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Singapore – Postal Mechanisation 30+ years ago

Jeremy Meal

This is a story of two themes in postal history – philatelic evidence on cover of automatic sorting plus the machinery involved in its processing and machine printed postage stamps (or in the vernacular of the time ‘ATM’, but from a ‘new’ provider ‘Almex’). Both aspects also involved for me two really weird coincidences, one in each philatelic sphere. Of course, it was my day-job in public transport, a specialism in electronic ticketing and smart payment cards and tickets, that took me to Singapore arriving on 1 October 1990 – but then, buses come in twos too don’t they? But the gap isn’t usually 30+ years, so apologies that I am only relating this story after such a long gap. But at least photos reproduce better now with modern technology and in colour for those of you taking this copy of *Ident* electronically.

When I first arrived in Singapore the postal history and postal mechanisation seemed really dull as the first stamp shops I found there seemed to be obsessed only with collecting stamps. But then I found Kenneth Fish’s tiny shop in a small local shopping centre at Holland Village where the tourists and the working ‘ang mohs’ like me went for lunch at least once a week for some western reminder of home – a ‘French’ patisserie (Singapore copy of course!). Ken had stayed on after World War II and his shop did stamps and money exchange for the tourists with his partner – but as Ken was still in contact with ‘old blighty’ he began to furnish me with London FS overseas coded mail to add to those coming in the ‘Red Cross Parcel’ (as we called it; the weekly courier of all our mail forwarded from our Woking HQ) [domestic] or other mail posted directly to our Singapore address.

Singapore being a relatively small island (think ‘Isle of Wight’ but with 4 million people), its postal services were assessed before departure as being less complex, being an island city-state, but they

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at least had some nice postmarks, including newish ones with numbered C die letters (CFC, I wondered, like those being deployed in the UK?). But no coding to be seen anywhere during those first few weeks except on incoming mail items (from London FS).

But in 1991 I began to see some local mail with little black numbers on, sometimes repeated in a line across near the bottom. Then I found a stamp shop with some envelopes going back to 1989 with red idents too. Of course, I thought – only one-off sorting needed – Telecom Singapore is doing Direct Sorting; just quality control desk idents, no ‘need’ for coding. One of the locals told me where the sorting office was based so I wrote almost straightaway to the Chai Chee Mails and Parcels Centre, not so much really expecting a positive reply. Visit arranged, same week! And they couldn’t have been more helpful, friendly and hospitable – maybe they didn’t get many crazy postal historians wanting a *visit*! I’d walked in with my Rollei camera prominently round my neck to show intent (more in hope than expectation) and asked permission to take pictures. No problem, they said, just be sure any person in-shot agrees to be in the picture or give them time to step away. Then the first weird moment – ‘oh, you’ll be interested to know’, my guide for the day said, ‘that your camera was made in this building, it used to be the Rollei factory’. Sure enough. ‘Rollei Singapore’ on the lens (and, for 1991, I think you’ll agree from the pictures below, the camera did me proud – some of the best indoor shots I’ve ever taken in the analogue era).

Automatic sorting process in 1991

Chai Chee was opened in October 1982 as an interim solution to rising mail and parcels volume in this booming Singapore economy, pending completion of the purpose-built Jalan Eunos Centre then being constructed for completion in 1995. The current building comprised of five ‘floors’ (NB ‘First’ is ‘Ground’ to us) with floors 2 and 4 being mezzanine levels housing, respectively, the administrative offices and Equipment Maintenance Section and the other the Computerised Central Information System. The fifth floor processed registered mail and held the Returned Letter Unit. The ‘business’ work was done between the first and third floors, with the former dealing with mail arrival and despatch through an adjoining vehicle-served platform on one side complete with chain conveyor and a bulk mailing area, together with the processing of all parcels and a customer services area. A tray elevator (for letter mail and packets) in the form of a moving conveyor ‘ramp’ took mail from the arrival platform up to the third floor for all automated and manual processing of domestic mail and processing of foreign mail.

All letter-related sorting equipment was by NEC (Nippon Electric Co – not as in ‘onto a tram or bus’ but ‘Japan’ in this case) – 4 Culler Facer Cancellers (CFCs) in service at that time, 1 Facer Cancellation Table and 1 Facer Cancellation (Stamping) Machine, 2 ordinary stamp cancelling machines, 3 OCR LSMs, 2 Desk Connected Letter Sorting Machines (DCLSM) suites and their integrated sorting machines. Finally, though as a separate system, sorted output was bundled onto a Letter Bundle Conveyer-System (LBCS), wrapped in individual plastic-bags with a bar-coded label on top to the 4-digit postcode. (Singapore went 6-digit in 1995 alongside adopting red linear barcode and later 4-state-code orange bar-code sorting at the new Jalan Eunos Centre; but I’d already left in mid-1993.) This was then conveyed to three further NEC machines that aggregated multiple bags for the same delivery point (the Bundle/Package Sorting Machine – BUSM [yes, honestly!]) and integrated letters and packets for each delivery office’s postpersons’ ‘beats’ (walks).

Finally I was shown on the lower floor of the building the Parcel Sorting Machine (PSM), a huge installation (for that era) that was using tilt tray technology, which as the photographs below show ran almost the full length of the office in sorting 2000 parcels per hour to 50 selections. In between the letter sorting and parcel sorting was an area for manual sorting of both packets and letters for use at peak times, plus a storage area for sacks and waist-high ‘wheelie’ baskets (of what we may recall as being akin to our UK ‘hotel laundry’ type). Robotic individually-guided electric buggies did the smaller movements of sacks etc.

So the following is a descriptive picture tour around the sorting office of each item of equipment, preseded by scans of one of each ident type from each suite of six desks of the DCLSM (idents were 1-6 black and 1-6 red) – with aforementioned CFC cancels – and an example of the barcode labels placed with the sorted and bundled letters for each delivery point in Singapore. I didn't get to see the special services on the upper floor nor the Centralised Computer Info System (CCIS) though I've included a picture of this from the Singapore 'Mails & Parcels' brochure along with the other two photos of the tilt tray conveyor and OCR detail, all the rest were taken by me during my 1991 visit.



Figure 1 – Red ident 3.



Figure 2 – Black ident 3.

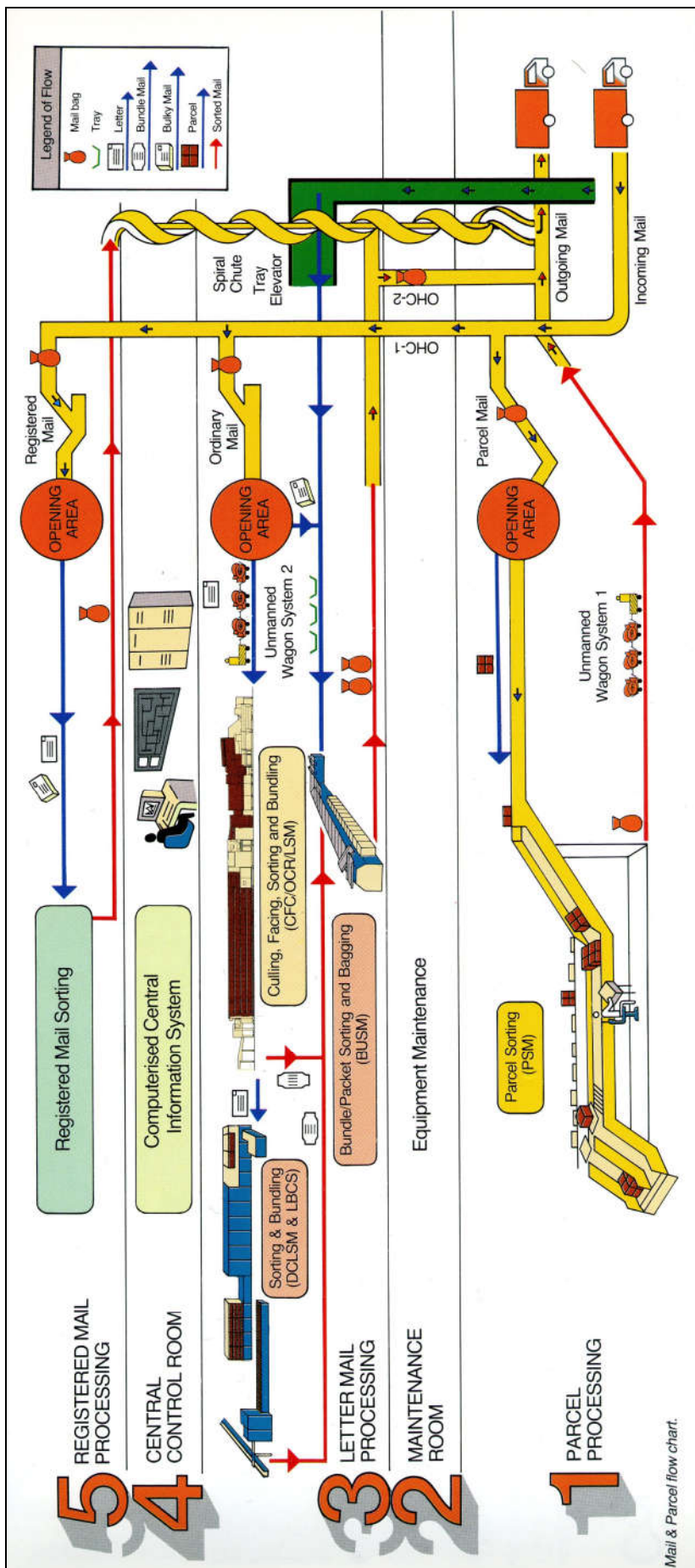


Figure 3 – Singapore M&PC schematic.



