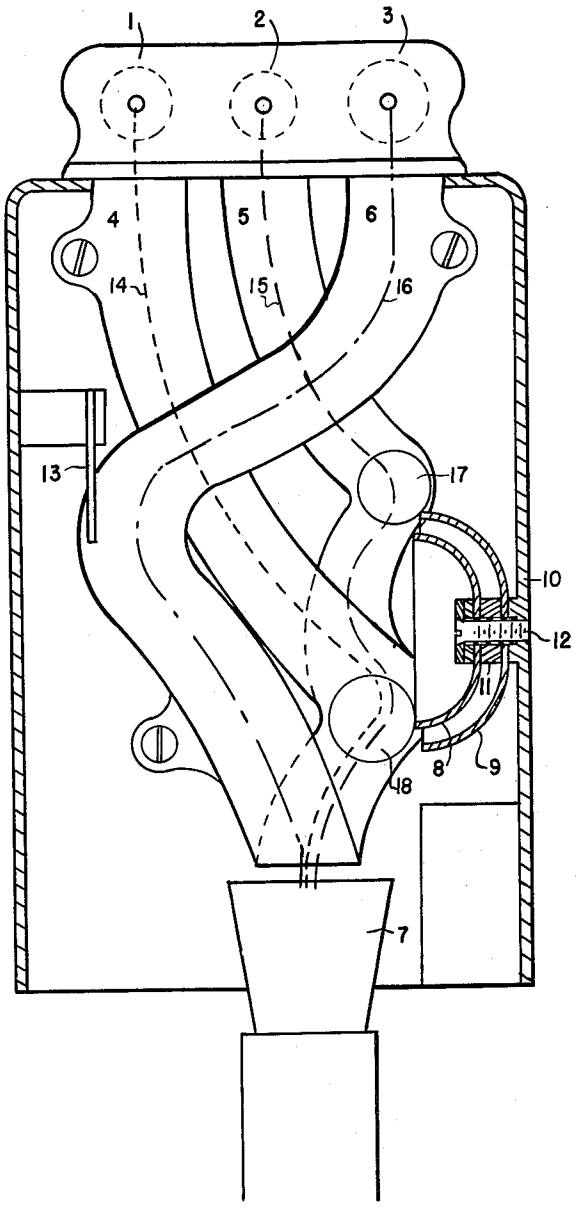
Sept. 13, 1955 R. J. GALLAGHER 2,717,683

DIME SIGNAL ON PAYSTATION

Filed Sept. 18, 1952



INVENTOR.
RAY J. GALLAGHER

BY McWatters Owen.

ATTY.

United States Patent Office 2,717,683 Patented Sept. 13, 1955

2,717,683

DIME SIGNAL ON PAYSTATION

Ray John Gallagher, River Forest, Ill., assignor to Automatic Electric Laboratories, Inc., Chicago, Ill., a corporation of Delaware

Application September 18, 1952, Serial No. 310,214

1 Claim. (Cl. 194—96)

This invention relates in general to paystations used in telephone systems and more particularly to signal sounding devices therein.

Paystations in use today have coin chutes generally of the type shown in the attached drawing, wherein a nickel deposited therein is guided so as to strike a gong once and a dime deposited therein is guided so as to strike the same gong twice.

However the switchboard operator handling a toll call often found it difficult to distinguish the two separate strikes by a dime due to the short time interval between strikes, the residual vibration from the first strike, and the damping effect of the second strike on the already vibrating gong.

A feature is the use of a second gong with the nickel-dime gong for the purpose of damping the vibrations of the latter, thereby to increase the intensity difference between two succeeding signals.

Another feature of this invention is to provide such a paystation with an arrangement of two gongs having distinctly different tones thereby to permit said operator to more positively distinguish between said two strikes.

Another feature is the adaptation of said two gongs for installation in presently used paystations.

Another feature is the arrangement of said two gongs so that each will tend to dampen the vibrations of the other, thereby to shorten the period of vibration of each. The advantages of shortening the period of vibration are twofold—the difference in intensity between the signals of two succeeding strikes of the gongs will be increased and beat frequency oscillation will be reduced.

Other features and advantages of the invention will be apparent during the course of the following description.

