Dec. 29, 1936. H. BREGMAN 2,066,065

TOY TELEPHONE

Filed April 29, 1936

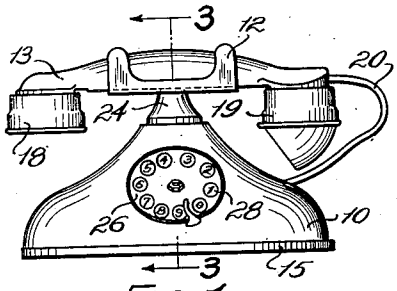


FIG. 1

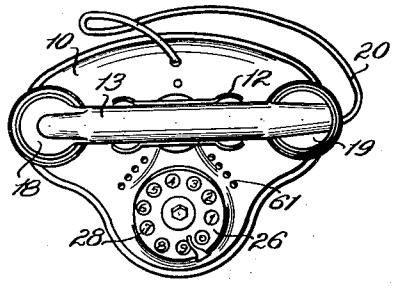


FIG. 2

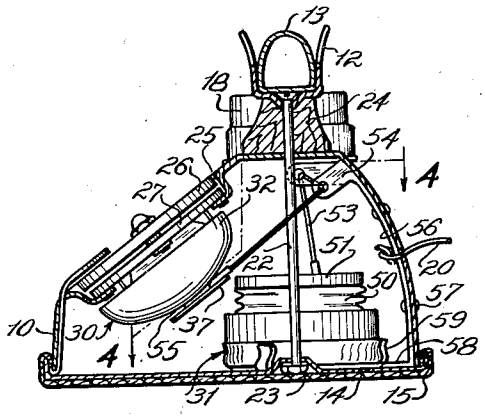


FIG. 3

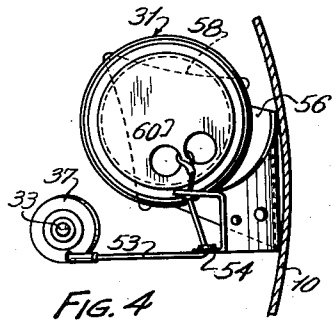


FIG. 4

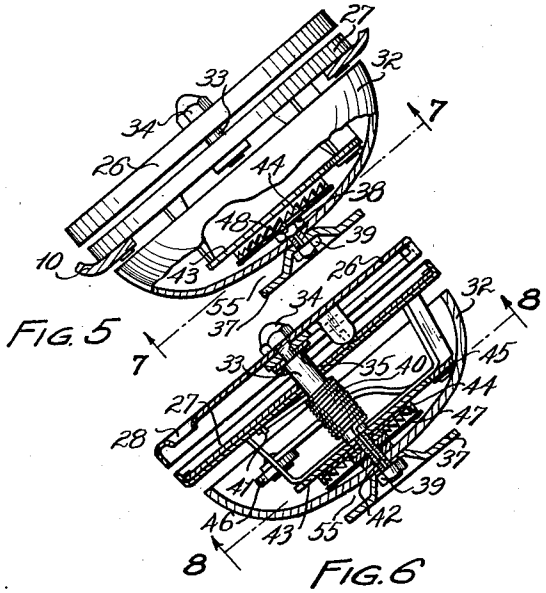


FIG. 5

FIG. 6

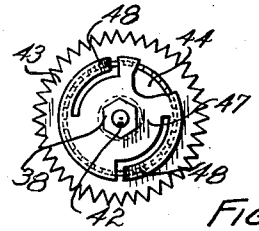


FIG. 7

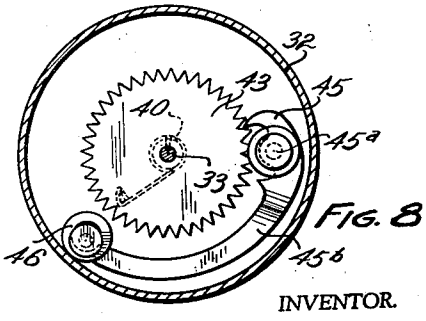


FIG. 8

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TOY TELEPHONE

Harry Bregman, Lorain, Ohio, assignor to The Steel Stamping Company, Lorain, Ohio, a corporation of Ohio

Application April 29, 1936, Serial No. 77,006

4 Claims. (Cl. 46—33)

This invention relates to toy telephones, and more particularly to a toy telephone of the type having a calling device such as a rotatable "dial."