Figure 4 – Letter tray conveyor.

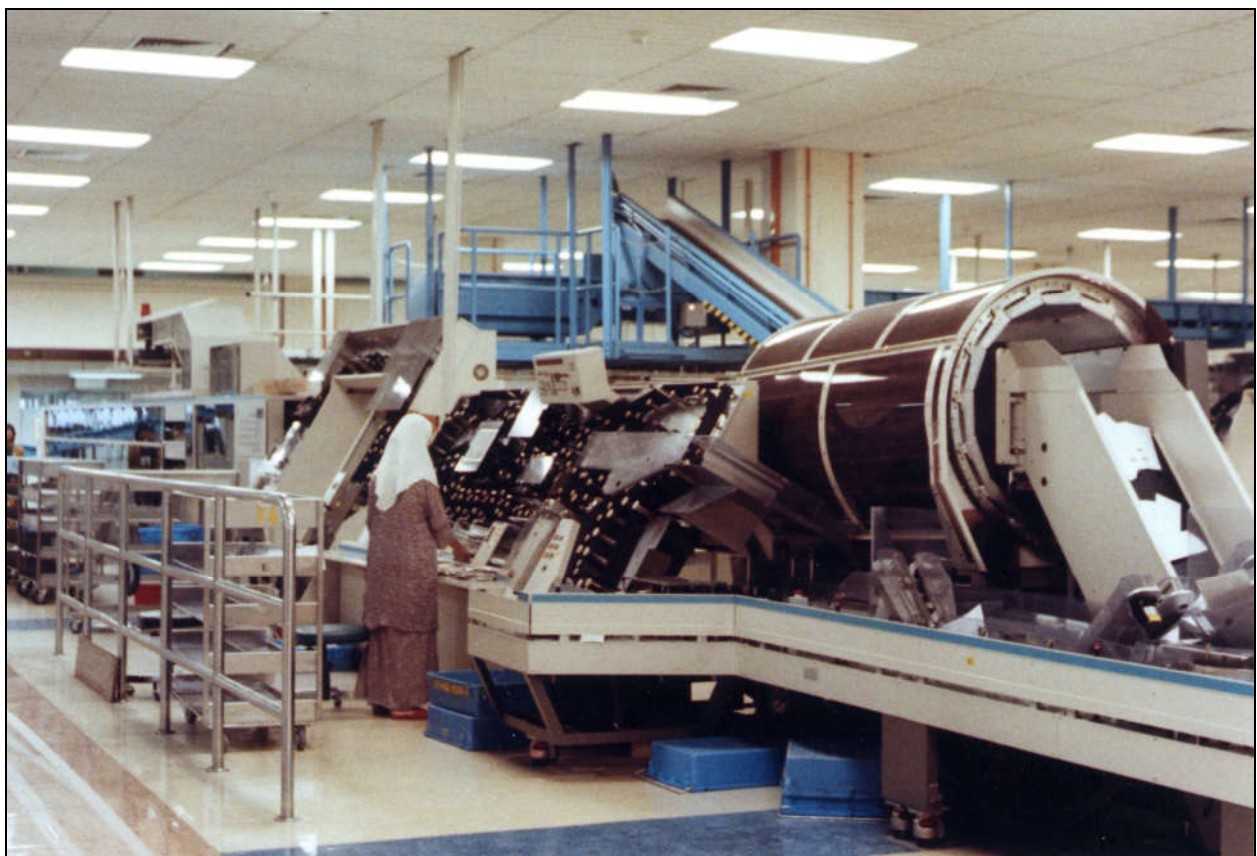


Figure 5 – Culler Facer Canceller.



Figure 6 – OCR and output boxes.



Figure 7– DCLSM coding desks (black ident suite).



Figure 8 – DCLSM coding desks (red ident suite).



Figure 9 – DCLSM sorting boxes.



Figure 10 – Bundled letters output to conveyor.



Figure 11 – Bundle labels for Delivery Offices.



Figure 12 – Bundle sorting machine.



Figure 13 – Parcel sorting machine.

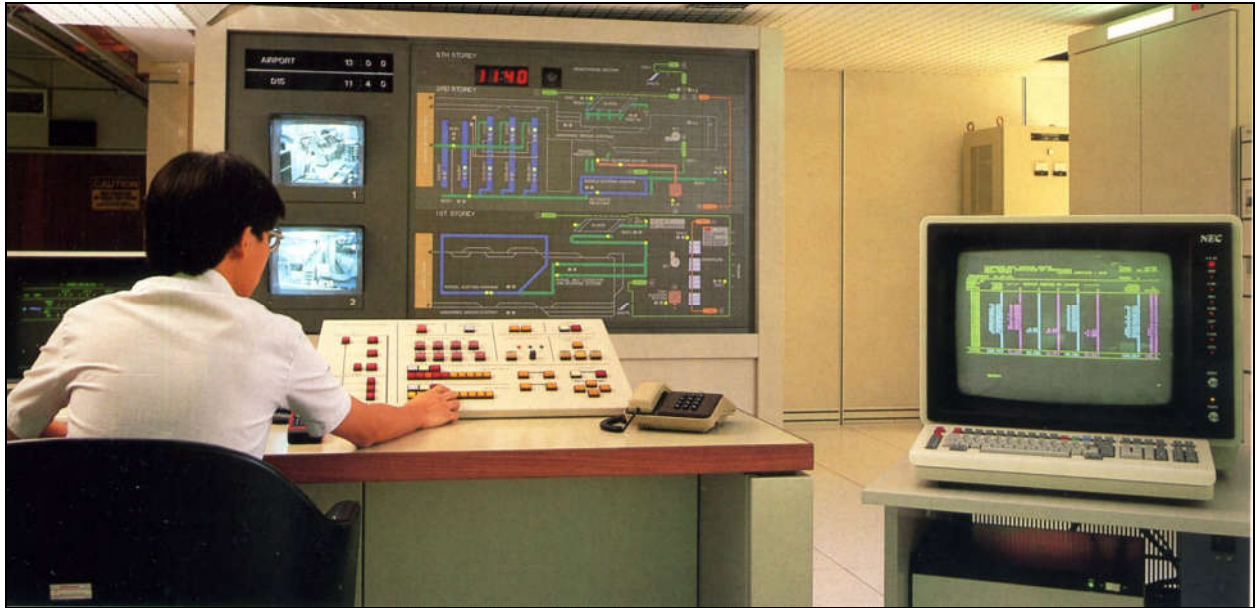


Figure 14 – Centralised Computer Info System.



Figure 15 – Unstaffed wagon.

Singapore ATM – Almex print on-selection and payment ‘stamps’

I mentioned in the introduction a second weird coincidence, following on from discovering that my Rollei camera had been made in the building that had now become the Singapore mechanised sorting office. Not only had I worked with Almex bus ticketing equipment in my day job in Newcastle upon Tyne for the 7½ years prior to going to Singapore, but I had unwittingly helped them design this vending machine! This was my first and only encounter with an Almex stamp-vending machine as that sort of kit normally finds itself in car parks for parking ticket vending (much of it survived into the era when they were re-badged Metric, the name of the owning group). The key feature was that they could issue a parking ticket, not only lining up the text on the front with the pre-printed background, but also ensuring that the sticky backing label, usually with a special offer (free or discounted burger voucher etc), could be peeled off to stick said ticket to the inside of the car windscreen. But to ensure that the print lined up and you got a complete voucher, not cut in half any time, each square ticket had a central hole punched at every ticket-length interval and the machine used optical hole-detector technology to know when and where to guillotine each purchase.

In Tyne and Wear we had recently opened the Metro (in 1980 – 40+ years ago and the same trains are still running!) and in 1982 sought the means of issuing single journey bus-bus, bus-Metro and bus-train through tickets where the ticket needed to open the gates on the Metro operated by encoded magnetic stripe (Paris carnet style 66mm Edmondson tickets; for Crouzet [later Ascom-Autelca] equipment). Almex produced for Busways (where I worked, leading the ticket equipment roll-out as we approached deregulation) a twin-ticket printer based on Nottingham’s single track Autofare but we, as the bus company, had to buy the tool for Crouzet to use to produce the ticket stock with a hole every 66mm. Busways retained the royalties on further use (but I doubt whether they were ever told by Almex, or at least Busways wouldn’t know where to find the ‘agreement’!). Singapore’s ATM stamps were conceptually simply a carbon copy of the Newcastle Busways ‘Transfare’ ticket print-on-demand method, moved to Almex’s ‘car park machine’ box and using the hole-detector to avoid guillotining through the stamp!


An illustration of the machine appears below, together with the pages from the promotional advertising leaflet for the service and examples of a couple of the ATM ‘stamp’ designs (one of which also appears on the DCLSM sorted envelope in the earlier part of this article – this was a cover I arranged in Singapore to be circulated to every PMSC member at the time in 1991). Firstly, I illustrate the Tyne and Wear/Busways tickets with the hole for the optical detector, which was the precursor for the design of the Singapore ATM ‘stamps’.



