

Telecommunications Heritage Journal

Issue Number 114

Spring 2021

ISSN 1353-0097



In this Issue

First payphones in Belgium
The evolution of switching systems
Trompe l'oeil phonebox
US Strowger demo exchange

www.thg.org.uk

First payphone in Belgium - Circa 1913

Jan Verhelst

Need for public phones

In the beginning of the 20th century, only a small minority in Belgium had a telephone in their home or business. If someone had to make a phone call, he could go to a telephone office during opening hours. This was usually located in the same building as the post office or the train station.

In such a public facility one could request a telephone call. Once the attendant had set up the connection, the customer was assigned to a telephone booth where he could make his call undisturbed. Afterwards he could pay at the counter.

The first public telephone booths in the street were introduced in Belgium in 1932 only.

Telephones with a coin box

Also before 1932 there was a need for publicly accessible telephones outside office hours, which is why telephones were placed in pubs, hotels and restaurants. In order to facilitate payment, a Belgian inventor had designed a coin box. This box was mechanically connected via a rod to the receiver hook of an ordinary telephone.

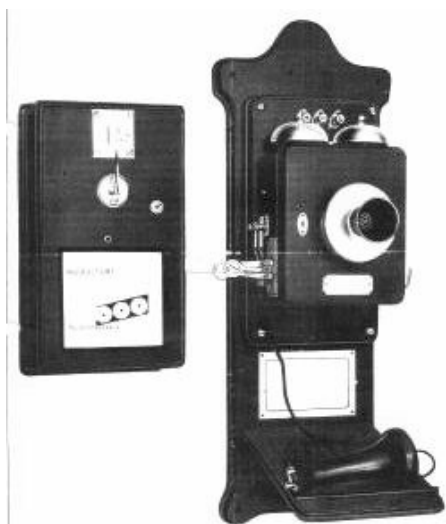


Fig. 1: Payphone in 1913 - coin box and regular phone

When the phone is not in use, the receiver hook of the phone is prevented from moving by a rod that is under control of the coin box. Only

when a user inserts an appropriate coin or token into the coin box is the receiver released. It can now move upwards and communication with the operator at the exchange can begin. When the call is ended, the receiver hook is lowered and locked again.

The associated telephone



Fig. 2: BTMC 2551 phone

The telephone is a normal wall phone of the Belgian Bell Telephone Manufacturing Company (BTMC) from Antwerp, a subsidiary of Western Electric, which was active from 1882.

It is a manually operated central battery phone, BTMC phone 2551, adapted by BTMC/Western Electric to the requirements of the Belgian government, mounted on a standard BTMC/ Western Electric 2001 back-board.

The coin box manufacturer

A company called Contrôleur automatique du telephone (Automatic Telephone Controller) was listed in a Brussels address book of 1912-1914.

A patent was requested in France by a Belgian inventor named Ernest Dejardin on 15 November 1912, and approved on 29 March 1913. It got the number FR 450.630 (see <https://worldwide.espacenet.com>)

Fig. 3

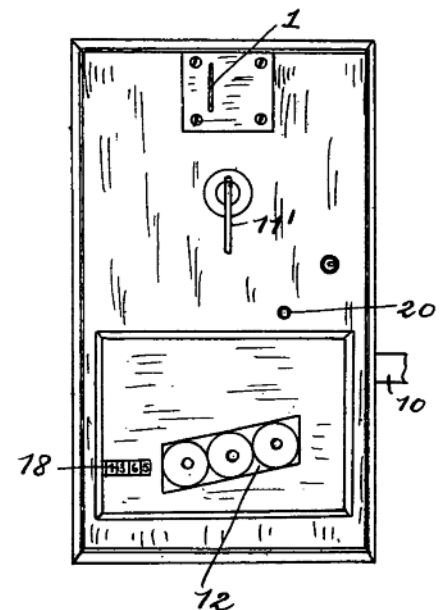


Fig. 3: Front view of the coin box (Copied from the patent application)

where a detailed description of the coin box is given.

After inserting a coin into coin slot 1 a user must turn knob 11' to allow the coin to start the internal mechanism and finally to appear in window 12. This window at the bottom shows the last three coins to prevent fraud. A mechanical counter 18 at the bottom left indicates how many calls have been requested so far, so that the administrator can check the phone company's bill.

To answer incoming calls, the administrator can place a key in hole 20, which unlocks the hook switch via rod 10 and allows the call to be answered. In the same way, the administrator can unblock the hook switch to make an outgoing call without having to insert a coin or token.

