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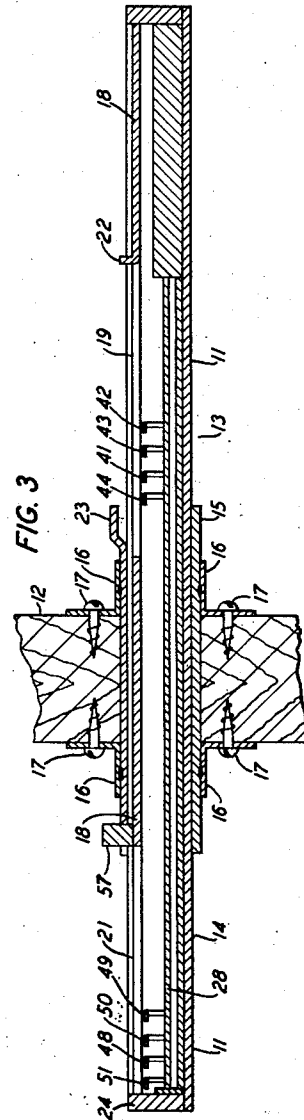
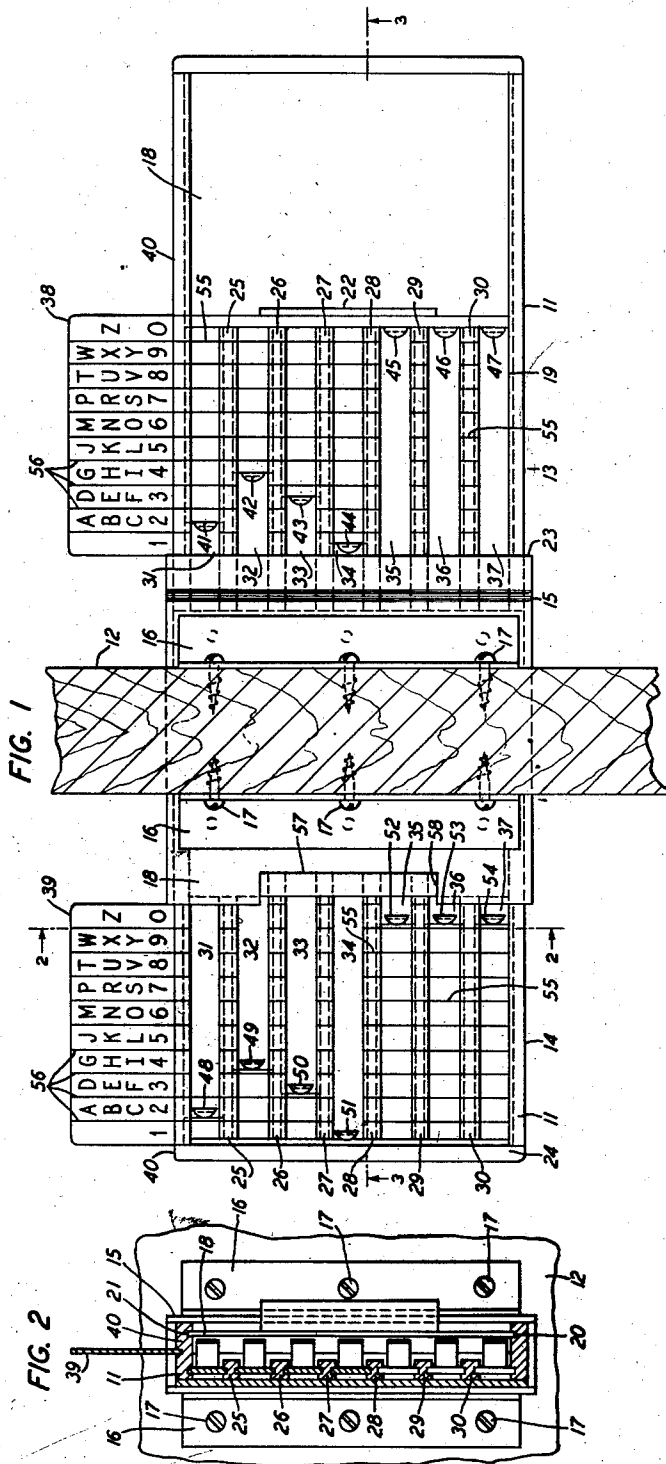
O. S. A. MESCH-