The attached sketch shows a typical arrangement of coin slots **1**, **2** and **3** with their associated coin chutes **4**, **5** and **6** designed for receiving and guiding along paths **14**, **15** and **16** nickels, dimes and quarters respectively against the proper signal sounding devices and thence to a coin receptacle **7** in a manner similar to that shown in Long #1,383,472. The quarter signal sounding device **13** is shown in its position with respect to its associated coin chute **6**. However instead of the usual single nickel-dime gong, applicant uses an inner gong **8** and an outer gong **9** as shown in their positions with respect to the coin chutes. It will be noted that they occupy the same position and approximately the same space as the single nickel-dime gong arrangement commonly used today. The positions of a dime **17** and **18** as it strikes the gongs is shown.

A sectional view of the two gongs and one type of supporting structure is shown; also the positioning of the gongs with respect to each other and with respect to the nickel and dime chutes (**4** and **5**) is shown.

Gongs **8** and **9**, similar in shape, are mounted on the paystation housing **10**, gong **8**, slightly smaller in size, being mounted within the concave portion of gong **9** with the outer convex surface of gong **8** in very close proximity to but not touching the inner concave surface of gong **9**. Disc **11** separates them and screw **12** holds them rigidly in place. The proximity and positioning of the vibrating surfaces of the gongs, which are closer than shown in the drawing, tend to cause a non-vibrating gong to dampen the vibrations of the other gong if it is vibrating, thereby to substantially reduce the vibration intensity of a signal before a second signal is produced and to reduce beat frequency oscillation. Preferably gongs with distinctly different tones should be used.

It will be noted that, while the edge of gong **8** projects slightly beyond the edge of gong **9**, yet the upper edge of gong **9** shields the upper edge of gong **8**, thereby to prevent a dime inserted in coin chute **5** from striking the upper edge of gong **8**; and that the lower edge of gong **8** shields the lower edge of gong **9**, thereby to prevent a nickel or dime from striking the lower edge of gong **9**. The sound caused by the vibration of the gongs is transmitted to the operator in a well known manner.

The operation of the signal sounding device is as follows:

If a nickel is inserted into slot **1** it will drop through chute **4** and be deflected into the lower edge of gong **8**, the sound caused by the vibrations of gong **8** being transmitted to the operator; if a dime is inserted in slot **2** it will fall through chute **5** and strike the upper edge of gong **9**, the sound caused by the vibrations of gong **9** being transmitted to the operator; then the dime is deflected by said gong **9** into the lower portion of chute **5** where it is again deflected this time against the lower edge of gong **8**, the sound caused by the vibrations of gong **8** being transmitted to the operator. During the time between the striking of gong **9** and gong **8** by the dime, the damping action of nonvibrating gong **8** on vibrating gong **9** will have considerably reduced the intensity of signal from gong **9**. Then when gong **8** is struck its signal will be clearly distinct from that of gong **9**. If a quarter is inserted into slot **3**, it will drop through chute **6** and be deflected against the signal-sounding device **13**.

While there has been described what is at present considered to be the preferred embodiment of the invention, it will be understood that various modifications may be made therein, and it is contemplated to cover in the appended claims all such modifications as fall within the true spirit and scope of the invention.

What is claimed is:

In a paystation having coin chutes for coins of the nickel, dime and quarter denominations, said chutes arranged to cause a coin of each denomination to follow a different path than the coin of other denominations when deposited therein, a signal sounding device mounted adjacent the quarter chute and arranged to be struck once by a deposited quarter as it follows its path, a pair of bells of symmetrical shape nested closely together with the outer surface of one bell concentric with the inner surface of the other bell, said bells mounted on a common stud but insulated therefrom, said bells mounted adjacent said chutes in such a manner that a deposited nickel strikes only the lower edge of the inner bell to provide a single sound, while a deposited dime is caused to strike first the upper edge of said outer bell and shortly thereafter the lower edge of said inner bell to provide two different sounds, the close relationship of said bells in said nested position causing a damping of the vibrations of either bell when struck by a coin to aid in giving separate and distinct sounds.

References Cited in the file of this patent

UNITED STATES PATENTS

469,649	Gray	Feb. 23, 1892
917,115	Otto et al.	Apr. 6, 1909
1,143,356	Buchanan	June 15, 1916
1,652,239	Edwards et al.	Dec. 13, 1927
2,179,091	Hoyt	Nov. 7, 1939
2,204,083	Hoyt	June 11, 1940