G. A. LONG.

COMPOUND CHUTE.

APPLICATION FILED MAR. 27, 1908.

912,389.

Patented Feb. 16, 1909.

Fig. 1.

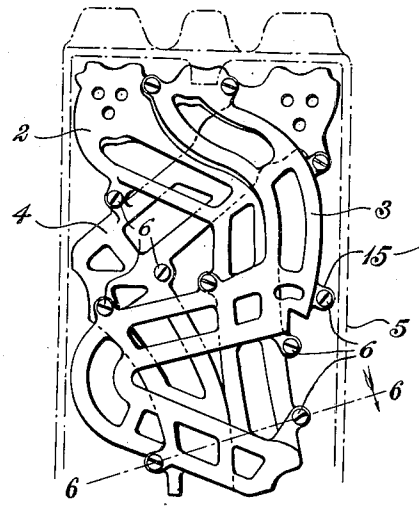


Fig. 2.

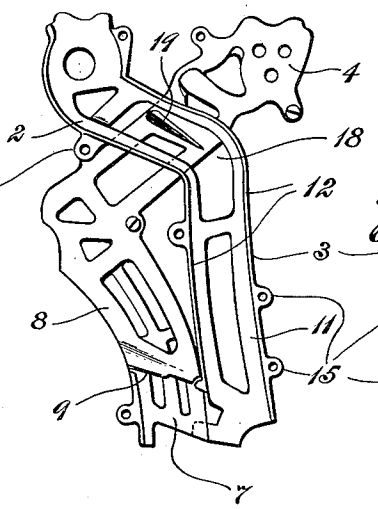


Fig. 3.

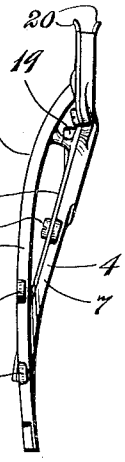


Fig. 6.

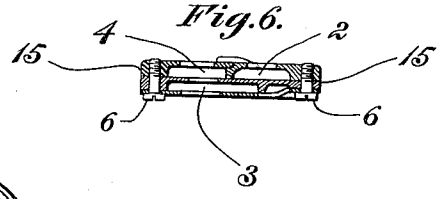


Fig. 4.

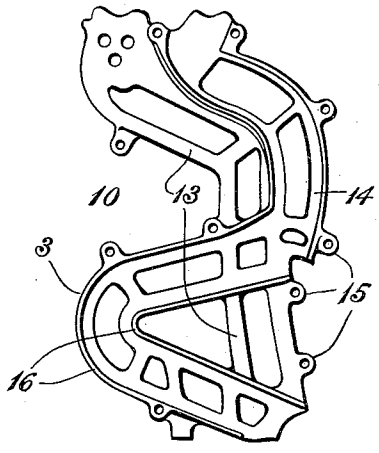
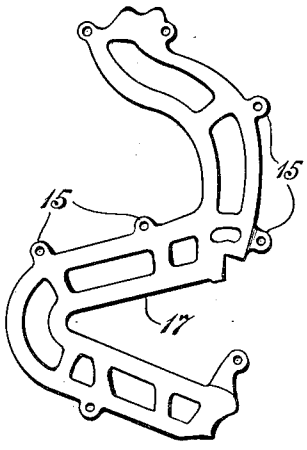


Fig. 5.



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UNITED STATES PATENT OFFICE.

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COMPOUND CHUTE.

No. 912,389. Specification of Letters Patent. Patented Feb. 16, 1909.

Application filed March 27, 1908. Serial No. 423,593.

To all whom it may concern:

Be it known that I, GEORGE A. LONG, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Compound Chutes, of which the following is a specification.

This invention relates to compound-chutes.

A device embodying my invention can be employed with advantage in many different connections.

In the drawings accompanying and forming a part of this specification I illustrate in detail one simple and effective form of embodiment of the invention which to enable those skilled in the art to practice the same will be set forth in detail in the following description while the novelty of the invention will be included in the claims succeeding said description. In said form of embodiment of the invention the article is especially intended for incorporation in what are known as "telephone pay-stations".

One of the objects of the invention is to provide a device of the class set forth which consists of a minimum number of parts, is compact yet reliable, and which can be inexpensively made and if necessary sold or handled as an article of manufacture.

The invention possesses other points of utility which with the foregoing will be brought out at length in said description.