2,356,335

NUMBER INDICATING DEVICE

Filed June 26, 1942

3 Sheets-Sheet 1



INVENTOR
O. S. A. MESCH
BY *J. MacDonald*
ATTORNEY

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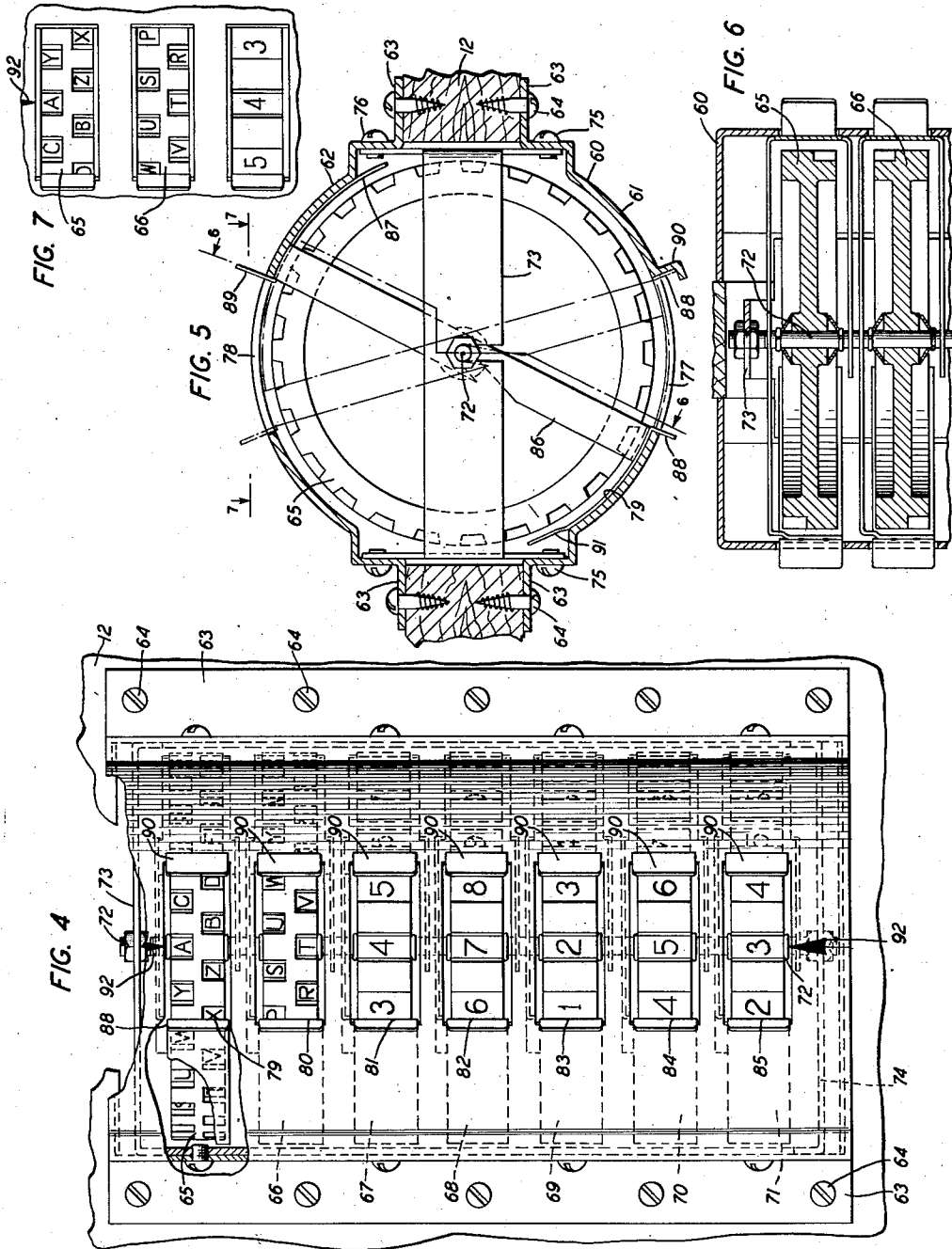
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O. S. A. MESCH
BY *J. Mac Donald*
ATTORNEY

