

(No Model.)

J. WRATITSCH & S. GERGACSEVICS.
AUTOMATIC TELEPHONE.

No. 504,011.

Patented Aug. 29, 1893.

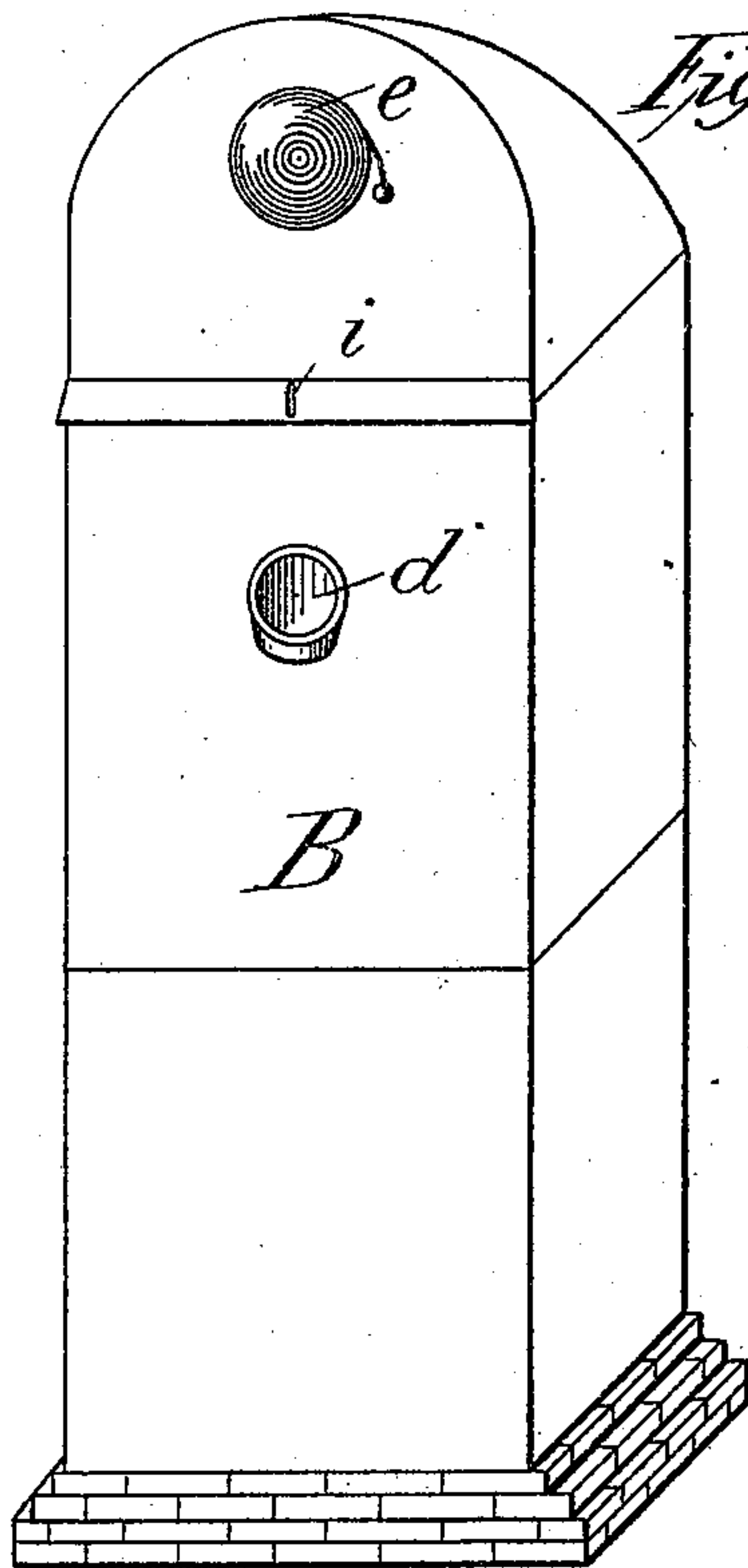


Fig. 1.