The present invention is an improvement over the invention disclosed and claimed in my copending application Serial No. 21,720, filed May 16, 1935.

An object of the present invention is to provide an improved toy telephone having a calling device and novel signaling means arranged to be actuated by the calling device.

Another object of the invention is to provide a toy telephone having a pivoted signal actuating member, and a plurality of sound producing devices, all of which are sounded by movement of the actuating member in one direction.

A further object of my invention is to provide an improved toy telephone having sound producing devices including a bell device and a pneumatic device and also having a pivoted operating member movable manually in one direction and adapted to be returned by a spring, and wherein operating connections for the sound producing devices cause sounding thereof in sequence during the return movement of the operating member.

Other objects and advantages of the invention will be apparent from the following description when taken in conjunction with the accompanying sheet of drawings, wherein

Fig. 1 is a side elevation of a toy telephone embodying my invention.

Fig. 2 is a plan view thereof.

Fig. 3 is a transverse sectional elevation taken on line 3—3 of Fig. 1.

Fig. 4 is a partial sectional plan view taken as indicated by the irregular section line 4—4 of Fig. 3.

Fig. 5 is a fragmentary view showing the dial and bell ringing mechanism.

Fig. 6 is a similar view showing the dial and bell ringing mechanism in section.

Fig. 7 is a partial transverse sectional view of the bell device taken on line 7—7 of Fig. 5, and

Fig. 8 is another partial transverse sectional view taken through the bell device on line 8—8 of Fig. 6.

More detailed reference will now be made to the accompanying drawing for the purpose of describing the improved toy telephone which embodies my invention. However, before proceeding with such detailed description, it should be understood that the invention is not necessarily confined to the particular construction illustrated, but may be embodied in various other toys and devices.

My invention may be embodied in a toy telephone of the cradle type, that is to say of the type having a standard or base and a combined transmitter and receiver removably supported thereon, and in Figs. 1 and 2 of the drawing I show a telephone of this type. The base 10 of this telephone may comprise a sheet metal shell which has been stamped or otherwise formed to the desired shape, and a cradle 12 thereon which provides a support for the combined transmitting and receiving hand set 13. The base may also include a bottom cover plate 14 which may, if desired, be provided with a covering or sheath 15 of felt or other suitable material.

The hand set 13 may be of any suitable construction, such as sheet metal, and may comprise a handle part having receiver and transmitting parts 18 and 19 secured to opposite ends thereof. The handle part is shaped for removable supporting engagement in the cradle 12. A cord 20, simulating an electric conductor cord, may be arranged to connect the hand set 13 with the base 10.

The cradle 12 and the bottom cover 14 may be conveniently secured to the base by means of a clamping rod or bolt 22 which extends downwardly through the cradle and the base and has a nut 23 disposed in a recess of the bottom cover 14. The cradle may be spaced above the base by means of a spacer 24, of wood or other suitable material, through which the clamping rod 22 extends.

As shown in Fig. 3 of the drawing, the shell of the base may be provided in the front wall thereof with a recess 25 in which a pivoted actuating member, preferably in the form of a rotatable dial 26, is arranged. The rotatable dial forms a part of a calling device which also includes a plate 27 having an annular series of numerals or characters such as the names of cities or stations. As is usual in devices of this kind, the rotatable dial 26 has an annular series of openings 28 through which the characters are visible. The openings of the dial are shaped to receive a child's finger for causing rotation of the dial.

I provide my improved telephone with a plurality of sound producing signaling devices 30 and 31 which, as will be presently explained, are arranged to be actuated in response to rotation of the dial 26. The signaling device 30 comprises a bell 32 and mechanism for ringing the same and, for convenience, may be referred to as the bell device. The signaling device 31 may be a voice simulating device such as a pneumatic device capable of producing a cry or squawk and, for

convenience, may be referred to as the pneumatic device.