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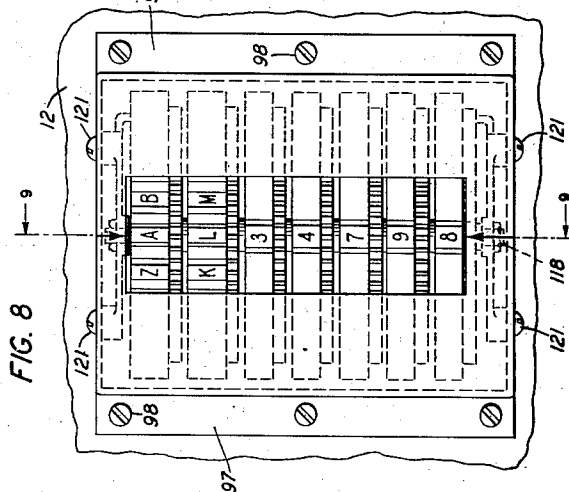
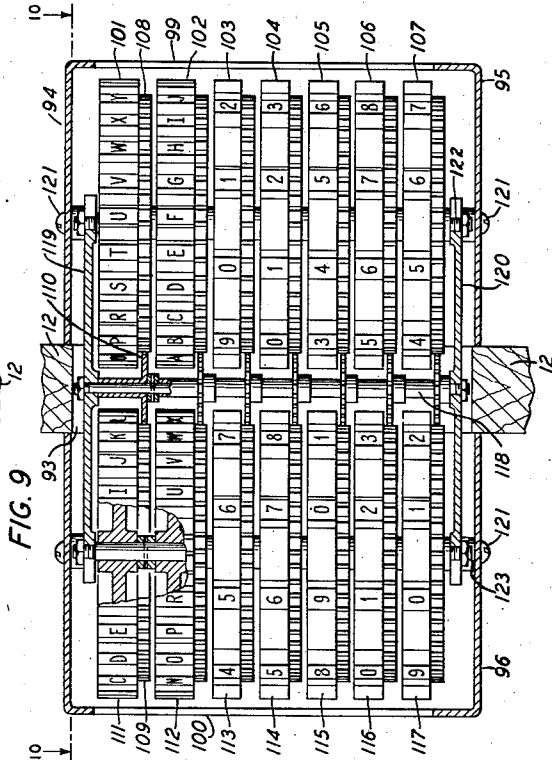
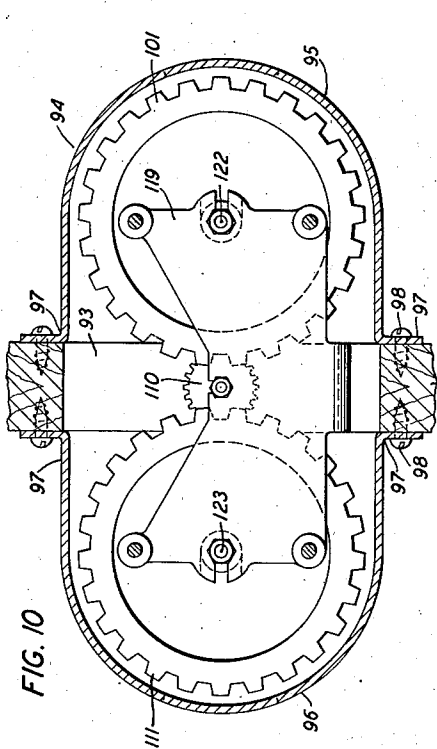
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3 Sheets-Sheet 3



