Nov. 18, 1941. B. J. REESE 2,262,818

DEVICE FOR PENCILS OR THE LIKE

Filed Oct. 2, 1939 2 Sheets-Sheet 1

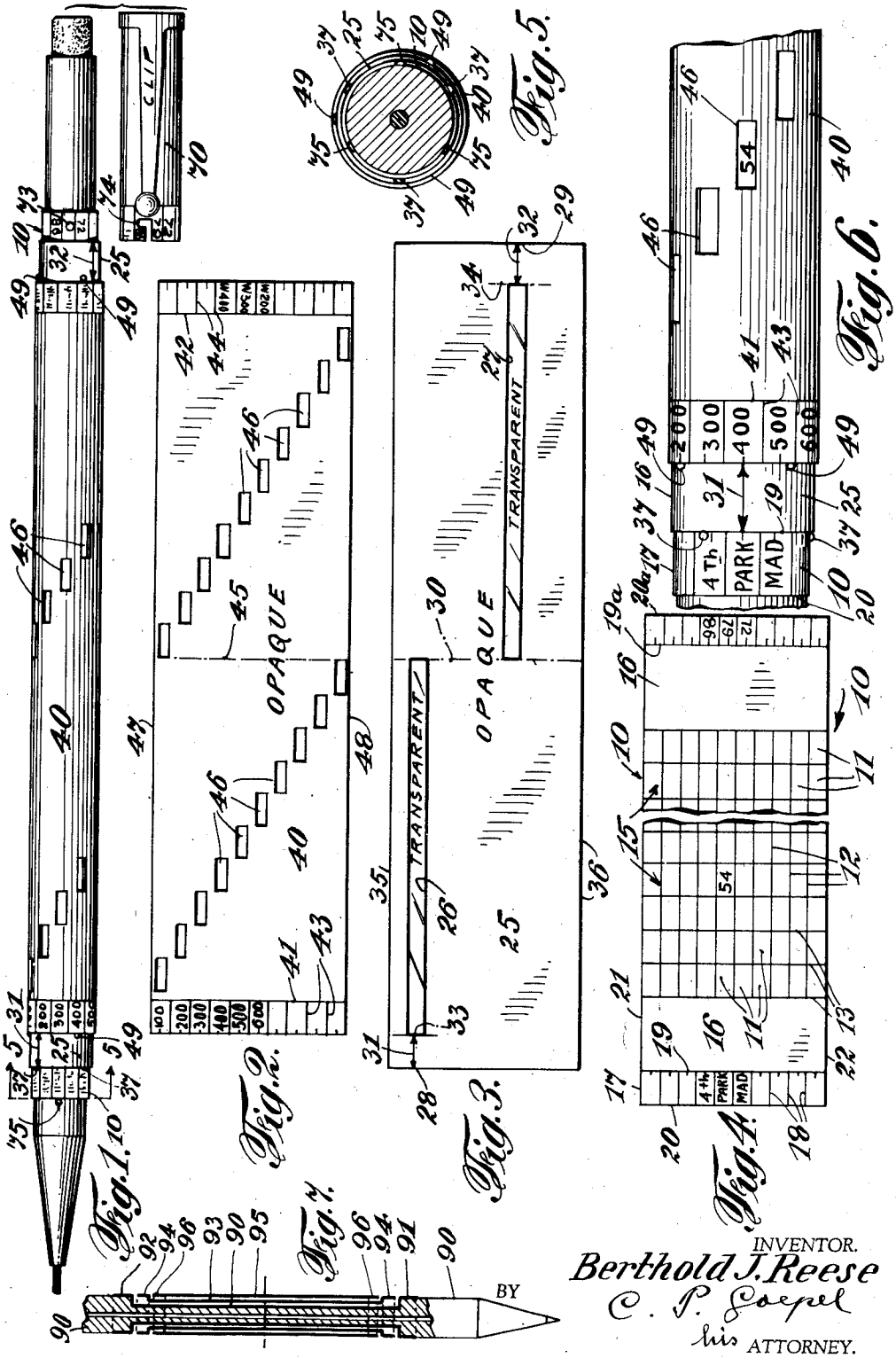


Fig. 1.
Fig. 2.
Fig. 3.
Fig. 4.
Fig. 5.
Fig. 6.
Fig. 7.