The administrator has a second key to retrieve the coins and tokens from the collection box at the bottom of the equipment.

Social impact

In rural areas, such a "payphone" was installed in the local pub. If there was an incoming phone call for a

local inhabitant, the pub owner obtained a small fee to go in town to warn the inhabitant that there was a phone call for him.

Other early 20th century boxes

Most of the contemporary coin boxes at the beginning of the 20th century are systems requiring interaction with the operator. Coins may only be inserted when requested by the operator. Some examples follow.

1. Ericsson

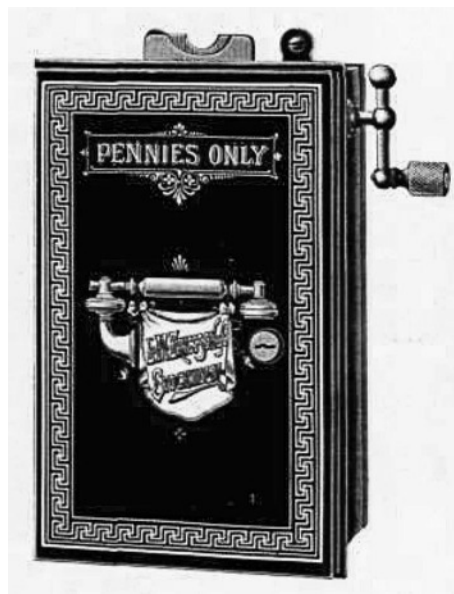


Fig. 4: Ericsson's coin box (1902)

Ericsson offered a coin box in his 1902 catalogue, which was widely used, i.e. in the United Kingdom.

After inserting the coin and turning the crank half a revolution, a buzzer was activated which generated an auditory signal that the operator could hear. The characteristics of the required coin could be adjusted per country.

2. Gray

Gray was the market leader in the USA at the beginning of the 20th century. In their catalogue of 1912, in addition to pay phones, they also displayed coin boxes.

At the operator's request it was possible to insert coins. Each slot had its own sound, so that the operator could hear which coins were inserted.

Gray was active in the US, but had also distributors worldwide. i.e.



Figure 5: Gray's coin box (1912)

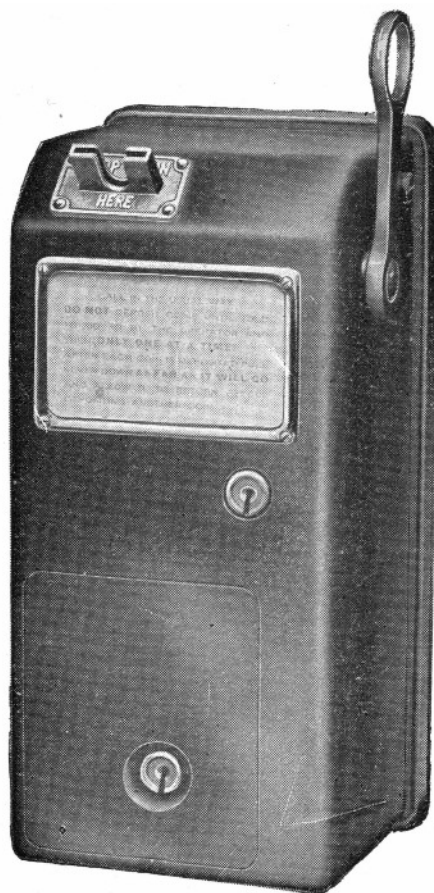


Fig 6: Western Electric's coin box 13-A (1908)

BTMC was their distributor in Belgium.

3. Western Electric

Contrary to the Gray solution, the Western Electric coin box only had one slot where three different coins could be inserted (nickel, dime or quarter). For each coin a gong was activated either one, two or three times.

4. Berliner



Fig 7: Berliner (Ca 1920)

Dutch PTT payphone (courtesy Jan Jansen, NL). The incoming coin activated a gong, which was acoustically forwarded to the operator via a small microphone.