INVENTOR
O. S. A. MESCH
BY *J. MacDonald*
ATTORNEY

UNITED STATES PATENT OFFICE

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NUMBER INDICATING DEVICE

Orwar S. A. Mesch, St. Albans, N. Y., assignor
to Bell Telephone Laboratories, Incorporated,
New York, N. Y., a corporation of New York

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7 Claims. (Cl. 116—135)

This invention relates to number indicating devices and more particularly to double display number indicating devices.

An object of the invention is to provide a device for temporarily recording and indicating to a telephone subscriber the number of a substation it is desired to call.

The invention provides means for simultaneously setting up the call number of a desired substation at two points observable by the person desiring to make the call, one point being for instance outside a telephone booth and the other inside the booth. The device eliminates the necessity of a subscriber having to mentally retain the number of the desired substation from the time the number is found in a directory until the call is made, or having to write the number on a sheet of paper preparatory to making the call.

A feature of the invention resides in the means provided for making a temporary record at two required points of the combination of characters forming the number of the substation it is desired to call.

Another feature resides in means for masking the call number set up on the indicators at the two points required.

In the drawings:

Fig. 1 is a top plan view of one form of the number indicating device and involving a set of manually operated slide-strips and a support for the slide-strips mounted on a wall member which may be one of the walls of a booth;

Fig. 2 is an end view, partly in section, of Fig. 1 and taken on the line 2—2;

Fig. 3 is a front view, in section, of the indicating device shown in Fig. 1 and taken on the line 3—3;

Fig. 4 shows another form of the invention involving a set of manually operated wheels and means supporting the wheels mounted vertically in an aperture in the wall of a booth, the wheels bearing letter and number characters;

Fig. 5 is a top plan view, partly in section, of Fig. 4;

Fig. 6 is a view, in section, of the upper portion of the device shown in Fig. 4 and taken on the line 6—6 in Fig. 5;

Fig. 7 is a rear view of a portion of Fig. 4 and taken on the line 7—7 in Fig. 5; and

Figs. 8, 9 and 10 show still another form of the invention involving two sets of wheels supported in a casing which is mounted vertically in an aperture in the wall of a booth. Fig. 8 is taken from one side of the wall of the booth,

Fig. 9 is partly in section and taken on the line 9—9 of Fig. 8 and Fig. 10 is a view, partly in section, looking down on Fig. 9 and taken on the line 10—10.

Telephone directories provided at a public telephone substation are in most instances located outside the telephone booth. When a person desires to make a telephone call and does not know the number of the substation desired, reference is had to the telephone directory to find the call number of the desired substation. After finding the number of the desired substation the subscriber must either mentally retain the call number or make a written record of it. Writing equipment is not always available and in this case if the subscriber does not correctly remember the number a wrong number call is made.

The number indicating devices, I have devised, provide means on which the subscriber while still outside the booth and while still in possession of the telephone directory may set up the number of the desired substation on a portion of the indicating device outside the booth and at the same time have the number also set up on a portion of the indicating device inside the booth. Means are also provided to mask the number set up on the indicating device to show that the indicating device is in use and prevent changing or casual observance of the number by someone other than the subscriber.

The number indicating device shown in Figs. 1, 2 and 3 comprises a rectangular box-like casing 11 extending through an aperture in the wall 12 of a telephone booth and so that one end portion 13, for instance, extends outside the telephone booth and the other end portion 14 extends inside the booth. A sleeve 15 of suitable form and dimensions to accommodate and support the central portion of the casing 11 is located in the aperture in the wall 12 and is supported by means of angle bars 16—16 secured to the sleeve 15 and mounted on the wall 12 by means of screws 17 or other suitable fastening means. It will be seen that the sleeve 15 extends a short distance on each side of the wall 12 and encloses the central portion of the casing 11. The casing 11 is provided with a sliding cover 18 apertured at 19 and which operates in grooves 20 and 21 which as shown in Fig. 2 are formed in the side walls of the casing 11. The cover 18 may be slid along the casing 11 by means of the handle 22 from the position shown in Figs. 1 and 3 and so that the handle 22 comes under the upwardly offset outer end 23 of the sleeve 15. The cover 18 will then be in such