Figure 16 – Tyne & Wear tickets.

▪ ADDRESS POSITION ▪

Position the address within the address zone of the envelope as illustrated, so that it can be 'read' by the machine.



▪ ADDRESS FORMAT ▪

Follow the address format as shown below:

- For high-rise buildings such as apartment blocks or commercial buildings

Apt Blk or Bldg No.

Street name

#

Unit No.

Bldg name

Singapore Postal Code

- For low-rise buildings

House No.

Street name


Singapore Postal Code

▪ ADDRESS PRINT ▪

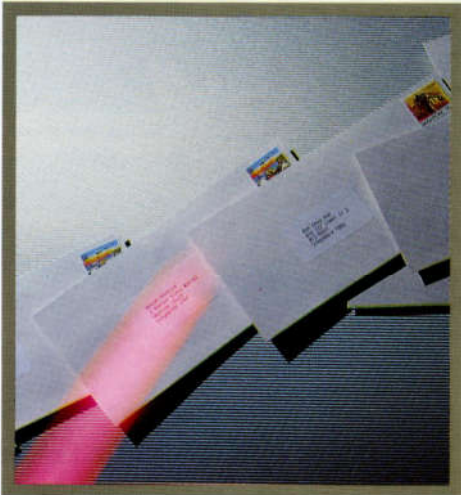
TYPE or **M**ACHINE PRINT your address in dark print using the common types of fonts. This is important as the machine cannot 'read' hand-written or dot matrix printed addresses.

Enquiries

If you need more information, please contact us at:—
Letters and Parcels Division
Chai Chee Complex
750 Chai Chee Road, Singapore 1646. Tel: 2400594 or 2400583



**Automated processing
of letters**



**Have your
letters
delivered faster
the OCR way.**




Figure 17 – OCR brochure.




Figure 18 – ALMEX ATM label.

How to use the Postage Label Vending Machine



1. Press RED button.



2. Turn knob to select value of postage labels required.




3. Press YELLOW buttons for number of labels. You can choose to buy 1, 2 or 5 labels by pressing one of these 3 yellow buttons.




4. Check cash display panel for the amount you have to pay.



5. Insert coins. The machine accepts 5¢, 10¢, 20¢, 50¢ and \$1 of the new Singapore coins only. Your change will not be in coins. If you pay more than the required amount, your "change" will be given in either 10¢ or 5¢ labels. You can keep these labels for use later on.



6. Collect labels by pushing flap at the bottom left hand corner of the machine.



The machine is a red, freestanding unit with a coin slot, a value selection knob, three yellow buttons labeled '1 LABEL', '2 LABELS', and '5 LABELS', a digital display showing '00.20', and a label collection flap at the bottom left.

To buy other number of labels, press a combination of any of the 3 yellow buttons. For example, to buy 4 labels, press button for "2 labels" twice. To buy 3 labels, press button for "1 label" followed by the button for "2 labels."

Figure 19 – ALMEX ATM instructions.

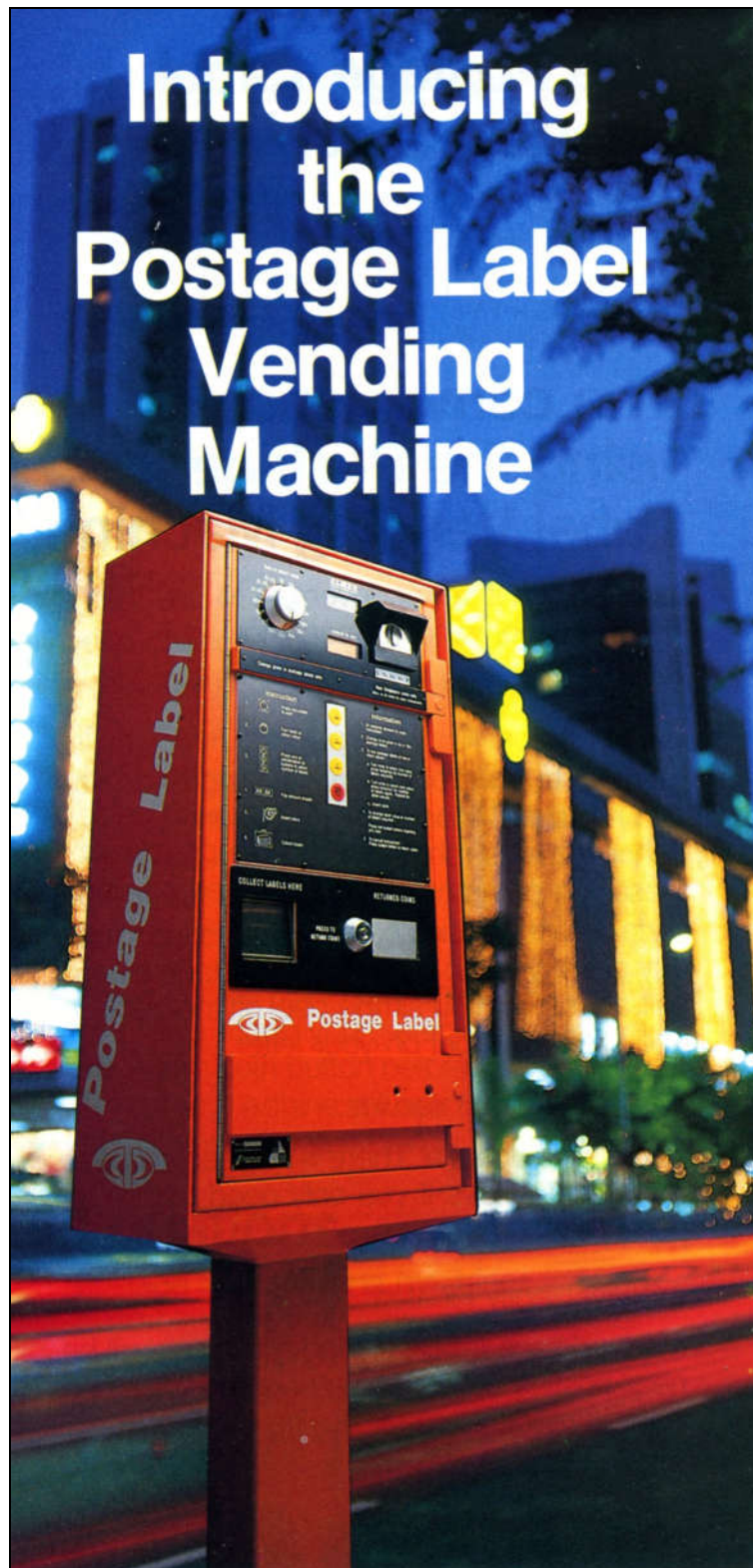


Figure 20 – ALMEX label leaflet.

Mail carriage by streetcar in the United States, 1891–1929

Paul Reynolds

All day long the white cars, so arrogant with the badges of 'U.S. Mail', ply back and forth over streetcar lines, delivering mail to the sub-stations and receiving in return that which accumulates there.¹

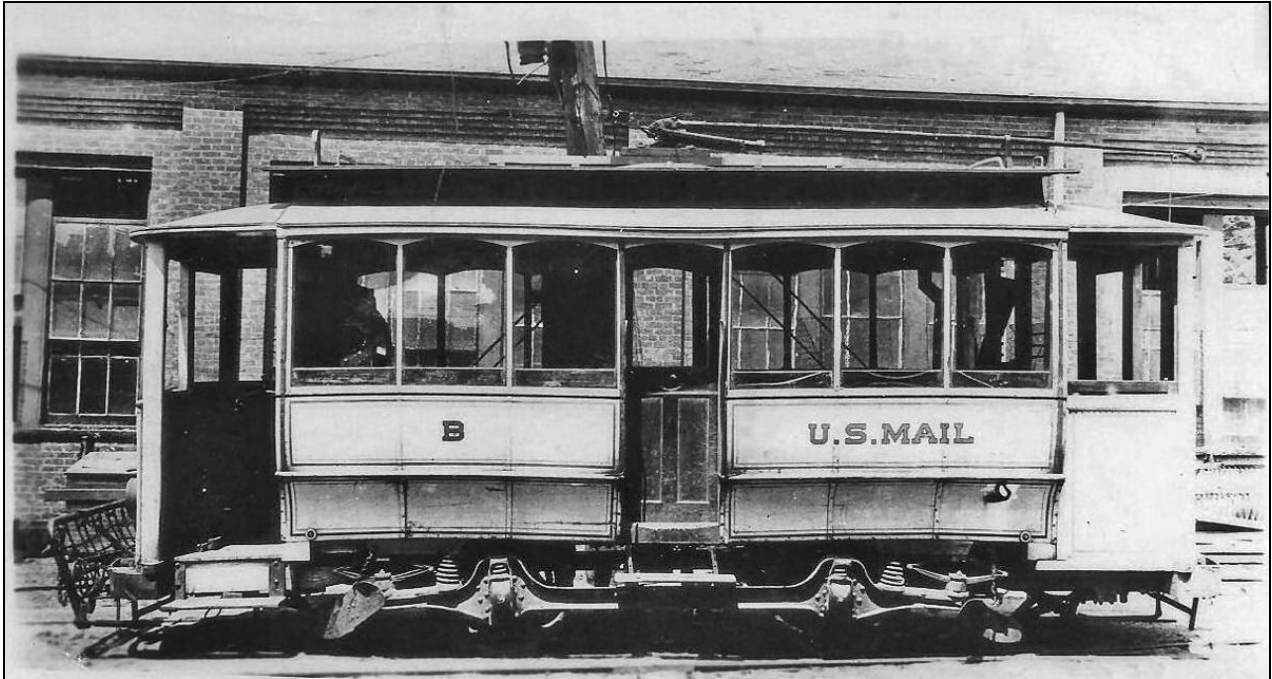


Figure 1 – A typical white streetcar that has been designed for mail sorting instead of carrying passengers. Location not known.