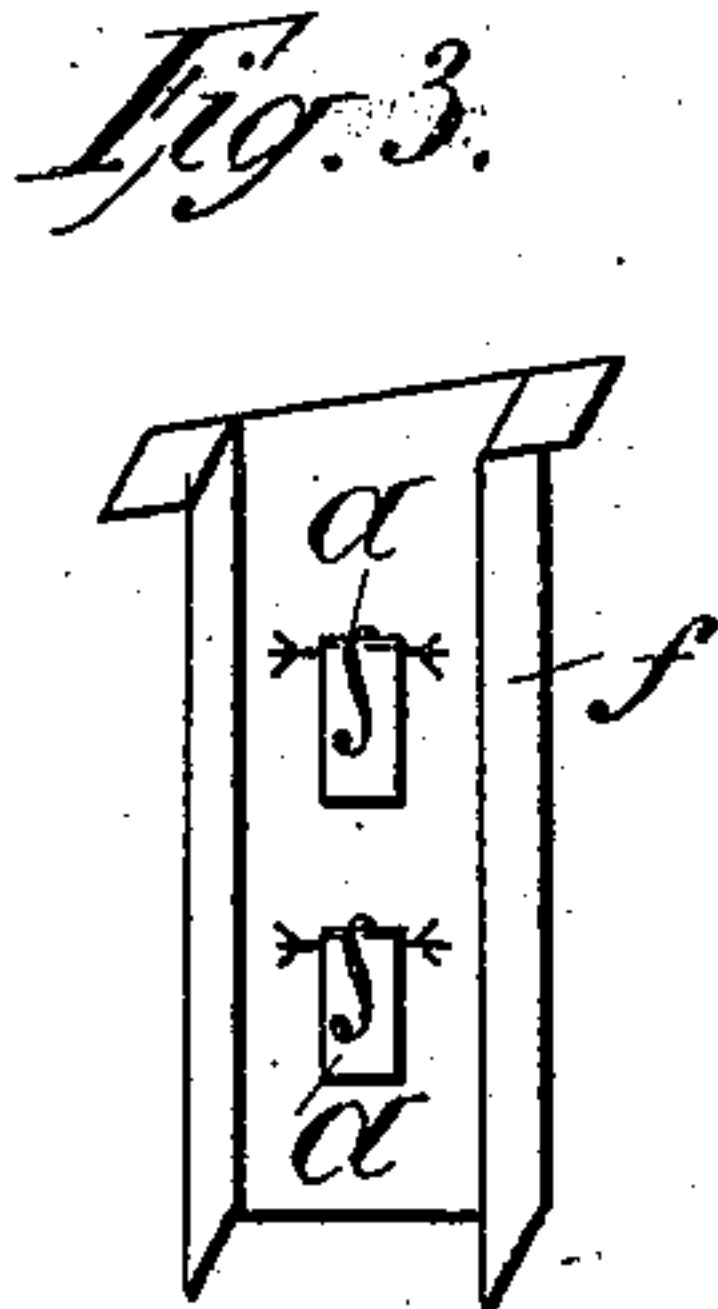


Fig. 3.



Fig. 4.