5. Zwietusch (1910)

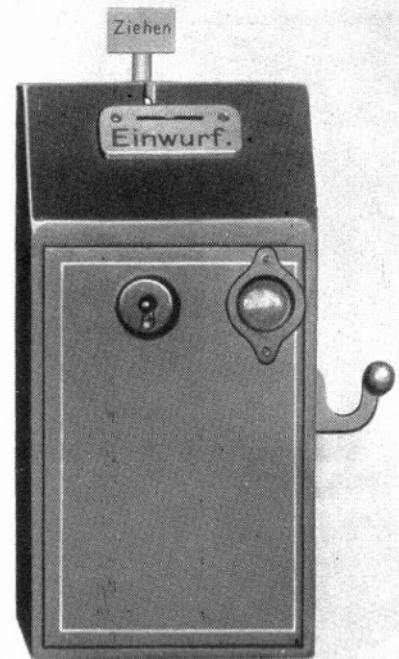


Fig 8: Zwietusch (1910)

This coin box from the German telephone company Zwietusch of Berlin (picture courtesy Dirk Bösterling, DE), has been used by the Reichstelegraphenverwaltung, the German PTT.

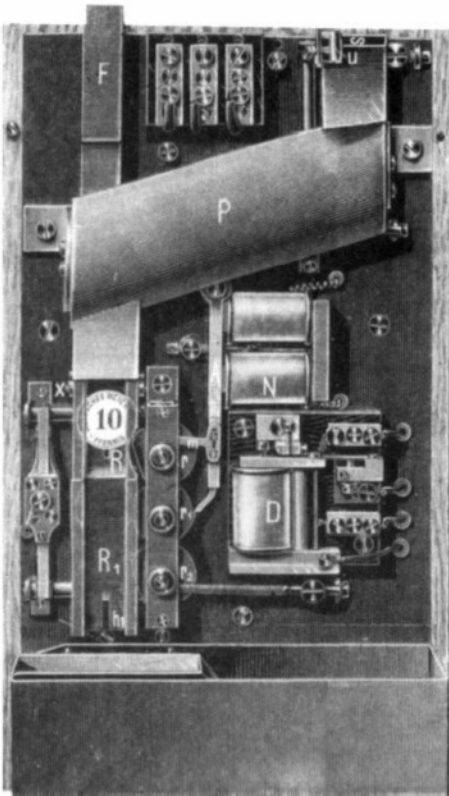


Figure 9: Mix und Genest (1889)

After a request for money from the operator, mechanical parameters of the coin (such as diameter, thickness) are validated.

6. Mix & Genest (1889)

The German manufacturer, Mix & Genest, had already in 1889 a prototype of a payphone (picture courtesy Dirk Bösterling, DE), which was commercialised in 1891.

After a request for money by the operator, a similar coin validation process was performed.

Sources

Catalogues

Ericsson (1902), Western Electric (1908) and Gray (1912)

Archives of Dirk Bösterling (DE), Jan Jansen (NL),

Pictures:

BMTC/Western Electric phones 1895-1930, Telecommunication Heritage Foundation (NL)

Patent FR 450.630 of 29 March 1913 via <https://worldwide.espacenet.com>

Remco Enthoven (JKL Museum, California, USA)

Special thanks

to Andy Emmerson for his assistance in obtaining the original patent and to give some language suggestions.

Nearly 90% of phone boxes removed in Ireland

Online news site, thejournal.ie, reported at the end of 2020 that in the last six months almost 90% of telephone boxes in the Republic of Ireland have been removed.

Telecomms operator Eir (formerly Bord Telecom Éireann) is quoted as saying that there are now only 51 payphones in the Republic that are available to the public and not in private places. Capital city, Dublin, has only seven kiosks after a staggering 181 were decommissioned since July. Of the counties, Cork has the most public payphones – just 13 – and ten counties have no public phones at all.

Official regulator, ComReg, previously required a so-called ‘Universal Service Obligation’, forcing Eir to operate payphones regardless of profitability, provided usage exceeded a threshold. Eir have stated that in January only nine payphones in the Republic were used enough to meet this target.

In a press release, ComReg said,

“ComReg has decided that after 31 December 2020:

- It is not necessary for ComReg to designate a Universal Service Provider for public payphones after this date.
- The needs of payphone users will be met in other ways, including payphones provided commercially by private operators.

“ComReg will continue to monitor the provision of public payphones ensuring that they remain affordable and satisfy the reasonable needs of consumers, and will intervene, if necessary, to ensure this.”

It goes on to add, “While public payphones may provide a basic service to a very small cohort of end-users who may have limited means of making a call and who seek a level of anonymity when contacting freephone numbers of a sensitive nature, the majority of end users appear to be increasingly utilising alternative methods.”



Eircom kiosk, Kells Co Meath
[J. Mulrane]