Electric streetcars ('trams' in UK English) started to appear in the streets of American cities in the 1880s and their presence became widespread during the 1890s. Some, like the example above (Fig 1), drew their current from an overhead wire by means of a cable, and so were generally referred to as 'trolleys'. Others, as in New York, Chicago or San Francisco among other places, were powered by a perpetually moving underground cable laid between the rails; the car was drawn along by grippers beneath the car by which it was attached to this cable: these were known as 'cable cars'.

It was not long before somebody realised that these streetcar lines could provide a means of rapid mail distribution within a city in the same way as inter-city mail was handled by the Railway Post Offices (RPOs) already operating on many main-line railways. That 'somebody' was Major John Harlow, the Postmaster of St Louis, Missouri (Fig 2). The city of St Louis covered an area of 62 square miles and in 1890 had a population of over 450,000 making it the fourth largest city in the United States. Yet to serve



Figure 2 – Major John Harlow, Postmaster of St Louis.

that population there was only the central post office and five sub-stations, or one post office to every 10 square miles or 75,000 inhabitants. Not surprisingly there were frequent complaints about the time it took for a letter to get from one part of the city to another. Harlow's plan to remedy this dire situation was to set up 40 more sub-stations and to use the streetcars to link them together. Each car would be fitted up with facilities for stamping and sorting, as on the railways. Bags would be delivered from the central office to each of the sub-stations for local delivery; the letter-carriers would transfer the collections they had made during their walks onto the mail car rather than having to carry them into the central office. Mail collected by the mail car from the sub-stations would be stamped and sorted on the mail car's return journey.²

The opportunity to test his idea came when the narrow-gauge steam railway from St Louis to Florissant, a country town 18 miles away, was electrified and turned into an inter-urban trolley. Towards the end of 1891 a service was started with two return journeys a day (Fig 3), but it was not Harlow's circulation plan in full, including stamping and sorting, because the company and the USPO could not agree on terms. It was only what was known as a 'pouch service', in other words, the trolley simply carried sealed mail bags to and fro – along too with parcels and dairy products. But eventually agreement seems to have been reached and the full streetcar mail service commenced on 3 February 1893; the frequency was increased to three trips a day, travelling clerks begin cancelling, sorting, and exchanging city mails between stations en route, and the USPO provided a handstamp reading ST LOUIS MO., STREET CAR R.P.O. No 1.

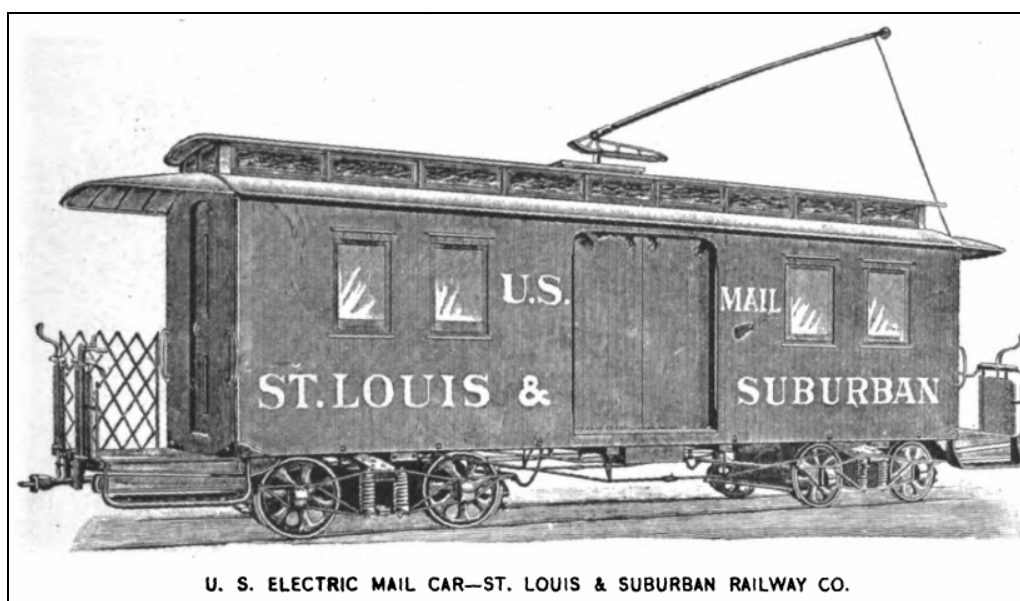


Figure 3 – The first mail car used on the St Louis to Florissant route before white had been specified as the colour for all mail cars (Electrical Engineer, 11 January 1893).

The results in St Louis were impressive and met with the approval of the Railway Mail Services establishment. Accordingly in his annual report for 1893/94 George F Stone, on behalf of his chief, the Second Assistant Postmaster General who was indisposed, reported that:

Consideration is now being given to the feasibility of utilizing electric and other rapid-motor street car lines to facilitate the transportation of mails in the important cities between the main post-offices, and to and from the railway stations. A plan of this kind would probably include the running of a special car over the several street lines for the exclusive use of the mail service, not only for carrying locked pouches, but in which a certain amount of distribution would be possible. Of course such an arrangement could be effected only by the hearty cooperation of

the street car companies with the Department for the improvement of the service. The office hopes to accomplish some substantial results in the direction indicated within the next year.³

The first city where these results were accomplished was Brooklyn in 1894 followed by several others between 1895 and 1897. But thereafter only a few additions were made, apparently because of budgetary issues and difficulties associated with agreeing a fair contract price with the various streetcar companies (all of which, of course were private commercial undertakings).

<u>1894</u>	New York	San Francisco	<u>1908</u>
Brooklyn	Philadelphia	<u>1897</u>	Cleveland
	Washington	Baltimore	<u>1910</u>
<u>1895</u>		<u>1903</u>	Omaha
Boston	<u>1896</u>	Seattle	
Chicago	Pittsburgh		
Cincinnati	Rochester		

It must be remembered that in addition to these 'travelling post offices' which performed a full range of mail circulation activities, the streetcar companies were used for a great many more 'closed pouch' services by which sealed bags were carried to and from without any processing being carried out en route. These services are not considered in this article.

A useful summary of the mail car services in place at the end of 1896 was provided in the annual report of the Postmaster General for 1895/96 reproduced below.⁴ By this date the service had been introduced in 11 of the eventual total of 15 cities, although in some cases further routes were still to be added to those listed here. A total of 45 cars were operating; they performed 196 round trips per day and covered 907,863 miles in a year.

Electric and cable car service at present in operation.

Date of order.	Description.	Length.	Daily average.
		<i>Miles.</i>	<i>Miles.</i>
1893. Feb. 3	St. Louis and Florissant, Mo., R. P. O	18.10	80.98
1895. May 1	Boston and Brighton, Mass., R. P. O	8.25	69.90
1	Boston and North Cambridge, Mass., R. P. O	6.39	80.89
14	Boston and Dorchester, Mass., R. P. O	4.49	63.65
14	Dorchester and Back Bay, Mass., R. P. O	4.60	56.87
14	Boston and Roxbury, Mass., R. P. O	2.79	54.59
14	Boston and Somerville, Mass., R. P. O	3.24	53.87
June 1	H and P, Philadelphia, Pa., R. P. O	11.98	161.41
8	Boston, Mass., Circuit R. P. O		42.06
July 5	Williamsburg and Northampton, Mass., R. P. O	8.63	59.20
Sept. 27	Third avenue, New York, R. P. O	12.15	710.52
Oct. 24	Philadelphia and Manayunk, Pa., R. P. O	7.98	134.23
Nov. 11	Chicago, Ill., Milwaukee avenue R. P. O	3.79	70.13
11	Chicago, Ill., North Clark street R. P. O	3.78	66.77
11	Chicago, Ill., Madison street R. P. O	4.97	96.29
11	Chicago, Ill., Cottage Grove avenue R. P. O	7.73	149.77
11	Cincinnati, Ohio, Walnut Hills and Brighton, R. P. O	7.62	39.20
Dec. 16	Brooklyn and Long Island City, N. Y., R. P. O	5.19	51.39
19	Washington, D. C., Pennsylvania avenue R. P. O	4.86	101.48
1896. Mar. 13	Brooklyn, N. Y., Circuit R. P. O	12.04	365.42
May 16	St. Louis, Mo., Grand avenue circuit R. P. O	13.66	127.61
Sept. 14	San Francisco, Cal., Mission street R. P. O	4.93	60.67
14	San Francisco, Cal., Market street R. P. O	3.77	65.82
14	San Francisco, Cal., Sacramento street R. P. O	4.91	57.67
Oct. 5	Rochester, N. Y., east and west side R. P. O	15.31	134.44