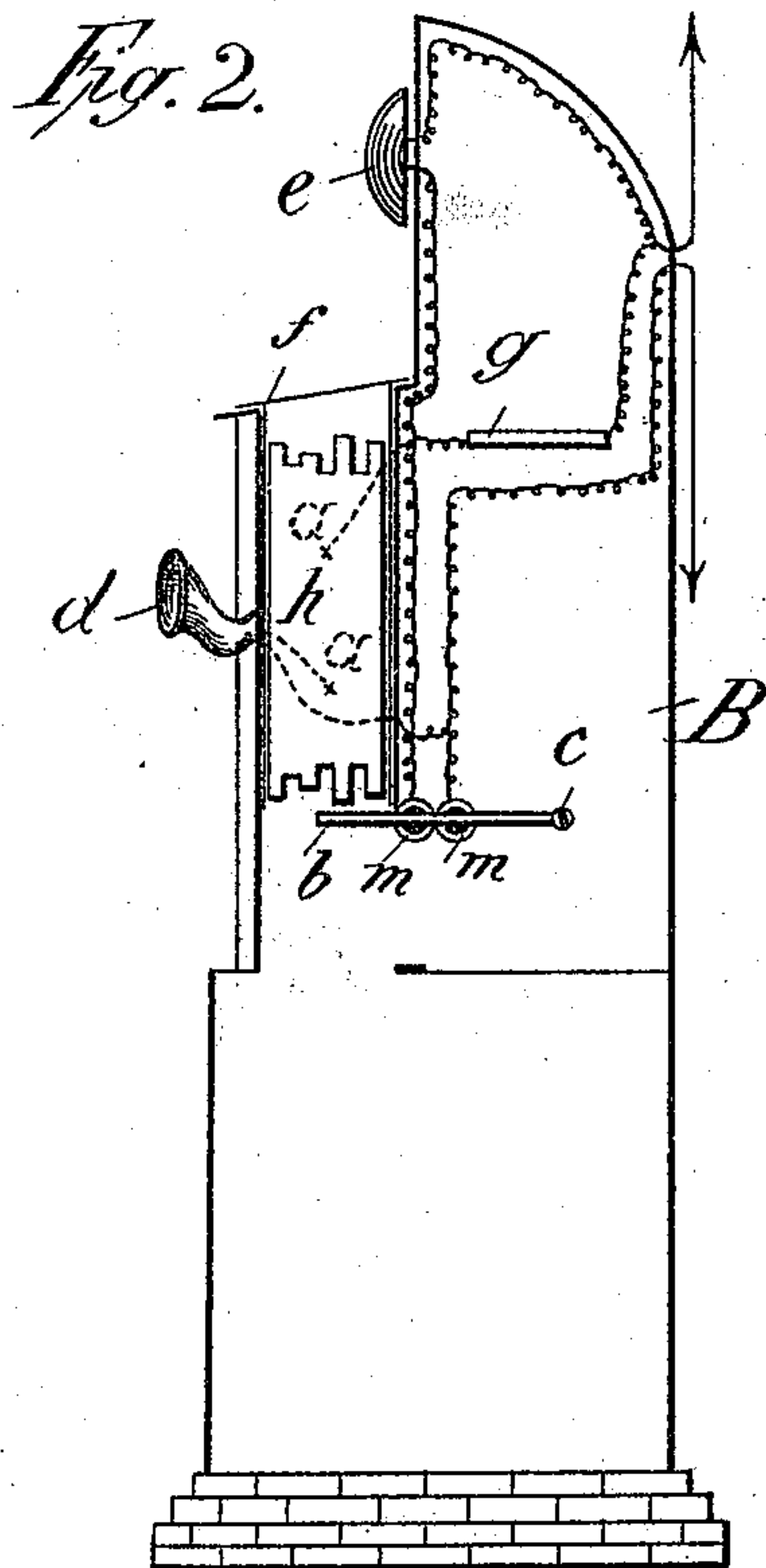


Fig. 2.