The dial 26 is mounted upon a rotatable shaft 33 and is drivingly connected thereto by means of the nut 34 cooperating with the shoulder 35. The shaft 33 extends into the hollow shell and, at its inner end, carries the bell 32 and a winding member 37. The bell and the winding member may be secured to the shaft by nuts 38 and 39 so that these members will be rotated with the shaft. A coil spring 40 may be disposed around the shaft 33 with one end thereof anchored to the plate 27 as indicated at 41, and its other end extending into an anchor slot or opening 42 of the shaft. A star wheel 43 and a ratchet wheel 44 are connected with each other and are both rotatably mounted on the shaft 33. The star wheel cooperates with an escapement-like pawl 45 which is mounted on a pivot 45a and has an arm 45b carrying a bell clapper 46. A plate detent 47 rotates with the shaft 33 and has spring fingers 48 adapted to cooperate with the ratchet wheel 44. The teeth of the ratchet wheel and the spring fingers are so arranged that upon clockwise rotation of the shaft the spring fingers ratchet over the teeth of the ratchet wheel but counterclockwise rotation of the shaft causes the spring fingers of the detent 47 to drive the ratchet wheel.

From the arrangement just described it will be seen that when the dial 26 is rotated in a clockwise direction the shaft 33 will rotate the plate detent 47 in the same direction, but since the spring fingers 48 of the latter travel over the teeth of the ratchet wheel 44, the star wheel will not be rotated. The clockwise rotation of the shaft 33 tensions the spring 40 and, when the dial is released after the clockwise rotation, the spring rotates the shaft and dial in a counterclockwise direction and returns the latter to its starting position. During this return movement of the dal under the influence of the spring 40, the spring fingers 48 of the plate detent 47 abut against teeth of the ratchet wheel 44 and cause this wheel, and the star wheel 43 which is connected therewith, to be driven in a counterclockwise direction. This rotation of the star wheel rocks the pawl 45 and thereby causes the clapper 46 to strike the bell 32.

The pneumatic signaling device 31 may be a device of the type having a bellows 50 and a reed or other sound producing element (not shown) past which air is caused to flow by operation of the bellows. This device may also have a weighted part 51 which is lifted to expand the bellows and which descends by gravity to collapse the bellows and force air past the sound producing element.

I transmit motion from the dial shaft 33 to the pneumatic device 31 to cause the bellows to be extended and collapsed in response to rotation of the dial. For this purpose I provide an operating connection between the dial shaft and the weighted part 51, preferably in the form of a cord or strand 53, which is connected with the weighted part and with the winding member 37. The strand may be led through one or more guide arms 54 which are suitably arranged to direct the movements of the strand.

With the arrangement just explained it will be seen that when the dial is rotated in the clockwise direction which, as explained above, tensions the spring 40 and causes the spring fingers 48 to travel over the ratchet wheel without causing ringing of the bell 32, the strand 53 is wound in the space 55 between the member 37 and the bell 32. The winding of the strand tensions the same and causes the weighted part 51 to be lifted to extend or partially extend the bellows 50. When the dial is released and rotated in the counterclockwise direction under the influence of the spring 40, the strand 53 is allowed to unwind and the weight 51 descends by gravity thereby collapsing the bellows 50 and forcing air past the sound producing element to cause the same to emit a cry or squawk which, in some instances, may be a sound simulating the voice.

As the strand 53 which provides the operating connection between the dial and the pneumatic device 31, I prefer to use an elastic strand. When an elastic strand is used for this purpose it will be seen that the strand need not be of an accurately determined length and the tensioning of the strand to lift the weighted part 51 may be caused in part by a winding up of the strand and in part by a stretching thereof. By use of such an elastic strand, operation of the signaling device 31 may be had as the result of either partial or complete rotary movements of the dial 26.

