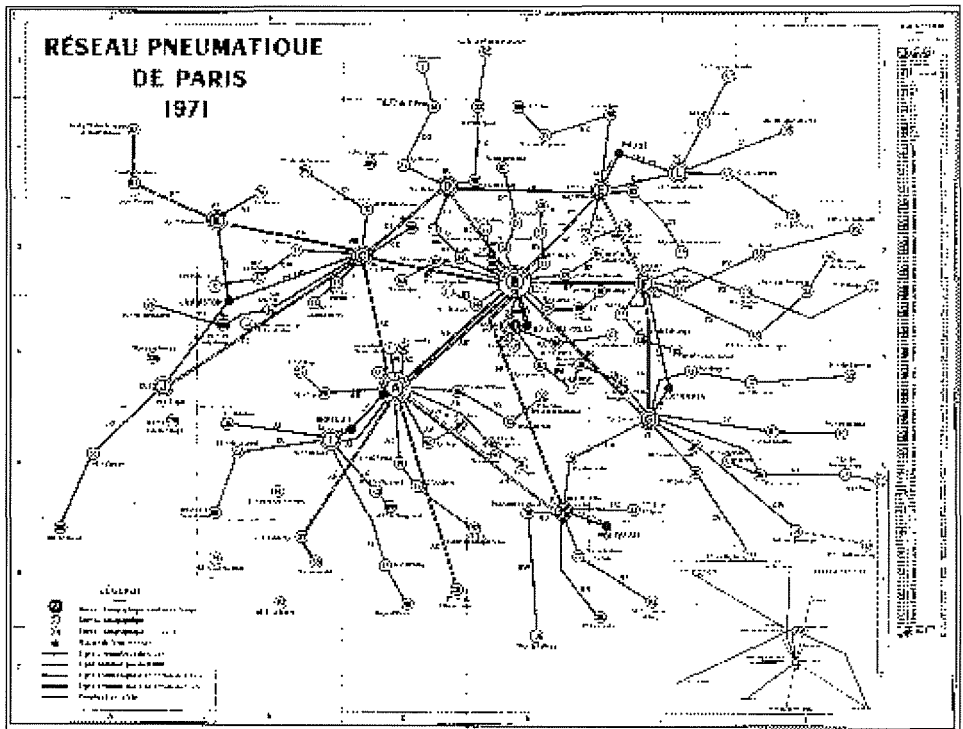


Figure 1. Map of the Parisian Pneumatic Post Network.

In 1879, with the opening of the service to the public, there was a new motive for expansion and, in 1881 plans were approved to extend the network of tubes across the whole of Paris. There were to be four stages each taking about one year to achieve: by 1 February 1882 the 16th and parts of the 15th and 17th arrondissements; by 1 April 1883 the rest of the 17th, the 18th, and part of the 19th; by 1 February 1884 the rest of the 19th, the 12th and 20th; by 15 December 1884 the rest of the 15th, the 13th and 14th. The system of tubes running across the whole of Paris

(generally located in the sewers) consisted of tubes of 65 mm diameter but from 1888 many tubes of 80 mm diameter were installed and today about one-third of the system uses the larger diameter. Also from 1888 began the elimination of the one-way polygonal networks and their replacement by double tubes.

Since the end of the 19th century there have been numerous detail changes of the network inside Paris but only one tube has gone outside Paris: that to Neuilly opened in 1914. It had been intended to extend the tubes widely through the suburbs but the 1914-18 war suspended the project and it was never revived. Nevertheless, in 1907 the transport of pneumatic mail beyond the limits of Paris was made possible by the employment of special messengers operating in 19 suburban areas. By 1916 these messengers were on bicycles and operating in most of the towns of the department of the Seine and also in Enghien-les-bains, Sevres, and St Cloud in the department of the Seine et Oise. Raincy was added in 1921.

Today, the service works inside Paris and to Neuilly by the tubes and thence outwards throughout most of the suburbs by messengers on motorcycles. Inwards the service uses post office vans between the suburban post offices and those offices on the limits of Paris which are on the tube network.

There is also another network between French government offices radiating from Central but with one line joining the Senate and the -Assemblée Nationale with the

Journal Official. Along this line pass the transcripts of the parliamentary debates which are printed and published within twenty-four hours.

The cylinders are propelled along the tubes pneumatically, ie by air either compressed or depressed: they are either blown forwards or sucked forwards from one office to another. The pressures come from compressors feeding groups of offices; these compressors were originally simple heads of water, then driven by steam engines, and finally by electrical machines. There are today 7 such installations, supplying pressure to 12 offices in the network.

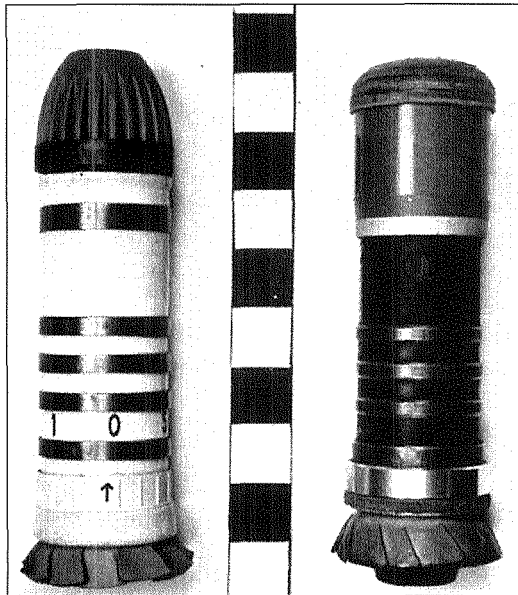


Figure 2. Pneumatic Post cylinders, new and old, showing the electrically conducting bands introduced after 1931.