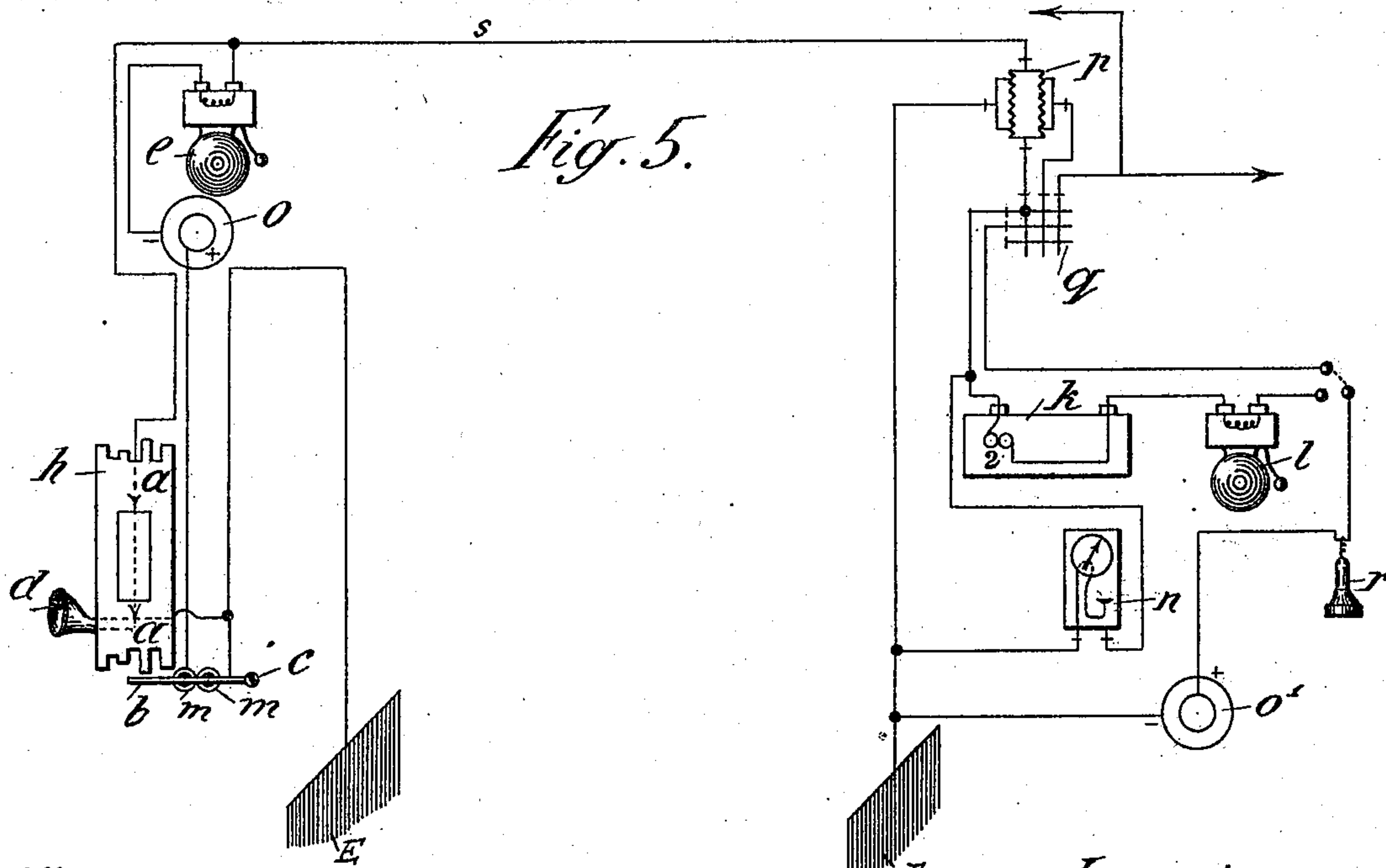


Fig. 5.

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JOSEF WRATITSCH AND STEFAN GERGACSEVICS, OF GRAZ, AUSTRIA-HUNGARY.

AUTOMATIC TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 504,011, dated August 29, 1893.

Application filed April 18, 1892. Serial No. 429,662. (No model.) Patented in Norway September 19, 1891, No. 2,450; in Spain September 19, 1891, No. 12,525; in Luxemburg September 19, 1891, No. 1,503; in France September 19, 1891, No. 216,225; in Belgium September 19, 1891, No. 96,443; in Switzerland September 19, 1891, No. 4,050; in England September 22, 1891, No. 16,076; in Italy September 30, 1891, No. 30,421/493; in Denmark June 7, 1892, and in Austria-Hungary August 20, 1892, No. 11,680 and No. 38,430.