Referring to said drawings, Figure 1 is a rear elevation of a compound chute embracing my invention and representing the same as mounted in the casing of a telephone pay-station, such casing being shown by dotted lines. Fig. 2 is a similar view of certain of the parts of the chute structure. Fig. 3 is an edge view of the parts illustrated in Fig. 2. Figs. 4 and 5 are views corresponding to Fig. 2 of other parts of the chute structure, and, Fig. 6 is a sectional view on the line 6—6 Fig. 1 looking in the direction of the arrow.

Like characters refer to like parts throughout the several figures.

At the outset I wish to make it clear that a device comprehending my invention includes several features whereby certain novel results are attained. Said device involves a plurality of chutes crossing each other a portion of one chute forming part of another chute by virtue of which compactness and a saving in stock are obtained. Another important point is such a device having several overlapping chutes which are rigidly united to each other to present substantially a unitary structure; such a structure can be sold as an entirety and can be at once and readily mounted in a pay-station casing or in any other position as the invention does not reside in any particular use to which the article may be put but rather in certain mechanical means. I wish to also make it clear that the number of chutes is a matter of no consequence. In the drawings and particularly in Fig. 1 thereof I have shown three of such chutes and when the same are disposed in the casing of a pay-station one of these will be used for the reception of a nickel or five-cent piece while the other two are adapted to receive dimes and quarters respectively, the cross-sectional areas of said chutes being such as to readily accommodate the respective coins. It will be obvious that I use the term "coin" in a generic sense to include a coin so called or anything equivalent thereto or by which coin-controlled apparatus may be caused to operate.

The three chutes are denoted respectively by 2, 3 and 4 and they are preferably tubular and may be made of any suitable material; as an illustration I might state that some soft metal is preferable in their construction by reason of which a coin will travel along the same comparatively noiselessly. The chute 2 may be used for the reception of nickels while dimes and quarters respectively may be deposited in the chutes 3 and 4. The organized structure composed of the several chutes may be fastened in a casing as 5 (shown by dotted lines in Fig. 1) in any desirable manner it being the custom to have the upper ends of said chutes in register with slots of appropriate value in the top of said casing 5. The coins after traveling through the chutes are discharged into the customary coin-box or receptacle (not shown) and it will be perceived on reference to said Fig. 1 that the outlets of said chutes are practically at the same place. The device composed of the three chutes consists of but five parts excepting of course the means which are provided to rigidly unite such parts and for this purpose screws as 6 can be easily utilized. For simplicity I have designated all the screws by the same symbol. The chute 4 comprises two members as 7 and 8 which are united by said screws 6. The

chute 4 in the main is of angular form and it is slotted at or near its outlet as at 9, such slot being formed by cutting away one of the side walls of said chute 4, the wall thus cut being that designated by 8.

Referring now to Fig. 4, the latter illustrates what might be considered a chute member and said chute member is denoted in a general way by 10. The member 10 forms parts of all three of the chutes as will be hereinafter explained and as will be seen on inspection of Fig. 1 for example the lower part of said chute member 10 crosses at an angle the slot 9 forming a cover for the latter and thereby completing the chute 4. The chute member 10 serves as a cover for a chute-member as 11 (see particularly Fig. 2). The chute member 11 has a body along the edges of which are formed lateral beads or flanges as 12 the latter being in parallelism approximately for the complete length; I say approximately as a portion of the bead or flange 12 on the left is omitted at the lower end thereof to provide for the proper discharge of the coin from the chute 2 of which said chute member 11 forms a part and practically the major part, said chute 2 being completed by the chute-member 10 which is laid against or upon the chute member 11 so as to cover the channel presented by the chute member 11 and the beads or flanges 12 thereon. The chute member 10 has two portions as 13 and 14 which I prefer as will be apparent to make integral and the portion 13 which intersects the portion 14 substantially centrally thereof covers the open side of the chute-member 11 so as to make the chute 2. I might state at this point that I prefer to pass the screws through openings in lugs or ears as 15 on the respective chute members and when the latter are placed or laid on each other and when said openings are in register the screws can be inserted in the proper lugs certain of which are threaded to receive said screws. For ease of understanding I have applied the same character to all of said lugs or ears. The portion 14 consists of an upper and substantially ogee or compound curved part and a lower and approximately V-shaped part, and substantially coextensive with said portion 14 are parallel beads or flanges as 16. The front part of the chute-member 10 is laid upon the chute member 12 in view of which the front face of the portion 12 will act as one side of the chute 2. On the front face of the chute member 10 is a channel presented by the portion 14 and the parallel beads or flanges 16 and the chute member 17 presents a cover for this channel fitting for this purpose against and being shaped to agree with the beads or flanges 16. Initially the chute members 7 and 8 are assembled and fastened together by their screws after which the chute member 11 is laid across the same as indicated in Fig. 2. The chute member 10 is then placed against the parts assembled as shown in Fig. 2, with the substantially angular portion 13 thereof in coincidence with the chute member 11 thereby completing the chutes 2 and 4. The outer chute member 17 is then laid against the chute member 11 and in coincidence with the portion 14 thereof so as to complete the chute 3. When this is done the parts will be rigidly united by the use of screws or equivalent fastenings as 6 so as to produce the organized multi-part chute represented in Fig. 1.