position that the inner end engages the end 24 of the casing 11. In this position the aperture 19 is within the sleeve 15 and the unapertured end portions of the cover 18 overlie the number indicating portions of the device. Spaced tracks 25, 26, 27, 28, 29 and 30 are mounted on the upper surface of the lower wall of the casing 11. The tracks are longitudinally grooved on their sides to provide slideways for long slide-strips 31, 32, 33, 34, 35, 36 and 37. The slide-strips may be made of sheet metal or other substantially stiff material and are slid along within the casing 11 and relative to columns of letters and numbers displayed on cards 38 and 39 which are mounted on and extend above the upper side wall 40 of the casing 11. The slide-strips 31, 32, 33, 34, 35, 36 and 37 are provided on one end with upturned tab portions 41, 42, 43, 44, 45, 46 and 47, respectively, and are provided on the other end with upturned tab portions 48, 49, 50, 51, 52, 53 and 54, respectively. The upper surface of the tracks 25, 26, 27, 28, 29 and 30 and the upper surface of the lower wall of the casing 11 are scribed to provide marks 55 which are, in effect, continuations of the column dividing marks 56 formed on the cards 38 and 39 to aid a user of the device in optically observing the location to which the tabs on the slide-strips have been moved along the tracks.

In setting up a substation number to be called the user of the device, after finding the number in the telephone directory, moves the slide-strips along the tracks until the tab portions on the strips in the section 13 of the device are in the required columns to indicate the number it is desired to call. The slide-strips are of equal length and when the tab on one end of a strip is located in a required column, in section 13 of the device, the tab on the other end of that strip is in the corresponding column in the section 14 of the device.

In Fig. 1 the device has been operated to set up the substation call number, Chelsea 3-1000, tab 41 in section 13 being under the column containing C, tab 42 in the column containing the letter H, tab 43 in the column containing the number 3, tab 44 in the column containing the number 1 and tabs 45, 46 and 47 in the column containing zero. It will be seen that the same number is indicated by the arrangement of the tabs 48 to 54 in section 14 of the device inside the telephone booth and that this display may be seen by the user of the device when he gets in the telephone booth and moves the slide cover 18 by means of the handle 57 to the position shown in Fig. 1, the handle 57 being accommodated in a cut-back portion 58 formed in the sleeve 15. The user of the device, before he goes into the telephone booth, may mask the number he has set up in section 13 of the device by sliding the cover 18 toward the left and until the handle 22 comes under the upwardly offset end 23 of the sleeve 15. This will prevent casual observance of the number he has set up on the device by other persons and will indicate that the device is in use. Since the handle 22 is under the offset 23 the cover 18 cannot well be moved from this position except by a person inside the booth and operating the cover 18 by means of the handle 57. When the user of the device gets into the booth he can move the cover 18 to the position shown in Figs. 1 and 3 so that he can see the number set up on the device. Another person outside the booth and waiting to use the

device may then proceed to operate the slide-strips to set up a number he desires to call.