INVENTOR.
Berthold J. Reese
BY C. P. Goepel
his ATTORNEY.

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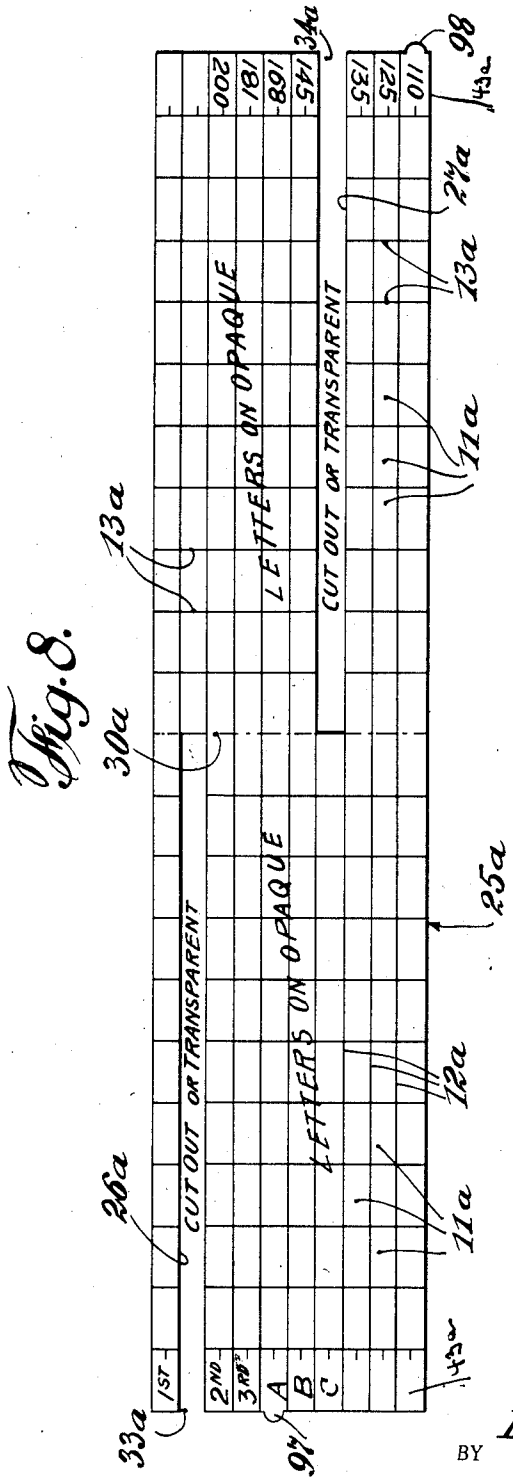


Fig. 8.

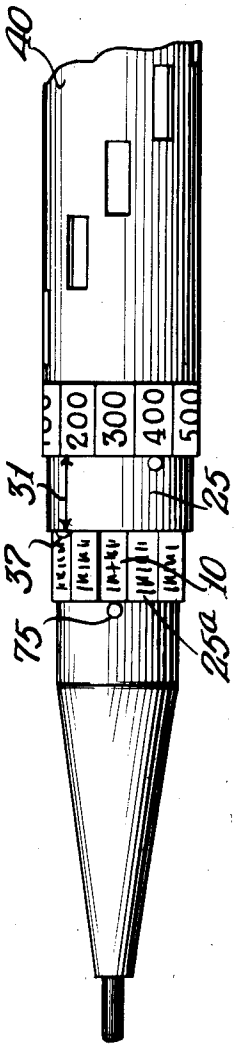


Fig. 9.

INVENTOR.
Berthold J. Reese

BY C. P. Goepel
his ATTORNEY.

Patented Nov. 18, 1941

2,262,818

UNITED STATES PATENT OFFICE

2,262,818

DEVICE FOR PENCILS OR THE LIKE

Berthold J. Reese, New York, N. Y.