For ten or fifteen years mail cars formed an essential part of the postal infrastructure in these 15 cities. But the period of their flourishing was short and as early as 1897 a sense of disappointment already starting to appear. In his annual report for that year the Superintendent of the Railway Mail Service (who was then responsible for the mail cars) expressed his reservations: 'It is a question in my mind, however, whether this class of service can ever be made to accomplish what was hoped when the system was first inaugurated. The runs are as a rule too short to admit of the distribution of any great quantity of mail either way.' There was simply not enough time to sort delivery mail into walk order for the letter carriers or to sort collected mail for onward transmission, and anyway conditions within the mail cars were simply too cramped for efficiency. Nevertheless, he was 'still of the opinion ... that the service is worth all it costs, and that it would be a step backward to abandon it' and he suggested various ways in which some of these difficulties might be minimised.⁵

But it was clear that the mail cars were not really coming up to expectations and in contrast to their enthusiastic spread in the mid-1890s, they were introduced into only three further cities after 1897. Added to that, the internal combustion engine was arriving, and the greater flexibility of the petrol-driven motor van soon assured its superiority. Furthermore, the increasing volume of motorised traffic obstructed the streetcars which thus became unable to offer the speedy and reliable service that the Post Office required. Consequently whenever Congress chose to impose financial restrictions on the USPO, mail cars were an obvious target for savings. Between 1913 and 1915 they ceased to operate in Boston, Brooklyn, Chicago, Cincinnati, Philadelphia, St Louis, Seattle and Washington. They had already ceased in New York as early as 1900 (because the USPO could not agree terms with the streetcar company), in San Francisco in 1905 and in Rochester in 1909. Cleveland, Omaha and Pittsburgh closed between 1917 and 1921 leaving just Baltimore, where the mail cars survived until 1929.

The mail cars



**Figure 4 – New York mail car used from 1895 to 1900
(Street Railway Journal, November 1895, p 697).**

5) except in one important respect: mail cars were always painted white regardless of the livery adopted by the individual company for their other vehicles. This was a government requirement intended to ensure that they were easily recognisable. The wording 'United States Mail' was often picked out in gold or even more flamboyantly, as at Boston or Washington, in red and gold. An attempt at uniformity was made in 1895 when the USPO adopted a design produced for the West Chicago Street Railroad Co (Fig 9) as standard with a view to its being used for all future mail cars in the future.⁶ But by then most of the companies involved in running mail cars had already provided themselves with cars to their own design.

Mail cars (the actual vehicles) were provided by the company operating the route and so their external appearance varied from city to city, but internally the layout always contained the same components and followed the same overall layout. Initially the USPO must simply have provided the basic specification and left it to the streetcar companies and their builders to interpret this as they thought best. Consequently there was no standardisation in the appearance of the vehicles (Figs 4,

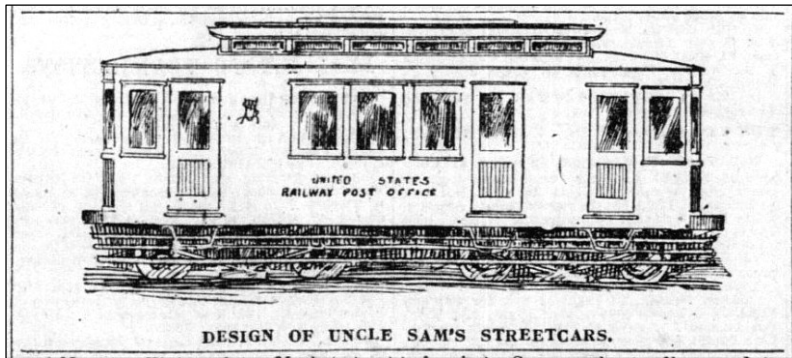


Figure 5 – San Francisco cable mail car, used from 1896 to 1905 (San Francisco Call, 7 June 1896).

table where the description accompanying the plan states that an electrical cancelling machine is to be mounted. On the outside is a posting box for the public to post letters en route which can then be immediately cancelled and routed appropriately.

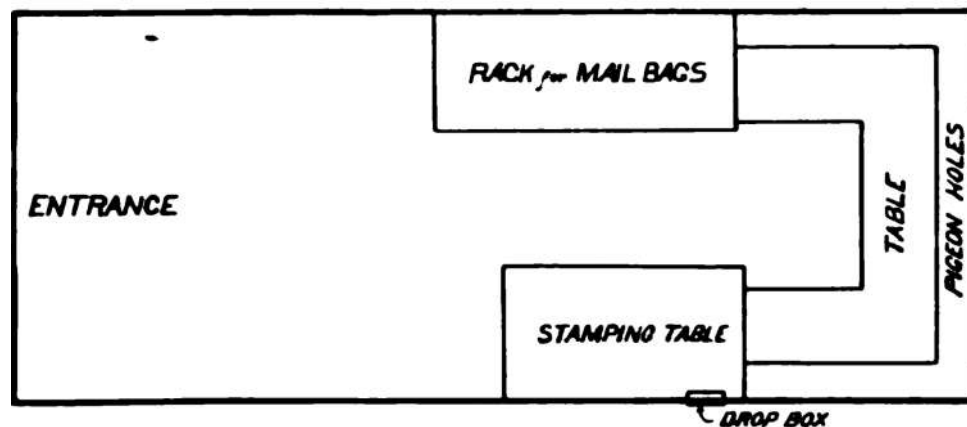


Figure 6 – The basic internal layout of a mail car is shown in the plan of a Philadelphia car of 1895, converted from a horse-drawn tram (Street Railway Journal, June 1895, p 453).

The People's Traction Company was acquired by the Union Traction Company later in 1895. Almost immediately the new company took steps to replace the old horse tram conversions. Fourteen new mail cars were built for what was described as 'the most extensive trolley mail service in the country' which connected 37 stations and substations. But the new cars still followed the same basic layout:

At one end is a distributing rack, containing 228 letter boxes, underneath which are closets and lockers. On one side are ranged tables for sorting the mail and letter-cancelling machines operated by the electricity which propels the car. On the other side are swinging racks for pouches.

There is a door on each side of the cars to take in and throw out mail, and there will be no necessity for the motorman or conductor or any one else except the two mail clerks employed on the car entering the interior. A number of the car windows are of frosted glass, and the rest are protected with brass screens and bars ... they will not be run as trailers, as are those now in use in the city, but each is equipped with its own motors and is operated independently.⁷

Mail cars in other cities followed much the same general layout although with individual differences. An example from New York, again from 1895, has a rack of pigeon holes at both ends of the car (giving a total of 380 selections) with the sorting and stamping tables adjacent to one rack

and what appears to be a frame for mail bags adjacent to the other (Fig 7). This plan also indicates the position of gas pipes for heating. The Philadelphia car must also had a heater that is not shown on the plan, for that was one of the USPO's requirements. At Chicago, the cars built by the Pullman Company for the West Chicago Street Railroad Co in 1895 (Fig 9) included a water cooler and a wash stand – probably very necessary items. This design of car was adopted as the USPO standard with the intention that it should be adopted on every system.

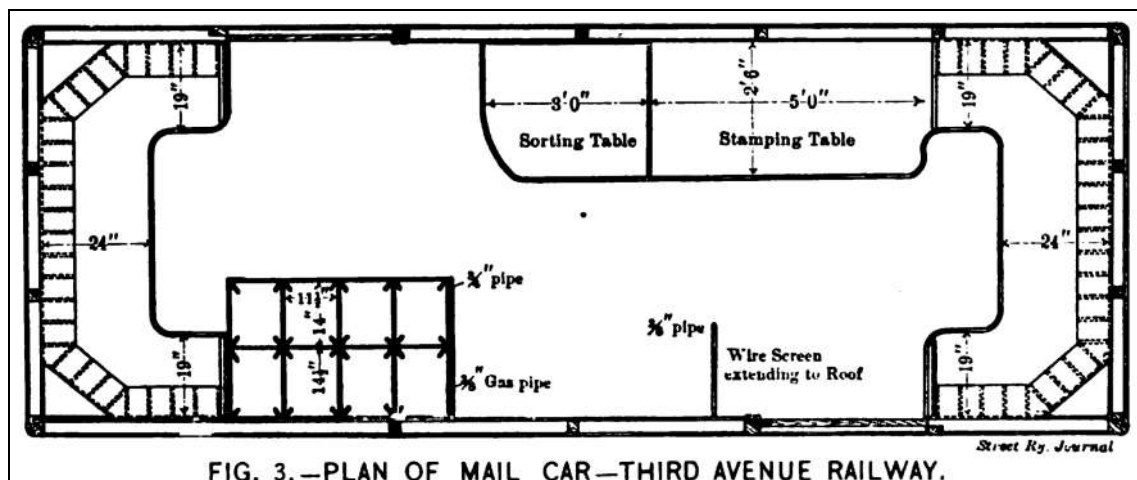


Figure 7 – Internal layout of a New York mail car used from 1895 to 1900
(Street Railway Journal, November 1895, p 698).

A photograph of the interior of a Boston mail car of the same period illustrates the same general layout (Fig 8).⁸ On the left is a frame for the mail bags and the layout of the sorting cases and the sorting and stamping table is the same. There is no sign of a cancelling machine: this was probably located at the other end of the car, behind the photographer.