The number indicating device shown in Figs. 4, 5, 6 and 7 may be used for the same purpose as the one above described and may be mounted in an aperture provided in the wall 12 of a booth so that it may be operated from outside the booth to set up indications of a substation number to be called and to indicate within the booth the same number set up on the portion of the device extending outside the booth. The device is mounted vertically in an aperture in the wall 12 of the booth and comprises a cylindrical casing 60 cooperatively formed by a portion 61 extending outside the booth and a portion 62 extending inside the booth. The portions 61 and 62 are identical in form and are provided with flanges 63 secured by screws 64 or other suitable fastening means to the wall 12. Wheels 65, 66, 67, 68, 69, 70 and 71 are rotatably mounted on a shaft 72 which is supported at its ends in brackets 73 and 74 which are secured by means of screws 75, 76 or other equivalent mounting means to the parts 61 and 62 of the cylindrical casing 60. The wheels 65 and 66 are provided with letter characters on the rim portion and may be manually rotated selectively to required position relative to openings 77 and 78 in the cylindrical casing 60 and so that the letter characters on the wheels 65 and 66 brought into view in the openings 77 and 78 will represent a combination of letters indicating the call letters of a desired substation. The letter characters on each wheel 65 and 66 are arranged in two semicircular groups, each group being a duplication of the other and so that when, for instance, wheel 65 is manually rotated to bring the letter A into view through the opening 77 outside the telephone booth, the letter A in the second group of letters on wheel 65 will also be in line to be observed through the aperture 78 in the casing 60 inside the telephone booth. The wheels 67, 68, 69, 70 and 71 are provided with number characters on their rim portions, the numbers being in two groups on each wheel and so that the numbers on one semicircular portion are duplicates of those on the other semicircular portion. These wheels may be selectively rotated to bring into view through the apertures 77 and 78 in the casing 60 a combination of numbers forming the call number of a desired telephone substation. The wheels 65 to 71, inclusive, are for the most part hidden from view by the casing 60 and the portions of the wheels observable through the aperture 77 may be masked by means of movable masks 79, 80, 81, 82, 83, 84 and 85, respectively. The masks 79 to 85, inclusive, are arcuately curved plates frictionally engaging the inner surface of the casing 60 and are individual to the wheels 65 to 71, inclusive. The masks are supported on arms 86 which are centrally pivoted on the shaft 72 and extend diametrically across the interior of the casing 60. A pair of arms 86 is provided for each wheel and each pair of arms carries a mask for the portion on the wheel on the outside of the device and also a mask for the portion of the wheel on the inside of the device. There is, for instance, as shown in Fig. 5, a mask 79 supported on the arms 86 to cover the portion of the wheel 65 observable through the aperture 77 on the outside of the booth and a mask 87 also supported on the pair of arms 86 to cover the portion of the wheel 65 observable through the aperture 78 inside the booth. Tabs 88 and 89 respectively are provided for the masks 79 and

87. When the tab 88 is moved to engage a stop 90 provided on the casing 60 the mask 79 covers the aperture 77 and the mask 87 covers the portion of the wheel 65 observable through the aperture 78. The mask 79 is in close frictional engagement with the inside of the casing 60 and is offset inwardly at 91 to snap over the edge of the aperture 77 to hold the masks 79 and 87 in the closed position. The stop 90 is so formed that it overlies the tab 88 and so that the mask 79 cannot well be moved from the closed position by a person outside the booth. The person inside the booth, however, may, by manual operation of the tab 89, move the mask 87 as shown in Fig. 5 to enable a person inside the booth to see the required portion of the wheel 65.

In operating the device shown in Figs. 4, 5, 6 and 7, the user sets up the desired telephone substation letters and numbers on the wheels 65 to 71, inclusive, each wheel being separately operated until the required character on that wheel is in line with a pointer 92 provided on the casing 60. When the required number has been set up on the wheels 65 to 71, inclusive, the masks 79 to 85, inclusive, may be moved to cover the portions of the wheels observable through the aperture 77 outside the booth. When the user of the device is inside the booth and is ready to make the call he may unmask the portion of the wheel 65 observable through the aperture 78 inside the booth. In doing this he moves the mask 87 from across the aperture 78 and at the same time moves the mask 79 from across the aperture 77. The portions of the wheels to be viewed in reading the call number inside the booth are successively unmasked while the user of the device is making the desired call. Another person outside the booth cannot disturb the number set up by the instant user of the device until the wheels are unmasked by the person inside the booth, since the offset portion 91 on each mask on the outside portion of the device bears against the edge of the aperture 77 and prevents movement of the masks to obtain access to the wheels from outside the booth until the masks are moved to open position by the user of the device inside the booth. Also since the stop 90, as above mentioned, is constructed to overhang the tab 88 when the mask 79 is in closed position it would be difficult for a person outside the booth to move the mask 79 from across the aperture 77. The same construction and arrangement is followed for each wheel in the device and the mask arrangement provided therefor and the device is therefore more under the control of the instant user of the device than of a person outside the booth and trying to obtain control of the device while it is in use by another person inside the booth.