For a long time the cylinders went from one office to the next where their contents were sorted for

the next stages of their journeys. Much time was spent in the manual redirection of cylinders but, after experiments in 1931, automatic navigation was introduced using apparatus which could accept or pass on cylinders according to the setting of electrically conducting bands encircling the cylinders.

The administration of the service started with the *Télégraphes* since it was then intended for the transport of telegrams and the first network connected offices of the *Télégraphes* which were quite distinct from those of the Postes. In 1878 the Postes and the *Télégraphes* were joined and became the *Postes et Télégraphes*. Later, the Téléphones was added to make the *P. T. T.* which still today remains the familiar designation of the *Postes et Télécommunications*. Inside the larger organisation, the responsibility for the pneumatic service remained with the *Télégraphes* or its successor the *Télécommunications*. The cooperation between the separate parts of the ministry is well illustrated by the events of 1927 when floods put the Segur telephone exchange out of action; telephone subscribers were allowed to send letters by tube for 30 centimes, the cost of a telephone call, instead of the normal 1.50 franc charge. Although not operated by the Postes, the service must still be considered to be postal since the addressee receives the original manuscript (or typescript) message of the sender on a letter, or card, or letter-card each of which falls within the generic term 'pneu'.

The service does not have its own offices but pneumes are posted in special boxes which have slits narrower than those for conventional mail. The fusion in 1878 of the Postes and *Télégraphes* led to a rationalisation of their offices and the purely telegraphic offices gradually disappeared. At the end of 1879, the first year of public use of the pneumatic tubes, there were 36 offices in Paris with pneumatic installations but only 6 of them provided a postal service; before the end of the century all sole telegraph offices had been closed. The telegraph offices had been numbered serially in 1871 and the post offices in 1863; as the two merged the joint offices took the postal number. Up to their individual closures the few telegraph offices which remained were allotted postal numbers as, for example, Ecole Militaire, which had had the number 15 as a telegraph office in 1871, was given the number 46 in the postal series until its closure in 1891. These office numbers had a purpose: an instruction of 1871 required that each telegram (and hence, later, each pneu) should carry in its top left-hand corner the two digit number of the office of despatch preceded by the number of that telegram as recorded in the daily register. Thus the 341st pneu sent out on one day by Bourse (98) would carry 34198. Since the first nine post offices were numbered only by a single digit their telegraph counters used the post office numbers preceded by a zero. These office numbers were not initially used to indicate the destination of a pneu. At the office of posting, the name of the office nearest the addressee was written in the top left hand corner so as to facilitate its navigation through the tube network; just

after the turn of the century there was a gradual replacement of the office name by the office number.

There was a curious situation in 1900 when the seven post offices at the International Exhibition were temporarily allotted telegraph office numbers from 10 to 16, numbers which were being used at the same time by the normal Paris post offices 10 to 16. To avoid confusion, the pneus from these offices were recorded in each daily register starting at 501; thus the 27th pneu sent out on a particular day from Alma (12) would carry 52712.

Shortly afterwards, the practice of numbering pneus was discontinued.

The Postal Stationery of the Pneumatic Post

Until 1898 when private cards and envelopes were admitted, the use of the official postal stationery was obligatory for pneumatic mail. The decree which opened the tubes to the public was signed on 25 January 1879 by MacMahon in the last days of his presidency and came into effect on 1 May 1879. It prescribed two franked forms: one, open, at 50 centimes, and one, closed, at 75 centimes, in modern parlance respectively a card and a letter-card although the latter was on thin paper.

The intention had been that the imprinted stamp should be the *Chaplain* type which had been the runner-up in the 1875 competition for the design of a new adhesive postage stamp but the upheaval which followed the resignation of MacMahon reverberated throughout the French civil service and the dies of the *Chaplain* type were not available in time to have the imprinted postal stationery ready by 1 May. It was therefore decided to use temporarily the *Sage* design, which had won the competition and was on the current postage stamps, modified by the deletion of POSTES. Thus, on 1 May two forms were on sale bearing this modified *Sage* design: a cream card titled '*Carte Télégramme*' with a red imprinted stamp, and a blue letter-card titled '*Télégramme*' with a black imprinted stamp. These inscriptions reflect the insistence that the service was provided by the *Télégraphes* and that the missives were regarded as telegrams except that for a fixed fee there was no limit to the number of words that could be sent. The absence of a limit was quickly recognized by the public; a card dated 15 May 1879 includes the following passage 'We are taking advantage of the freedom which renders henceforth the postcard telegram no longer limited by sending you with our best wishes our friendly greetings' which, in French, took 27 words and, by itself, would have cost 75 centimes at the then current rate for telegrams. The letter-cards carried on the back a prohibition against the inclusion of any sheet of paper or of anything at all; if the weight exceeded that of the letter-card as sold it would be transferred to the post.

to be continued in August 2013 issue