In using the compound chute with a telephone pay station it is usual to combine therewith signals which preferably consist of bells or gongs so placed as to be sounded by the respective coins and when necessary the different chutes may be so slotted that the coins may strike the coöperating bells in descending their proper chutes. I might state that the chute 3 while itself of novel construction is not claimed herein but is claimed in a concurrently-pending application Serial No. 422,810 filed March 23, 1908.

The chute 2 is of skeleton construction and it has in one side thereof a longitudinal slot as 18 constituting an escape opening and made of a length sufficient to insure the lateral movement of a coin or like device which is less in diameter than that of a nickel whereby said small coin or equivalent instrumentality cannot traverse said chute 2 a distance sufficient to act on the signal coactive therewith. The chute 2 is laterally curved or arched as shown best in Fig. 3 so as to permit the lateral discharge of the wrong coin from said chute 2 into the space between the same and the companion chute 4. It will be assumed that a coin of less than the predetermined diameter is inserted in the chute 2. When this is done the coin will descend the chute until it comes opposite the slot or escape opening 18 at which point said coin will be caused to tip sidewise and be ejected from or pass through the said slot or opening automatically. The remainder of the chutes if desired may be of similar character. The slot or opening 18 is in a relatively steep part of the chute 2 but notwithstanding this it is possible that the improper coin in said chute 2 might be so tipped as to block said chute and to prevent such a contingency as this I provide positive means which will eliminate the same as will now appear. On the chute 4 transversely thereof is a bead as 19 which is inclined to the horizontal and which is tapered toward its lower end. It will be assumed that a coin of the wrong kind has been introduced into the chute 2 and that it has come opposite the slot or opening 18. When this occurs said coin tips over and is supported by the bead or guide member 19 so that the said coin cannot tip over to an extent sufficient to arrest its descent and there-

by choke the chute 2. When said coin strikes the said bead it will be supported conjointly by said bead and chute 2 the bead owing to its inclination positively separating the coin from the chute, such function being aided by the form of the bead which in addition to being tapered toward its lower end has its side faces converging toward the rear of the compound chute by reason of which the upper of said faces will assist in the deflection of the coin or its diversion.

It will be seen that the upper or mouth portions of the several chutes are widened or somewhat outwardly flared along substantially angular lines and this provides for the ready and correct mounting of the chute in position in the casing 5. Each chute as illustrated especially in Fig. 3 has these flared portions 20. The top of the casing 6 has several pendent projections as shown by dotted lines in Fig. 1 and through these are formed the coin-slots. The flared portions 20 are adapted to fit and receive between them the respective pendent projections by reason of which the compound chute as an entirety can be readily centered or correctly and accurately mounted in the casing 6. All of the chutes discharge their coins substantially at a common place so that a coin-box or equivalent receptacle of substantially small area is necessary to receive the coins.

What I claim is:

1. A chute-member comprising two distinct intersecting portions one of said portions being provided with beads disposed substantially in parallelism throughout the length and following the shape thereof.

2. A chute member the body of which has a pair of parallel beads presenting with said body a channel, the latter being of irregular form combined with a second chute member fitted against said beads for closing said channel.

3. A chute member having parallel beads, a second chute member fitted against said beads and having on the face thereof opposite that so fitted, a pair of parallel beads, and a third chute member fitted against the latter beads said members collectively presenting a plurality of chutes.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. LONG.

Witnesses:

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