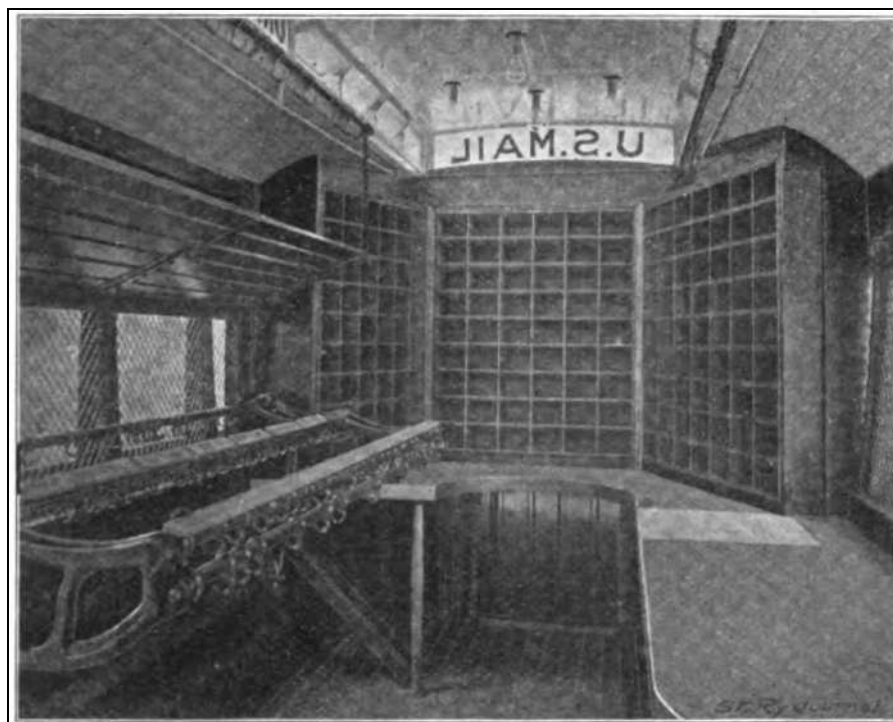


Figure 8 – Interior of a Boston mail car showing bag rack, sorting cases and sorting/stamping table (Street Railway Journal, November 1895, p 454).

These cars were all single-purpose vehicles intended for postal traffic alone. But sometimes, as at Chicago in 1895 (Fig 9), the mail car was a composite or dual-purpose vehicle, with passengers carried in one half and the other half reserved exclusively for postal purposes. It was the same at Brooklyn: ‘The company offered to give us the use of the whole of these cars’, said the local Postmaster, ‘but that would be more room than we should need, and so at my suggestion only half of each car will be used for postal purposes’. He went on, ‘The other half will be a smoker, so that the company will be deriving some revenue from these cars’.⁹ Regardless of whether they were composite or single-purpose vehicles, the mail cars might run either independently as single units or they might be attached as a trailer to a powered passenger car on a scheduled service.

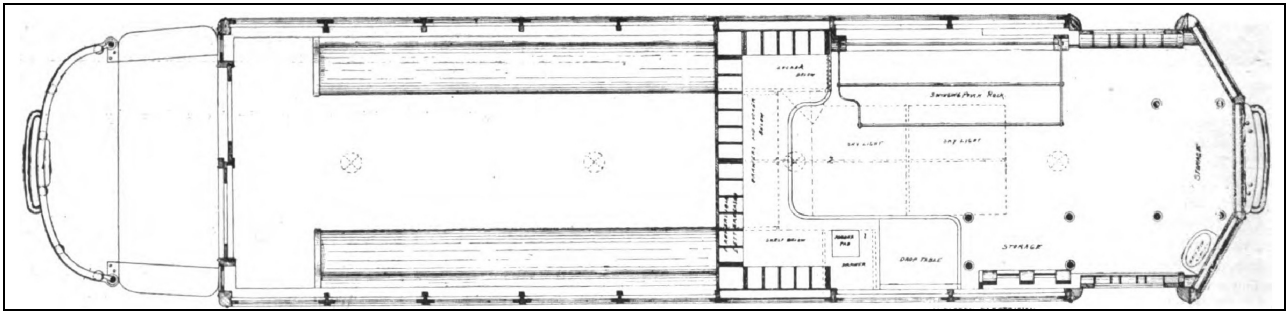


Figure 9 – Internal layout of a dual-purpose (passenger/postal) mail car for Chicago and then adopted as standard by the USPO (Western Electrician, 1 June 1895, p 262).

The working routine

Each mail car was of course staffed by USPO clerks. Their actual number varied: it was normally two or three, although at Boston (at least initially) it was only one. In addition, each independent car had a motorman (driver) and conductor provided by the operating company. (The conductor was needed to change the points as required, swing the trolley pole round when the car started back on its return journey, and to keep an eye on the timetable.) These two were not of course required if the mail car was operating as a trailer to another powered car.

The working day started early. The first cars were on the rails by 5.00 or 6.00 am in many cases and continued until around 8.00 pm. But at New York they continued until midnight and at Boston, after the daytime cars had gone home, the ‘Boston Circuit’ night car took over and ran all night, making three round trips to stations on all the shorter daytime routes. On its outward journey, usually starting from the central office, the mail car would carry bags for all the postal stations on its route and also for other stations which were not on its route but which could be served by a connecting horse-drawn wagon.¹⁰ As it continued on its way it would offload these bags at the appropriate points, but also pick up bags for stations further down the line. One of the clerks would have to dismount regularly during the journey to empty the roadside letter-boxes – and then run to catch up with the car because it might not have stopped. They would also meet letter carriers at designated points and hand over the bags containing mail for their delivery walks. At the end of the journey the process would be reversed: bags of outward mail would be collected from each station and if necessary stamped and sorted. Letter-carriers would also appear and hand over the unstamped mail which they had collected during their deliveries. Mail could also be posted directly into the car by members of the public by means of a letter box on the side of the car. All this had to be stamped and sorted. Mail collected from these various sources and intended for delivery from stations closer to the centre would be offloaded as the car made its way back but overall the car must have become fuller and fuller as it neared its destination. Since all the mail it carried was already stamped and sorted there was no need for it go through this process in the main sorting office – or at least, not in the case of mail for the most frequent selections. These bags could simply be transferred to the train or to a mail car serving the route on which the delivery station lay.

But even so, there must have been a residue of mail to unusual destinations which would have to be added to the general mail mix going through the central office (but at least that category could go straight to sorting).

The mileage covered by these mail cars could be considerable. In New York City, before it was withdrawn, the Third Avenue Rail Road Co car (the city's solitary mail car) covered nearly 260,000 miles a year. It ran every half hour and stamped and/or sorted about 70,000 items a year. Perhaps more typical were the mileages of the various Boston cars which mostly ranged between 20,000 and 30,000 miles a year. The figures were similar for most cars in Philadelphia although the Manayunk route reached 92,000 miles and the Frankford route 79,000.

In some cities the mail cars operated on multiple routes branching out in all directions. Boston, Brooklyn and Philadelphia each had 8 routes, Chicago had 7 and Omaha 5. Other cities had fewer routes and Cincinnati, Cleveland and Pittsburgh each had one only, a solitary mail car which made a circuit round the city up to nine times a day (in the case of Cleveland). In Chicago and St Louis, too, a circuit mail car operated among the other routes, and mention has already been made of the nightly Boston Circuit. The place with the most routes was St Louis where there were as many as 15, although of these two were only temporary in connection with the 1904 World Fair and the city's centennial exposition in 1909.

Given the huge and rapidly growing amount of mail that was being handled by the USPO at this period, any help that the mail cars could provide in diverting mail away from the central sorting offices was obviously valuable. But realistically, it did not amount to very much. In 1895/96 the mail cars together handled 505,481 items daily, but at this period Chicago alone claimed that 2,000,000 items passed through its main office every day. Unfortunately I have not been able to find similar figures for the other cities where mail cars were in service, but clearly the throughput for most of them will have been rather less than that of Chicago: a combined daily figure of 17,000,000 might not be too far off. If that is anything like correct, then the mail cars only accounted for less than 3 percent of the total traffic in these 11 cities.