Application October 2, 1939, Serial No. 297,571

1 Claim. (Cl. 40—68)

This invention relates to devices for pencils or the like, and has for its object to provide a novelty pencil which may be used for advertising purposes. For example, and as one embodiment, the ordinary pencil used for writing is provided with certain devices embodying the invention, whereby, due to the shifting of parts, a certain problem may be solved or a question may be answered. Such devices may be applied to a pen, fountain pen, pencil, mechanical pencil, or any other instrument or implements, or may be used separately. It has other applications hereafter pointed out.

The invention itself consists in the cooperation of certain parts, in which one part forms a basic field with indications distributed over the same.

Another part forms a separator in which all but one group of indications of that field are masked; and a third part forms also a separator in which all of the foregoing group excepting the one desired indication, is masked.

More particularly, the invention consists in having the first part provided with indications on one longitudinal line, other indications on lines parallel therewith, and also longitudinally arranged.

Another member adapted to be superimposed upon the first or basic member has a longitudinal slot or longitudinal transparent portion so as to mask out all the indications on the basic field except those on one longitudinal line, and a third member adapted to be superimposed upon the second member has indications thereon with transparent or cut out openings arranged in steplike formation, so that said third member masks out all indications on the longitudinal line excepting the single spacing of the basic field below a certain one of these openings, whereby the answer to a question may be given. These three members may be superimposed upon each other in flat or other form, but in the embodiment as applied to a pencil they are formed into cylindrical members superimposed upon each other in concentric relation, so that they may be rotated one in respect to the other.

The embodiment of the invention includes also a common indicator on the second or intermediate member, to bring into alignment certain indications on the basic member with certain indications on the top member.

The invention will be more fully described hereinafter, an embodiment thereof shown in the drawings, and the invention will be finally set forth in the claim appended hereto.

In the accompanying drawings:

Figure 1 is a side view of a pencil made in accordance with my invention;

Figure 2 is a plan view of the top blank used to carry out the invention;

Figure 3 is a plan view of the next lower blank used to carry out the invention;

Figure 4 is a plan view of the lowest blank used to carry out the invention;

Figure 5 is a transverse section taken on line 5—5 of Figure 1;

Figure 6 is an enlarged partial view of the embodiment of the invention;

Figure 7 is a longitudinal sectional unit of another embodiment of the invention, drawn diagrammatically;

Figure 8 is a plan view of an intermediate blank to be formed into a cylinder; and

Figure 9 is a partial view of still another embodiment of the invention.

Similar characters of reference indicate corresponding parts throughout the various views.

Referring to the drawings, an embodiment of the invention is shown in the form of a pencil. The invention may be embodied in a pen or any other instrument or implement.

In the embodiment, a mechanism is shown by which the number of a street may be ascertained by placing the name of the avenue and the number of the place on that avenue into juxtaposition; only one answer is in view at a time. This corelationship is shown at one end of the pencil, and more particularly, in Figure 6. If it be desired to ascertain the nearest street to 400 Park Avenue, then the indication "Park" on one member is placed in alignment with the indication "400" on the other member, and thereupon only "54" will be exposed to view, determining that the nearest street to 400 Park Avenue is 54th Street. The coaction can be in reverse. The indication 54 can be found by being made visible, and thereupon the number of the avenue ascertained.

The invention is thus embodied in the portion shown in Figure 6. A duplication of the invention is obtained by preferably using a cylindrical form as a pencil, or pen, as a basis, and inscribing directly on the pencil or pen.

In the embodiment shown in Figure 1, the other end is provided with indications to determine the avenue, when the street and its number are known. In the embodiment, this end of the pencil operates by reversing the position of the pencil, while in the hands of the user.