To all whom it may concern:

Be it known that we, JOSEF WRATITSCH and STEFAN GERGACSEVICS, subjects of the Emperor of Austria-Hungary, and residents of Graz, in the Province of Styria, Austria-Hungary, have invented a new and useful Automatic Telephone, (for which we have obtained patents in Austria-Hungary, dated August 20, 1892, No. 11,680 and No. 38,430; in France, dated September 19, 1891, No. 216,225; in Belgium, dated September 19, 1891, No. 96,443; in Switzerland, dated September 19, 1891, No. 4,050; in Great Britain, dated September 22, 1891, No. 16,076; in Denmark, dated June 7, 1892; in Norway, dated September 19, 1891, No. 2,450; in Italy, dated September 30, 1891, No. 30,421/493; in Spain, dated September 19, 1891, No. 12,525, and in Luxemburg, dated September 19, 1891, No. 1,503,) of which the following is a specification.

In order to establish a telephonic system resembling the post office and to allow every one to communicate for a small outlay of money, it would be necessary to permit in the same manner as pillar-boxes are now erected in every street of the largest towns for the interchange of written communications, verbal communications to likewise be effected in the different parts of one or more towns, which are in telephonic communication with one another. Likewise could the expenditure incurred in the post office in collecting and delivering the written communications and paid for by the purchase of a stamp, be paid in the case of telephonic communication by means of a coin or check. As in the post-office where the reduction in the expenditure has caused the exchange of written communications to make an unexpected stride, so will telephonic communication, which is limited owing to its cost to a few subscribers, only assume general importance when by reducing such cost and establishing a large number of public telephonic stations in every part of the town, people of small means will be able to make use of the telephone.

The telephonic stations open at the present

time, are too limited in number and yet in consequence of the high working expenses and cost of maintenance, they could not at present be multiplied to any great extent.

The invention has for its object to thoroughly dispense with the cost and management as well as with the staff in charge of telephonic apparatus, by erecting public telephonic stations, and to further enable every one to use these stations at any time during the day and night without any requiring extraneous help nor being possessed of any special knowledge, the station operating automatically.

The apparatus can be set up in any suitable locality either in a place specially hired for the purpose in the porter's lodge of private houses, in hotels, tobacconists and places of amusement and require neither supervision nor control.

The best method would undoubtedly be to use telephonic kiosks such as designed by the inventors and which may be erected in the most important thoroughfares and be accessible to the public by day as well as by night while being used at the same time for advertising purposes so as to cover the greatest part of the expenses incurred for ground rent and lighting.

In the accompanying drawings Figure 1 represents the automatic telephone apparatus in a perspective view. Fig. 2 represents a section of the same. Fig. 3 is the coin chute with the contacts. Fig. 4 is the appertaining coin or check. Fig. 5 is a diagram of an automatic telephone station, showing the connection of the same with the central office.

The automatic telephone is placed in a shell B (Fig. 1) resting upon a pedestal and which is constructed in such a manner that it cannot be easily damaged. Below a slot *i* formed in the shell aforesaid is arranged a chute (for the coins) *f* of horn or other non conducting material, provided with two spring contacts *a a*, and designed to receive the check or coin *h* inserted in the said slot *i* and falling upon a spring lever *b* secured to a support *c* ar-