Cancelling machines

One of the essential duties of the mail cars was to cancel and sort mail en route so that it could either be dropped off at the appropriate sub-station for local delivery, or transferred into the outgoing city mail stream at the central office without the need for any further processing. Nearly all mail cars were provided with one or more handstamps and a good number of them also had an electric cancelling machine which was powered from the same source as the car itself. Given the time constraints

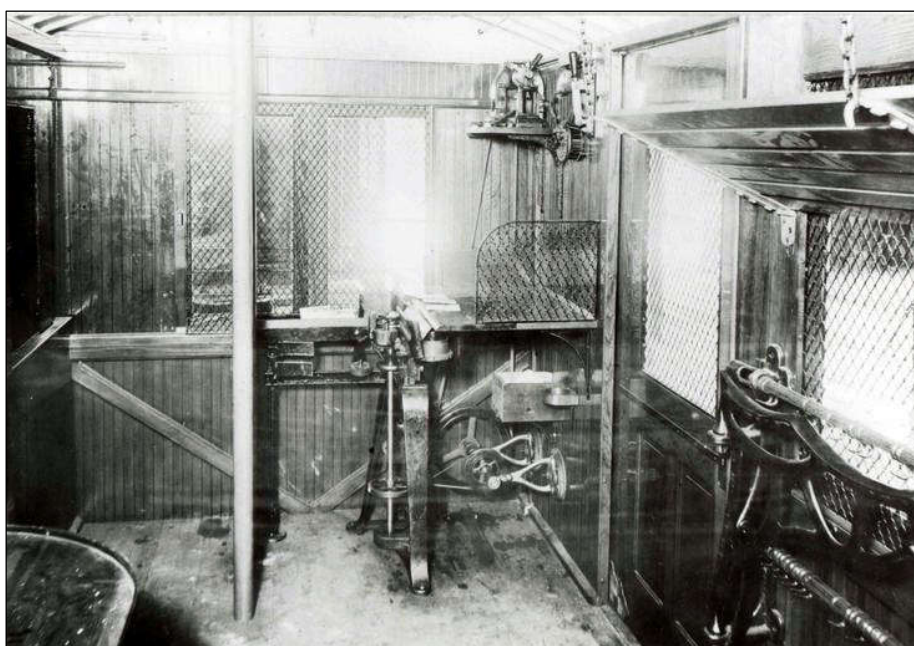


Figure 10 – interior of a Boston mail car showing the cancelling machine (<https://postalmuseum.si.edu/exhibition/mail-trolleys/how-it-worked>)

under which the mail cars operated, rapid cancelling was essential if they were to stamp and sort the mail within the time available, and this is born out in the description of Boston's first car in 1895 which ended with the statement that 'its most important feature will be a cancelling machine'.¹¹ None of the floor plans reproduced above actually show the location of the cancelling machine, but an interior view of a Boston mail car (Fig 10) suggests that the it was installed at the opposite end of the car to the bank of sorting cases, which hardly seems to be a good working layout, especially since there were normally three clerks all trying to work within the same restricted space.

A list of the mail cars which are known to have been equipped with a cancelling machine appears at the end of this article. In some cases the machine was used for only a short period: perhaps experience taught the authorities that the amount of mail collected was not enough to require machine cancellation, or perhaps it became apparent that the machine took up space that could be better used for other purposes – storing bags, perhaps.

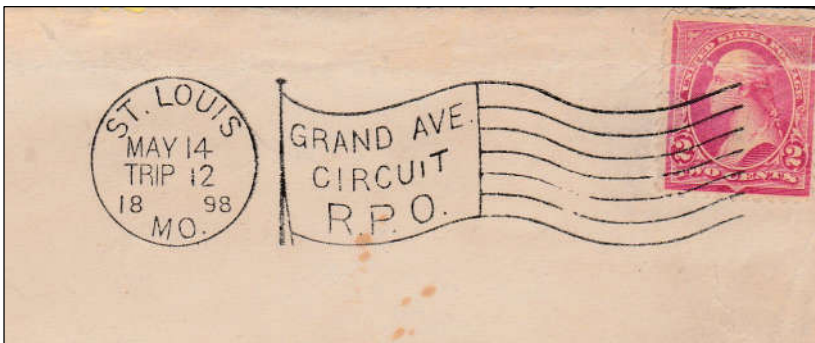


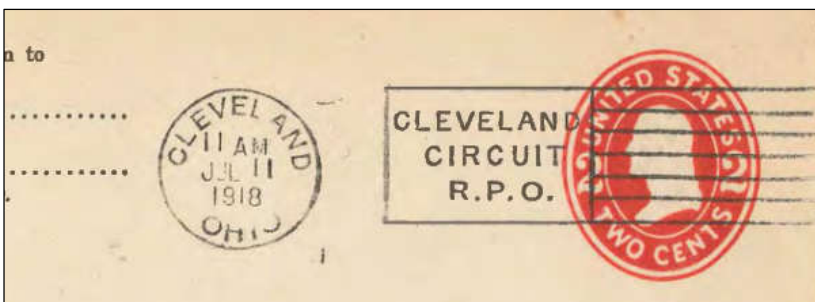
Figure 11 – Typical streetcar cancellation from an American Postal Machines Co machine, as used in most cities.



Figure 12 –Streetcar cancellation produced by a Doremus machine; used on two lines only in Chicago.



Figures 13, 14 – Streetcar cancellations produced by Universal machines at Cleveland. The Universal was introduced in 1911, at first with a wavy line die. This was replaced by the boxed die in about 1917.



Most of the machines were supplied by the American Postal Machines Company which was the USPO's normal source in the 1890s (Fig 11). Doremus machines were used in two of the Chicago cars (Fig 12) and after the USPO had started to use Universals, these replaced Americans at Cleveland and Baltimore during the 1910s (Figs 13,14,16). An examples of an International (Hey-Dolphin) machine is known from the Brooklyn South Shore RPO in the period 1904–06 (Fig 15): all recorded strikes are of the town die only, apparently used as a transit mark.¹² An International is also known from Baltimore's Roland Park & Highlandtown service in 1922 (Fig 16), although a Universal was normally used on this line at the time (Fig 18).

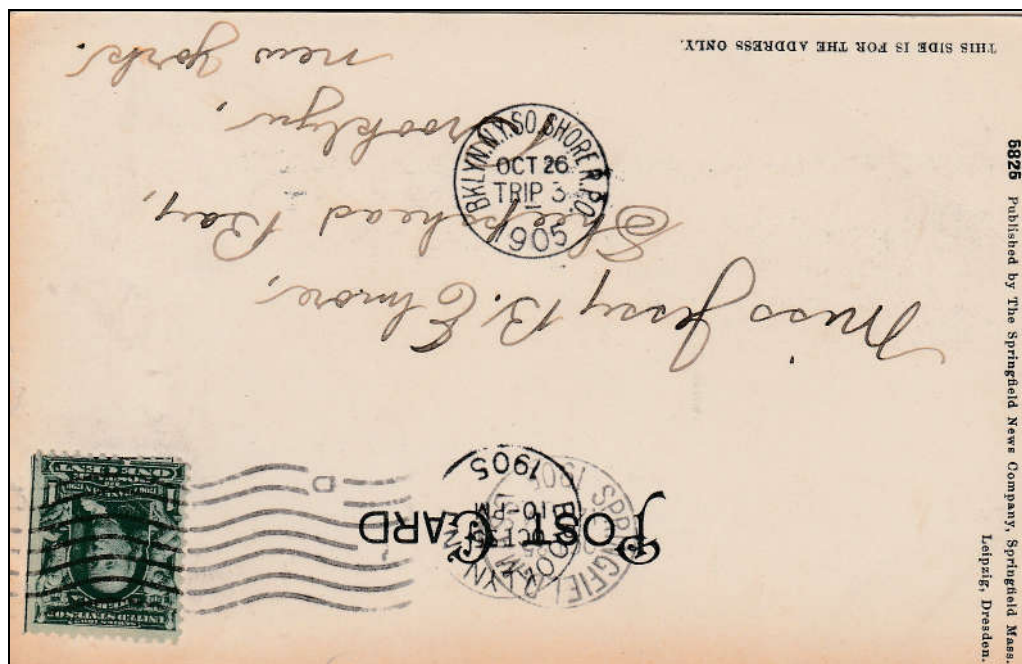


Figure 15 – International machine (town die only) used as a transit mark on the Brooklyn South Shore RPO, 26 October 1905.

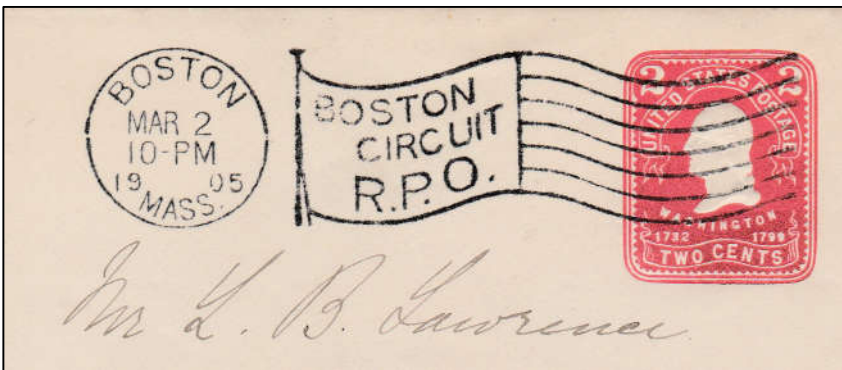


Figure 16 – International machine used on Baltimore's Roland Park & Highlandtown service in 1922.

The design of the American cancels followed their standard and familiar flag design (Fig 11). With only one exception, the town die showed the name of the city, with the route of the car appearing in the flag. That one, short-lived exception was the Boston circuit car. This was the first car to have a cancelling machine and as supplied in 1895 the town die read 'Boston Circuit' with the standard design of flag (Fig 17). This was changed in 1897/98 for the city name, 'Boston, Mass.', in the town die in the usual way with 'Boston Circuit R.P.O.' now in the flag (Fig 18), thus following what had become the standard pattern for streetcar cancelling machines from the American Company.



Figures 17, 18 – American Postal Machines Company cancellation from the Boston Circuit mail car. Fig 17 is the original version introduced in 1895. This is the only streetcar cancellation to include the name of the service in the town die. Fig 18 shows the standard version introduced in 1898. Note that in both cases clock time is shown, not the trip number.