The means used to carry out the invention as

in the embodiments shown consist of three superposed blanks, each disposed so as to form a cylinder, by joining the abutting edges of each blank. The ground or basic blank **10** shown in flat form in Figure 4 is provided with a plurality of adjacent rectangles, **11**, formed by lines, one group longitudinally disposed parallel with the axis of the pencil as indicated by **12**, the other group of lines transversely disposed to the longitudinal lines, as indicated by the lines **13**. Into these rectangles or squares, street numbers are arranged and inserted. Exterior to this field of rectangles, the field being generally indicated by **15**, at either side thereof there is a blank space **16**, and exterior of this, a field **17** is provided, which has lines longitudinally disposed in respect to the axis of the pencil, forming ten, or more or less than ten, spaces, into which separate spaces formed by these lines **18** the names of the avenues are inserted. Preferably, these blank spaces are bounded by a transverse line **19**, at one side, and by the edge **20** of the blank, at the other side. The left hand end of Figure 4 has been described, and the right hand end is formed in the same manner.

The blank is then preferably applied to the pencil body and may be secured thereto by any suitable adhesive. The edges of the longer sides indicated by **21** and **22** then abut against each other, and the blank **10** is formed into a stationary or fixed cylinder.

The next blank **25** is shown in Figure 3, which is shorter in length than the blank **10**, and extends in length from the transverse line **19**, to the corresponding transverse line **19a** of the blank **10**. The width of the blank **25** is slightly less than the width of the blank **10**. The blank **25** is provided with two cut outs, **26** and **27**, beginning at **33**, **34**, and each terminating at the central transverse line **30** of the blank **25**. The length of each cut out **26**, **27**, extends then from **33** and **34** to the central transverse line **30**, and the width of each cut out, **26**, **27**, is about the width of one of the rectangles **11** of the blank **10**. One such opening may be used, beginning at **33** and terminating at **29**, all on the same longitudinal line. Instead of a cut out, the portions corresponding to the cut outs may be made of a transparent material, and the remaining portion of the blank may be made of opaque material, and in this case the transparent portions **26**, **27**, may be provided at their outer ends with double headed arrow indications or the like. The length of each arrow extends from each edge of each blank to a certain distance inwardly, indicated by the lines **33** and **34**. This blank so constructed is then bent into cylindrical shape, with the edges **35** and **36** of the longer sides abutting each other. The inner bore of this cylinder is of such a diameter that it is slightly larger than the exterior diameter of the cylinder formed of the blank **10**, sufficient to have a frictional engagement therewith, so as to require a slight manual operation to move the cylinder formed of the blank **25** over the cylinder formed of the blank **10**. To prevent the blank **25** cylinder from moving longitudinally in respect to the blank **10** cylinder, fixed studs or pins **37** may be applied to the blank **10** cylinder, as shown clearly in Figure 6.

The next blank **40** has a length equal to the distance from the line **33** to the line **34** of the blank **25**. Stated otherwise, the inward ends of the double arrow indications **31** and **32** determine the length of the blank **40**. At each end of this blank **40**, a transverse line **41** and **42** is provided spaced from each edge of the blank a distance sufficiently long to enable the entry of one or more numbers and letters. Longitudinal lines **43**, **44**, form twenty, or more or less than twenty, separate spaces for these entries. The blank **40** has a real or imaginary line **45** at its central portion dividing the blank into two equal parts. Each half is provided with a plurality of cut outs or transparent openings **46**, arranged steplike, which may begin at the left upper part of each half and which may end at the right lower part of each half. Each of these openings **46** is preferably in the form of a rectangle, and each is in line with one subdivision formed by the lines **41** and **43**. The width of this blank **45** is slightly less than the width of the blank **25**, and when formed into cylindrical shape by abutting the edges **47** and **48** of the blank **40**, its bore has a diameter slightly larger than the exterior diameter of the cylinder formed from the blank **25**, such as to give a slight frictional hold between the cylinders, in like manner as described between the cylinder of blank **25** in respect to the cylinder of the blank **10**. To prevent longitudinal movement of the cylindrical blank **40** over the cylindrical blank **25**, the blank **25** may be provided with studs or pins **49** like the studs or pins **37**.