In the number indicating device shown in Figs. 4, 5, 6 and 7 the wheels are arranged so that the number set up on the wheels will be read from top to bottom. In this construction a single set of letter and number wheels is provided and each wheel extends from the outside to the inside of the booth. Since each wheel carries two identical sets of characters with one set on each half portion of the wheel rather large diameter wheels are required and the aperture in the wall of the booth must be large to accommodate the wheels. This slight disadvantage, however, may be overcome by constructing the device as shown in Figs. 8, 9 and 10 in which two sets of letter and number wheels are provided, one set of wheels to be operated from out-

side the booth and the other set of wheels to be operated inside the booth by means of the first set. Each wheel carries a single set of letter or number characters.

As shown in Figs. 8, 9 and 10, the wall 12 of the booth is apertured at 93 to accommodate the number indicating device which is arranged in a vertical position so that the letters and numbers may be read from top to bottom. The casing 94 comprises an outer half portion 95 and an inner half portion 96 provided with edge flanges 97 secured by means of screws 98 or other suitable fastening means to the wall 12 and so that the two parts of the casing 94 cooperate to form a suitable housing for the two sets of letter and number wheels employed in the construction. The portion 95 of the casing 94 is apertured at 99 to permit manual operation of the set of wheels housed in this portion of the casing and to permit observance of the letter and number characters on the wheels in this portion of the device. The portion 96 of the casing 94 is apertured at 100 to permit observance of the letter and number wheels housed in the portion 96 of the casing and from inside the booth. The set of wheels in the portion 95 comprises the letter wheels 101, 102 and the number wheels 103, 104, 105, 106 and 107. A ring gear 108 is provided on each letter and number wheel and each ring gear 108 on the outer set of wheels is gear-connected to a corresponding ring gear 109 on the inner set of wheels by means of a pinion 110. The wheels 101 to 107 which are operable from outside the booth are individually gear-connected through their ring gears 108, pinions 110 and the ring gears 109 to a corresponding set of wheels 111 to 117 which are observable from inside the booth, the pinions 110 being rotatably supported on a shaft 118 located between the two sets of wheels and supported on frame plates 119 and 120 which are supported in the casing 94 by means of the screws or other suitable fastening means 121. The wheels 101 to 107 are rotatably supported on a shaft 122 and the wheels 111 to 117 are rotatably supported on a shaft 123. When the wheels 101 to 107 are operated to set up a combination of letters and number characters representing the call letters and numbers of a desired substation, the wheels 111 to 117 will be automatically operated to set up the same combination of letters and numbers and which may be observed by the user of the device by looking through the aperture 100 in the portion of the casing 94 located inside the booth. Although I have not shown mask devices for the letter and number wheels in the construction shown in Figs. 8, 9 and 10, it is obvious that mask devices might be provided for the wheels in somewhat the same manner as the mask devices provided in the construction shown in Figs. 4, 5, 6 and 7.

What is claimed is:

1. A number indicating device at a booth equipped substation comprising casing means mounted in an apertured wall of said booth, apertured wall members in said casing means located inside and outside the booth, selectively operated number recording and exhibiting means mounted in said casing means and operable from inside and outside said booth through the apertures in said apertured wall members in said casing means to record and exhibit the call number of a desired substation, the selected positions of said selectively operated number recording and exhibiting means being observable inside and out-

side said booth through the apertures in the apertured wall members in said casing means, and movable mask means operable to move across the apertures in the apertured wall members in said casing means to mask and unmask the numbers recorded on said device.