ranged under the said chute. Close to this lever *b* are arranged two electro-magnets *m m* which attract the latter to one side immediately the check or coin falls down. A spring (not indicated in the drawings) brings the said lever *b* back to its former position (like the armature of an electric alarm bell) when no current passes in the electro magnet. In front is placed a mouth piece *d* (for speaking and hearing) as well as a signal bell *e*. In the upper part of the shell B is arranged the telephonic apparatus *g* which is of any known construction, while the lower part of the same that is to say the pedestal part serves as receptacle for the inserted checks or coins, which serve as a key to open the shell. The metal check, which is represented in Fig. 4 as a stamped metal piece, replaces the money which is to be paid and may be used at the same time as a key for opening the telephone kiosk. If now some one desires to use the telephone a check must be first obtained wherewith to open the door of the kiosk wherein it is retained. The door may be constructed in such a manner that it closes automatically after the person has entered the kiosk and that by the sliding motion of the bolt the sign "Engaged" appears on the door, but that construction is not intended to be claimed and is therefore not represented. The metal check is now inserted in the slot *i* formed in the automatic telephone and effects thus a metallic connection between the two contact springs *a a* of the chute *f* (Fig. 3) whereby the battery circuit in the central office is closed, as will be explained afterward. This closing forms the call indicating at this office by means of an indicator *k* and of a signal *l* which is in the kiosk where a person desires to speak. When the central office has asked which further telephonic connection is to be established and the required telephonic connection has been established a conversation may then take place with a subscriber which has his own installations or with any other person which happens to be waiting just at the same time in another telephonic kiosk. The duration of conversation can be easily determined and is controlled by the central office. When the conversation is ended that is to say when the time allowed for speaking has elapsed the battery of the telephonic station is closed by depressing a key *n* (Fig. 5) at the central office, whereby the check *h* which was hitherto carried by the lever *b* underneath the chute *f* (Fig. 3) is allowed to drop owing to this lever being released by the electro magnets *m m* aforesaid the metallic connection being broken and further conversation being impossible. This stoppage is indicated at the time of its occurrence to the occupant of the kiosk by means of the bell *e* (signal apparatus) above mentioned which is intercolated in the same circuit leading to the electro magnet. Should it be desired to prolong the conversation a further check is inserted in the slot immediately the bell rings

and the connection remains the same as before. When the conversation is concluded the door bolt, previously shot forward, is shot back and the sign "Free" appears on the outside of the door. The latter can be opened from inside and is automatically locked again immediately the person has issued from the kiosk.

The function, inserting and combined manner of connection is illustrated in the diagram Fig. 5. The principal insertion is made in the current of repose. In the central office is a lightning guard *p*, a switch board *q*, an indicator *k* with signal apparatus *l*, compass key *n*, a receiving and transmitting mouth piece *r* and a battery *o'*. Suppose that by the insertion of a metallic coin into the automatic telephone the spring contacts *a a* are connected and the circuits of the battery *o'* of the central office is closed, then the current takes its way from the + pole to the mouth-piece *r* to the signal *l* and indicator *k*, from there through the switch *q*, the lightning guard *p* and the air conduct *s* to the automatic telephone, to the metallic check *h* to the ground *E* and through the latter to the — pole of the battery *o'*. As long as that connection is closed a continual conversation is possible. When after the lapse of time determined for a conversation the key *n* in the central office is depressed, the battery *o* of the automatic telephone station is intercolated into the circuit and the current passes from the positive pole of the station mentioned through the two electro magnets *m m* into the ground, through the latter to the compass-key of the central office, the switch *q*, lightning guard *p*, air conduct *s* to the signal apparatus *e* and from there to the negative pole of the battery *o'*. By this connection the lever *b* upon which rests the metallic check is tripped as far from the electro-magnets *m m* that the check may drop, whereby the contact is interrupted and the conversation is rendered impossible. It may also be taken care to save the check, if for instance the apparatus does not work, or if a subscriber is not in place (in the kiosk) or its line is engaged; the person using the automatic telephone has only necessary to let the check somewhat project when calling the central office, and to insert totally the check but when the conversation has begun. If any interruptions or disturbances should happen, the only reason for it may be the conducting wire (shunts, interruptions, &c.) but also the same are easily to state by the compass-key; the central office has only in the beginning of the service to prove the several lines by depressing the key.

Having now described the nature of our invention, we claim—

In an automatic telephone, the combination of two contact springs *a a* adapted to be engaged by a metallic check, with a chute of non conducting-material, a spring-lever *b* secured to a support *c* and arranged under the

said chute, and two electro magnets *m m* which trip the lever, said magnets and key *n* being contained in the central station circuit, whereby the officer in the central station may
5 depress a key *n*, so that the token or metallic check can fall down and the electric connection is interrupted, substantially as described and for the purpose specified.

In testimony whereof we have signed this specification in presence of two subscribing witnesses.

JOSEF WRATITSCH.

STEFAN GERGACSEVICS.

Witnesses:

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