With the three cylinders disposed concentrically, as shown in Figure 1, and partially in Figure 6, the operation is as follows:

If it be desired to ascertain the nearest street to the address of 400 Park Avenue, the cylindrical blank **25** is first rotated over the cylindrical blank **10** until one end of the arrow **31** is in line with the median line of the spacing in which the word "Park" or "Park Ave." appears. Then the cylindrical blank **40** is rotated until the number 400 is in line with the other head of the arrow **31**. These rotations of the cylinders bring about a shifting of parts so that the transparent longitudinal cut out **26** is in line with the proper rectangle for the proper street, and one of the step-like transparent openings of the cylindrical blank **40** segregates all the streets on the longitudinal transparent cut out from the single one which is the proper one, masking all the rest. Thus, by a series of maskings, of all the streets spaced on blank **10**, the cylindrical blank **25** masks out all save those on a longitudinal line, and the cylindrical blank **40** masks out all but one of the longitudinally segregated members, the space not masked being the proper one corresponding to 400 Park Avenue, New York City. In other words, 400 Park Avenue is at or near 54th Street. Instead of the longitudinal and/or latitudinal masking of the member **25**, followed by the member **40**, these members **25** and **40** can be transposed.

Similarly, by turning the pencil, the right hand portion of the cylindrical blank **10**, the right hand portion of the cylindrical blank **25**, and the right hand portion of the cylindrical blank **40** may be brought into play, and by like maskings the true answer obtained. This end is preferably arranged with house numbers on the cylindrical blank **40**, and with streets on the cylindrical blank corresponding to cylindrical blank **10**, whereby the avenue may be found appearing through one of the small openings in the cylindrical blank **40**. This end can be a duplicate or continuation of more avenues of the left end as described, or all right ends of the cylinder may terminate at one point in order that wider openings may be used for answers by streets.

In the embodiment shown in Figure 1, there is provided a rotary cap **70** with a turnable, flexibly springable clip from over the end of the pencil cap, with a pin **73** engaging slot **74**. The clip turns at its end (very end of the pencil cap) so it can be pushed out of the way when and if part of it covers street to be aligned with a number. By rotating the cap **70** with its streets thereon, to align a certain street with the arrow **32** which has in turn been aligned with the number of the street, only the desired avenue visible through one of the small openings in the cylindrical blank **40** may be seen by the user.

It will have been seen that the inner portion of the ground or basal blank has all of the markings of one class, greatest in number; the field of the spaces **20**, markings of another class, the field of the spaces formed by the lines **41** and **43**, of still another class. By tiering two classes of lesser number of units together by means of a visual indicator, then only the true answer is visible through registering openings, said answer being one of the units of the class largest in number. This result is obtained by the cooperation of a longitudinal slot segregating a longitudinal group from the rest of the units, with a diagonal or stepped group of unit openings, whereby all the longitudinally aligned units save one are masked from the user.

Instead of street numbers and names, avenue numbers and names, etc., many other combinations or permutations can be worked out, as names of theatres, churches, museums, dates., etc., vitamins and calories, parts of car, mileage, oil, decimal equivalents, known cost and profit, mixtures of ice cream, percentages, salaries or wages and hours, interest, time tables, distances between cities, what to use to take out any kind of spot from any material, domestic and foreign postal rates, proof reader's marks, color combinations, paper weights and sizes, publication data and rates, drink concoctions, chemical equivalents, what to take care of every so many miles on car, photoengraving price list, electrotyping price list, etc.

Instead of the studs **37**, **49** and **75** in Figures 1 and 5, small engaging studs, bumps, pins, grooves, washers, or the like, may be provided under or above each cylinder as required to prevent the cylinders from shifting longitudinally, latitudinally or circumferentially upon the pencil, and so as to require a slight manual operation to rotate each cylinder independently of the others. These studs, washers, or the like, are also provided to protect the markings on cylinders from being rubbed or worn by the moving parts.

The material of the three blanks or pencil proper and two cylinders is preferably Celluloid, or can be made of sheet metal tubes, or plastics, or any suitable material. Any number of cylinders can be used. Instead of having the two ends active as the embodiment shows, only one may be used.