In the town die it was normal (but not invariable practice) to show the trip number rather than clock time. However, the Boston circuit cars, which operated only at night, always showed the time, either 10 pm, 2 am or 4 am reflecting the three distinct circuits that they made (Figs 15, 16).

It has been claimed that some cars had two cancelling machines on the grounds that in some cases the flag cancellation includes the figure '2' (Figs 16, 19).



Figure 19 –American Postal Machines Co cancellation showing '2' in the flag.



Figure 20. Handstamp showing 'Car 2' clearly indicating a second car on the route.

This suggestion seems unlikely. Apart from the difficulty of fitting two machines into the space available and at the same time allowing room for a working area around each of them, handstamps are known which show 'Car 1' or 'Car 2' in killer (Fig 20). This seems to show that '2' in the flag must refer to a second car working the route, not to a second machine in the one car.

Streetcar services where a cancelling machine was used

An American Postal Machines Co machine was used unless indicated otherwise. In some cases more than one die is known.

Baltimore

Arlington & So Baltimore (Baltimore & Arlington from 1910)

Replaced by Universal from c1920.

Roland Park & St Helena (Roland Park & Highlandtown from 1910)

Partial replacement by Universal from c1917; International known from 1922.

Towson & Catonsville

Replaced by Universal from c1922/23.

Boston

Boston Circuit R.P.O.

Boston & Brighton

Boston & North Cambridge.

Machine used 1897–98 only

Boston & Somerville.

Machine used 1898 only

Brooklyn

Brooklyn Circuit R.P.O.

South Shore R.P.O. *International (?) from c1904.*

Chicago

Wentworth Avenue. *Doremus machine.*

Cottage Grove Avenue. *Doremus machine.*

Cincinnati

Brighton Car

Cleveland

Cleveland Circuit R.P.O.

Replaced by Universal from 1911.

Philadelphia

Philadelphia & Manayunk

Philadelphia & Frankford

Philadelphia & Germantown

Philadelphia & West Philadelphia

Southwest Circuit

Pittsburgh

Fifth & Penn Ave Circuit ('Street Car R.P.O.' from c1907)

Rochester

East Side R.P.O.

West Side R.P.O.

St Louis

Grand Avenue Circuit

Street R P O (Florissant)

References

[Unless shown otherwise, all cited references may be retrieved from 'Google books' or 'Chronicling America', <https://chroniclingamerica.loc.gov/>.]

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2. John B Harlow, 'The electric railway mail service at St. Louis', *Electrical Review* [New York], vol 22 no 2 (4 March 1893), pp 29–30
3. 'Report of the Postmaster General ... [for 1893/94]' (Washington: Government Printing Office, 1894), p 172
4. 'Report of the Postmaster General ... [for 1895/96]' (Washington: Government Printing Office, 1896), p 496
5. 'Annual reports of the Post Office Department ... [for 1896/97]' (Washington: Government Printing Office, 1897), p 507
6. *Street Railway Review*, vol 5 no 5 (May 1895), p 276; no 6 (June 1895), p 364–5
7. *Evening Star* [Washington DC], 25 September 1896
8. *Electrical Engineer*, vol 20 no 377 (1895), p 90

9. *New York Tribune*, 8 July 1894

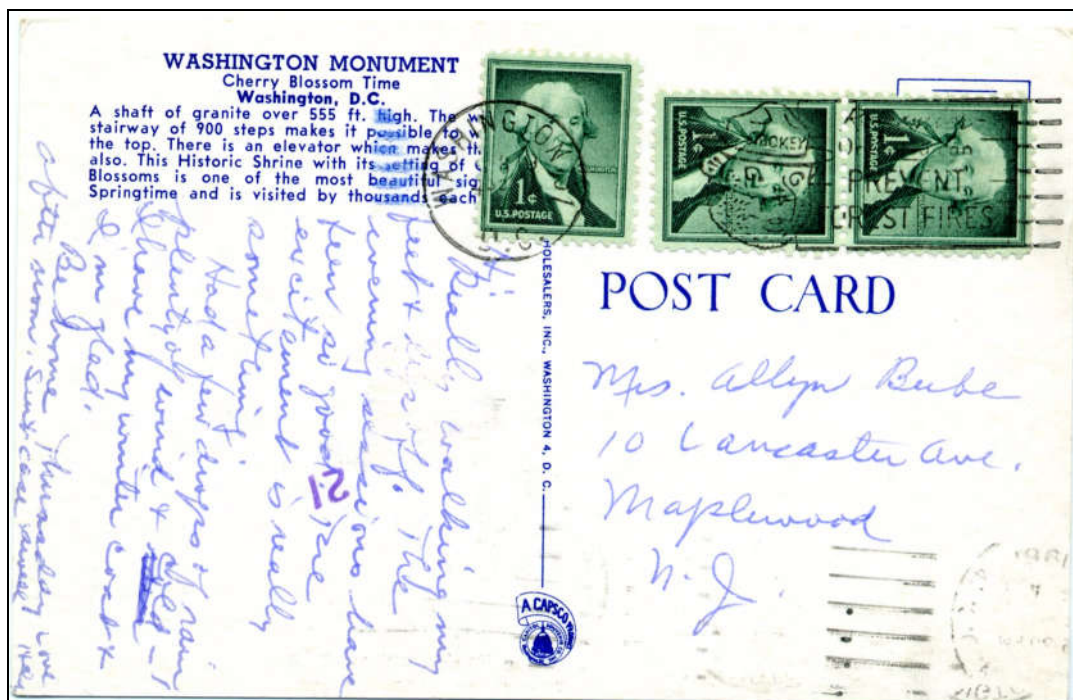
10. A fascinating film clip of 1903 shows a horse-drawn USPO mail wagon exchanging bags with a cable mail car in Washington <https://postalmuseum.si.edu/exhibition/customers-and-communities-serving-the-cities-overcoming-congestion/trolley-mail-service> [accessed 7 July 2021].

11. *Electrical Engineer*, vol 20, no 389 (1895), p 372

12. John M :Price, 'Brooklyn streetcar R.P.O. markings', *Excelsior* (Empire State Postal History Society), vol 3 no 2 (summer 1975), pp 1–10; may be downloaded from <https://www.esphs.us/journals/excelsior/> [accessed 7 July 2021]

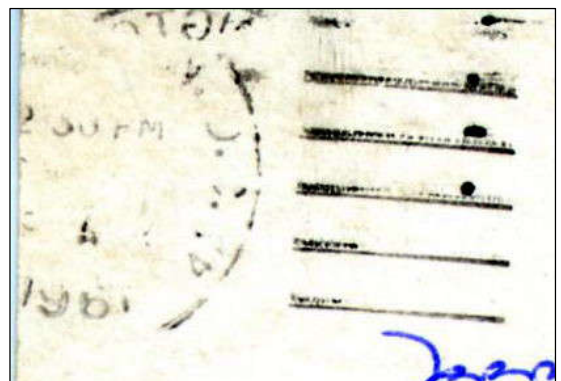
Another early Burroughs ident from Washington

Jeremy Meal



One of my recent finds is this card from a holiday-maker in Washington to a friend in New Jersey. A very obvious Burroughs ident 21 appears on the address (i.e. the wrong) side of the card, but the date is frustratingly unclear.

That the year is 1961 is shown by the weak cancellation on the bottom right (enlarged and inverted reproduction shown alongside). But it is not clear enough to make out the actual date, although the writer's remark 'Had a few days of rain, plenty of wind & cold – I have my winter coat & I'm glad' points to a date in either early spring or late autumn. There is another cancellation on the reverse (reproduced on the following page) but it is too weak to be any help. That leaves just the Universal or International steel cancellation on the stamps and that too is very indistinct.





Note the hint of a postmark over the trees below the Washington obelisk.

However, it is just possible to make something out of this cancellation if it is enlarged. One would expect the date to be in the format month+day/time/year, so the character directly below the G (in 'Washington') can be read as a B, and so the month is February, which agrees with the sender's message. (By February you can probably expect DC to be warming up, but perhaps still with a nip in the air.). The next line is perhaps 4 30 (superscript 30). The 0 looks like a B or an 8 but that is because it falls over the line defining Washington's coat. There should then be a PM or an AM, but I can see no trace of it. The plug might not have been inserted. Similarly I cannot see any sign of a year, again perhaps the plug wasn't inserted.



It looks as though the CFC mis-faced this card the first time round, hence that faint cancel on the picture side. That meant it was then presented the wrong way round to the Burroughs operator who keyed it away leaving an ident 21 on the address side (which to him/her was the reverse side of the item). When the supervisor cleared the reject box he saw that it hadn't been cancelled and fed it into the CFC stream again – and this time it was faced upside down – hence the 1961 cancel on the address side. For some reason the item wasn't sent to the Burroughs suite a third time – perhaps the failure was spotted at once and so it was it was put through the back-up stamp cancelling machine by hand and then hand sorted – if you want a job doing properly, don't leave it to a robot!

If the date of February 1961 is correct, then this is a very early example of a Burroughs system at Washington and this is borne out by its evenly printed, fresh-looking appearance. It is not *the* earliest example, however, because Ed Ryan, in his article, 'Early Burroughs idents' in *Ident* (vol 19, pt 4, 1996, pp 50–54), records an example (ident 81) from 4 January 1961.