2. A number recording and indicating device at a booth equipped substation comprising an apertured wall in a booth, casing means mounted in the apertured wall of the booth, apertured wall members in said casing means extending inside and outside the booth, selectively operated slide-strips supported in said casing means and extending outside and inside said booth, said slide strips being arranged in coplanar and parallel relation and being operable and observable through the apertures in said apertured wall members, cards bearing letter and number characters, said cards being supported outside and inside the booth, and said slide-strips being operable relative to said cards and being comparable with said cards to indicate both outside and inside the booth a combination of characters representing the call designation of a desired substation.

3. A number recording and indicating device at a booth equipped substation comprising an apertured wall of a booth, a box-like casing mounted in an apertured wall of the booth and extending outside and inside the booth, said casing having apertures formed in the walls of said casing outside and inside the booth, a set of selectively operated slide-strips supported in said casing and extending into portions of said casing lying outside and inside the booth, said slide strips being arranged in coplanar and parallel relation and being operable and observable through the apertures formed in said casing, a card mounted on said casing outside the booth and at an angle relative to said slide-strips, columns of characters displayed on said card, a duplicate of said card mounted on said casing inside the booth, said slide-strips being operable relative to said columns of characters on the cards to indicate outside and inside the booth the call designation of a substation it is desired to call, and a slide cover supported on said casing and operable to mask settings of said slide-strips relative to said cards.

4. A number recording and indicating device at a booth equipped substation comprising apertured casing means mounted in an apertured wall of the booth, said casing means extending outside and inside the booth, a set of selectively operated wheels supported in said casing means and observable from outside and inside the booth through apertures in said casing means, said wheels bearing characters to be used in combination to indicate the call designation of a required substation, and movable masks for said wheels operable across the apertures in said casing means to mask the numbers recorded on said device.

5. A number recording and indicating device at a booth equipped substation comprising aper-

tured casing means mounted in an apertured wall of the booth, said casing means extending outside and inside the booth, a set of selectively operated wheels supported in said casing means and observable from outside and inside the booth through apertures in said casing means, said wheels bearing on their rim portions characters to be set up in combination by operation of said wheels to indicate the call designation of a substation required by a user of the device, sets of movable masks operating across the apertures in said casing means to mask the portions of said wheels observable through the apertures in said casing means, and means on said masks and on said casing means cooperating to prevent undesired movement of said masks.

6. A number recording and indicating device at a booth equipped substation comprising apertured casing means mounted in an apertured wall of the booth, said casing means extending outside and inside the booth, a set of selectively operated wheels supported in the portion of said casing means extending outside the booth, said wheels being observable and operable through an aperture in said casing means outside the booth and bearing characters on their rim portions to be set up in combination by operation of said wheels to indicate the call designation of a substation required by a user of the device, a second set of wheels like the first set and mounted in the portion of said casing means extending inside the booth, said second set of wheels being observable through an aperture in said casing means inside the booth and gear trains extending from the first set of wheels to the second set so that when the user of the device operates the first set of wheels to set up the call designation of a desired substation the same call designation will be set up on the other set of wheels and may be read inside the booth when the user of the device enters the booth.

7. A telephone number indicating device for setting up and holding for observance, by a telephone user, the call number of a desired telephone substation comprising an apertured wall of a telephone booth, casing means mounted in the apertured wall of the telephone booth and having portions extending outside and inside the telephone booth and in line with the aperture formed in the wall of the telephone booth, apertured walls in said casing means, the apertures formed in the walls of said casing means providing observance openings outside and inside the telephone booth, manually movable members arranged in the order of digits in a telephone call number and supported in said casing means and operable and observable through the observance openings provided in said casing means both outside and inside the booth and said members being selectively operable to various positions to indicate both outside and inside the booth a combination of indications representing the call number of a desired telephone substation.

ORWAR S. A. MESCH.