It will be noted that on the basic blank **10** unit spaces are arranged longitudinally which are provided with indications co-related with a transverse indicator on the same longitudinal line. On the uppermost cylinder **40** indications are provided arranged transversely to the longitudinal line of indications and also co-related thereto. Intermediate of these two cylinders **10** and **40**, is a cylinder with an indicator to join one of its transverse indications with the end indication of the longitudinal alignment indications, whereby by a series of maskings that space of the basic cylinder is obtained which belongs to the joined transverse indications.

All the markings may be made by etching, lithographing, stamping, printing, or the like.

The basal blank or tube **10** has been described as a separate unit from the pencil, but the markings of the blank or tube can be placed directly on the pencil. The order of the intermediate member **25** and the top member **40** can, of course, be transposed. Where lines, such as **12** and **13**, **18**, **19**, **19a**, **41**, **42**, **43** and **44** are referred to, these are to classify and to form segregated spaces; of course, they can be omitted, provided the indications are properly spaced.

To speed up the act of selecting and rotating any particular cylinder, small nitches or tab-like protrusions, each of which to have some index-like marking as required, can be included at each end of every cylinder.

The blanks **10**, **25** and **40** shown flat, may be made directly in the form of cylindrical members or tubes.

In the embodiment, an ordinary pencil has been shown; the invention is adapted to pens, fountain pens, mechanical pencils, or to other instruments or implements, or may be used without them. Also, this invention may be provided in suitable designs or shapes in construction with, or for application to other articles or devices. Some of such items are: telephone, menu indexes, maps, bulletins, bridge score-pad stands, cocktail shakers, toys, games, etc.

In Figure 7 is shown diagrammatically another embodiment. The pencil **90** has circumferentially disposed the avenues at one end at **91**, and the streets at the other end at **92**, the intersecting tube **93** has the arrow indication or tie-up at **94**, at each end thereof. The outer tube **95** has the number **96** at each end. The outer tube **95** has the step-like transparent openings against its opaque body portion. The tube **93** has the one-half length, transparent slots, or full length opening, so the opaque area masks out everything on the pencil except one longitudinal line. The pencil **90** or innermost cylinder has the answer, when properly blocked out.

In Figure 8 is shown a plan view of a blank **25***a* adapted to be made up in a cylinder, or used flat, or otherwise. The body portion has an opaque basic field widened into squares or oblongs as indicated by **11***a*. Two cut outs or transparent portions **26***a* and **27***a* are provided, these being at the median line **30***a* and having open ends at **33***a* and **34***a*. At each end, divisions **43***a* are arranged to have inserted therein, suitable indications. Protrusions **97** and **98** are provided.

It is possible, with one or more of cylinders of this type to increase the number of answers (to be rendered one at a time) to whatever quantity may be required, by adding cylinders to the other three cylinders **40**, **25** and **10** (see Figure 9). By adding one cylinder of the type as shown in Figure 8 between blanks **10** and **25**, the improved pencil will be enabled to give almost twice as many answers, one at a time, as with blanks **10**, **25** and **40**. This arrangement thus increases the field of information without decreasing the size of the printing or increasing the size of the members. Of course, blanks **10**, **25** and **40** must be used in coordination with this additional cylinder of Figure 8. The action for procuring the correct answer is the same as when only blanks **10**, **25** and **40** are used, except that