The arrangement which I have disclosed herein provides for an improved and more satisfactory operation, in that the signal devices emit sounds only during the return or counterclockwise movement of the dial. This is desirable in a toy telephone and increases its amusement value because each time the child actuates the dial he is rewarded by the sounding of the signal devices during the automatic return of the dial. A further advantage obtained in the operation of my improved toy telephone is that the operating connections are such as to cause the signal devices to operate in sequence during the return movement of the dial. In this sequential operation the bell device starts to ring first and after an interval of time the pneumatic device starts sounding. The bell device may continue to ring during the entire return movement of the dial while the pneumatic device may produce sounds only during the latter portion of such return movement. The starting of the sounding of the pneumatic device after the start of the ringing of the bell device is due, in part at least, to the use of the elastic strand 53 because the extending of the bellows 50 during the manual rotation of the dial is accompanied by some stretching of the strand. When the dial is released and begins its return movement the bell device starts ringing but the bellows 50 does not begin to collapse until the strand has contracted and begins to slacken.

To facilitate assembly of the parts of the toy telephone I may provide a suitably shaped bracket 56 for supporting and positioning the signaling device 31. This bracket may be secured to the rear wall of the base 10, as by means of rivets 57, and may have an arm 58 extending laterally above the bottom cover plate 14 for supporting the device 31. The arm 58 may have spring fingers 59 which grippingly engage the device 31 to retain the same in position. If desired, the bracket 56 may be extended upwardly so that the guide arms 54 may be carried thereby. The connection between the strand 53 and the weighted part 51 of the signaling device 31 is preferably located eccentrically with respect to the center 60 of the signaling device, as shown in Fig. 4, so that after the signaling devices 30 and 31 have been assembled into the base of the telephone in the relative positions shown in Fig. 3 and with the ends of the cord 53 connected thereto, it is only necessary to rotate the device 31 within the

spring fingers 59 to take up any slack which may exist in the strand 53 when the dial is in its starting position. After the slack has been taken up the fingers 59 can be further deflected into firm holding engagement with the device 31.

The shell of the base 10 may be provided with a plurality of appropriate openings 61 for the passage of sound waves emanating from the signaling devices 30 and 31.

From the accompanying drawing and the foregoing description, it will now be readily understood that I have provided an improved toy telephone embodying a plurality of signaling devices which are operated to produce sounds only during the return movement of the dial. It will also be seen that I have provided novel means for causing operation of the signaling devices such that they start sounding in sequence during the return movement of the dial.

While I have illustrated and described the improved toy telephone of my invention in a somewhat detailed manner, it will be understood, of course, that I do not wish to be limited to the precise arrangements and details of construction illustrated and described, but regard my invention as including such changes and modifications as do not constitute a departure from the spirit of the invention and the scope of the appended claims.

Having thus described my invention, I claim:

1. In a toy telephone the combination of a base having a bell device and a pneumatic device thereon, a rotary actuating member movable manually in one direction, a spring adapted to move the actuating member in the opposite direction, means operably connecting the pneumatic device with said actuating member, and a ratchet mechanism operably connecting said actuating member and said bell device, said ratchet mechanism having elements cooperating to cause sounding of the bell device only during movement of the actuating member in said opposite direction.

2. In a toy telephone the combination of a base having thereon a pair of sound producing devices one of which is a pneumatic device, a rotatable operating member manually movable in one direction, a spring adapted to cause return movement of said operating member, means operably connecting said operating member and said pneumatic device to cause sounding of the latter during said return movement, and a ratchet mechanism between said operating member and the other signal device for causing sounding of the latter only during said return movement.

3. In a toy telephone, a base having thereon a bell device and a pneumatic device, a manually operable spring-returned dial, and a ratchet mechanism and an elastic cord providing respectively an operating connection between the dial and said bell device and between the dial and said pneumatic device, said ratchet mechanism and elastic cord cooperating to cause sequential starting of sound emission by said devices during the return movement of the dial.

4. In a toy telephone, a base having thereon a bell device and a pneumatic device, a pivoted actuating member manually movable in one direction and adapted to be automaticlly returned, means operably connecting said actuating member and said pneumatic device including an elastic strand adapted to be tensioned and stretched during manual movement of said actuating member and to be contracted and slackened during return movement of the actuating member, and a ratchet mechanism rendering the bell device inoperative during said manual movement of the actuating member but adapted to cause sounding of the bell device during said return movement.

HARRY BREGMAN.