the user will have one additional cylinder to rotate. Any number of cylinders as shown in Figure 8 may be added, one on top of the other, but one or all are to be placed between blanks **10** and **25**. Every time one of these additional cylinders as shown in Figure 8 is added the pencil will render almost twice as many answers as is possible when only blanks **10**, **25** and **40** are used. All cylinders of the type shown in Figure 8 are preferably to be constructed the same size as blank **10**, and each one may have included at each of its ends (short ends) a small tab-like protrusion, or the like, as **97** and **98**, on which some special index-like marking may be provided thereon, viz: U to mean "uptown;" D to indicate "downtown;" E to mean "east;" W to indicate "west." Colors or numbers may also be provided for this type of index marking as required. The above-mentioned tab-like protrusions, or the like, speed up the act of selecting and rotating the cylinders. All the markings on any part of the cylinders of the type shown in Figure 8 are preferably made on an opaque background. Cylinders of the type shown in Figure 8 may, if required, be made shorter than the length from **20** to **20***a* of blank **10** in Figure 4. The first cylinder of this type to be added should be slightly shorter than blank **10**; the second cylinder of this type to be added on top of the first (of this type) should be shorter in length than the first. If the length of each cylinder of this type varies and is less in length than the blank **10**, nitches or the like may be required instead of the above-mentioned tab-like protrusions, **97** or **98**, for index marking purposes, or such marking may be provided latitudinally along the edges of cylinders of this type. There is one slotted opening (either cut out or transparent, or a plurality of adjacent longitudinally arranged openings, each being about the same size as on blank **40**) on each side of this type of cylinder, each running from the very edge (short edge) to the center of the length of the cylinder. The width of each of these slotted openings permits only one longitudinal line of answers to be visible from the blank or cylinder underneath it only if the arrow or pointer aligns one of the known factors on the blank or cylinder below this type of cylinder with the other known factor on blank **25**, which is above this type of cylinder. Of course, blank **40** is also above this type of cylinder and masks out from the view of the user all but one answer, otherwise this type of cylinder functions exactly as blank **10** in cooperation with blanks **25** and **40**. The two slotted openings in cylinders of this type (Figure 8) do not have pointers, and each runs from the center of the length of this cylinder to the very edge. Bumps, pins, studs, grooves, washers, or the like, are used for the same purposes as heretofore explained. Of course, if one cylinder of this type is added, the inner bore, when abutted, is slightly larger than the exterior diameter of blank **10**. If two cylinders of the type of Figure 8 are added, the second's inner bore is larger than the first's outside diameter. Naturally, the inner bore of the cylinder formed by abutting the longest sides of blank **25** in Figure 3, is to be slightly larger than the exterior diameter of the last added cylinder of the type of Figure 8. Instead of two slotted openings in the type of cylinder of Figure 8, only one may be provided if desired. If such is the case, said slotted opening runs right across the entire cylinder, from the very left edge to the very right edge (short edges), but this can only be when and if blank **25** has one slotted opening running from **33** to **34**. The distance between **28** and **33**, and between **34** and **29**, can be shortened.

In Figure 2, a step-like formation of openings **46** has been shown. It is not necessary to have these steps successively arranged. They can be arranged staggered to each, or disposed indiscriminately, as long as the different openings are spaced not in the same line either longitudinally or transversely.

In Figure 3 and Figure 8 elongated slots are shown. In place thereof, multiple openings, transparent or cut out, may be provided. In Figure 3 the slots **26** and **27** are marked "Transparent," but they can be cut outs in place thereof.

I have described an embodiment of my invention, but it will be clear that changes may be made within the principle of the invention described without departing from the scope of the subjoined claim.

What I claim is:

A device of the character described comprising a base member and a superposed longitudinal slotted member relatively movable with respect to said base member, each of said members having thereon indicating characters forming a composite field of resultant information arranged in intersecting rows disposed longitudinally and transversely, a transverse row of indicating characters on the end portions of said base and slotted member forming a composite index, a second slotted member mounted on said first slotted member, said second slotted member being shorter than the first slotted member and having a blank marginal portion terminating adjacent the index on said first slotted member to leave the same exposed, said second slotted member being movable with respect to said first slotted member and having a longitudinal opening for selectively exposing individual longitudinal rows of indicating characters of said composite field of resultant information on either said base or first slotted member, a third member having stepped openings therein overlying said second slotted member, said stepped openings adapted for selective registry with said longitudinal openings to expose individual indicating characters along said longitudinal openings during relative movement of said first and second slotted members, said third member terminating short of the blank marginal portion of said second slotted member and having an index along its edge arranged in a transverse row, the integrals of said index being in longitudinal alinement with said stepped openings, and a duplex pointer on the blank marginal portion of said second slotted member pointing to the composite index of said base member and said first and third members.

BERTHOLD J. REESE.