

Sept. 10, 1968

E. RITTER

3,400,470

WRITING ARRANGEMENT

Filed Nov. 4, 1965

5 Sheets-Sheet 3

Fig. 4

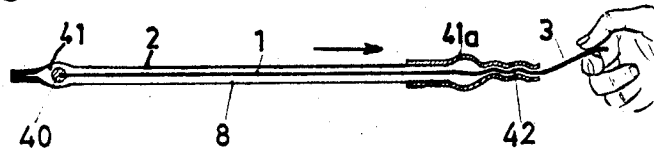


Fig. 5

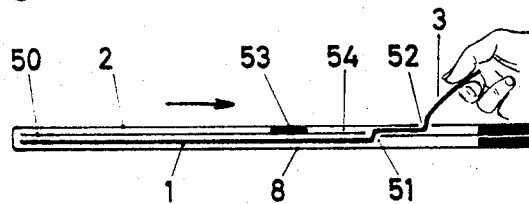
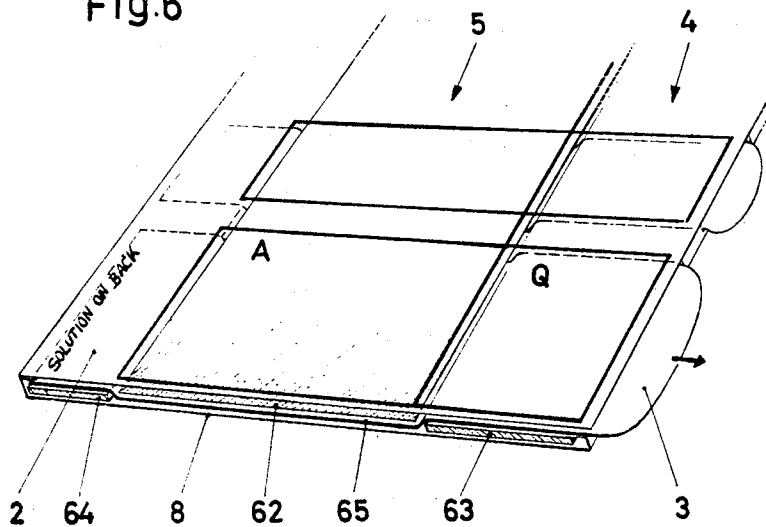


Fig. 6



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5 Sheets-Sheet 4

Fig. 8

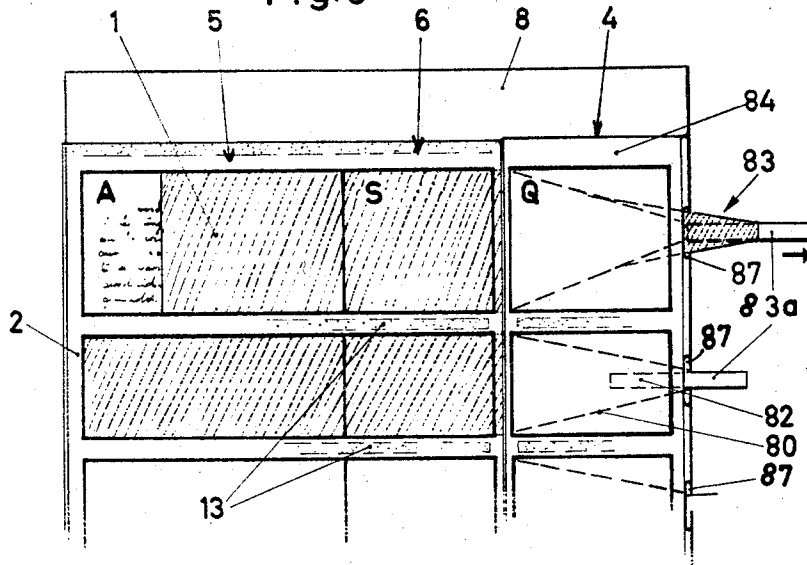
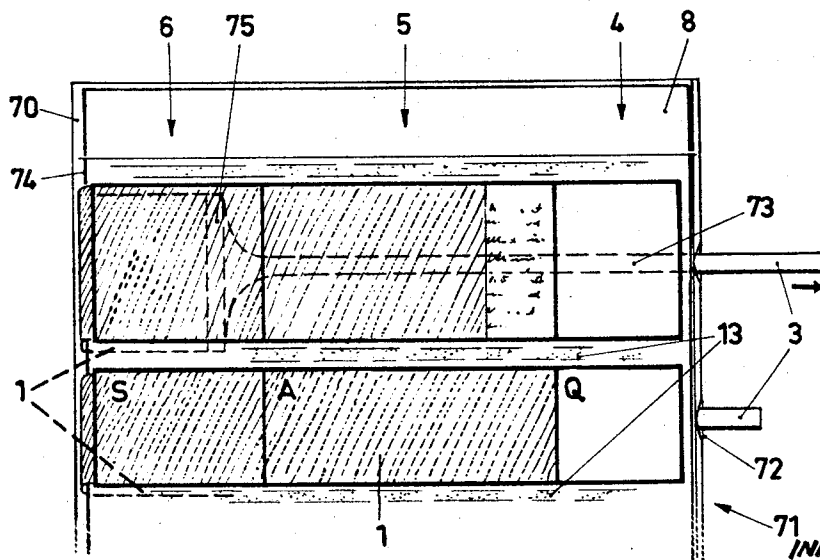


Fig. 7



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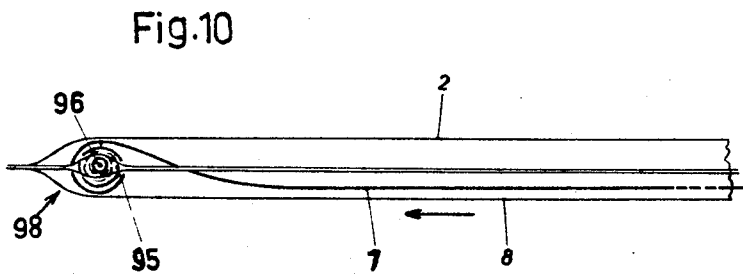
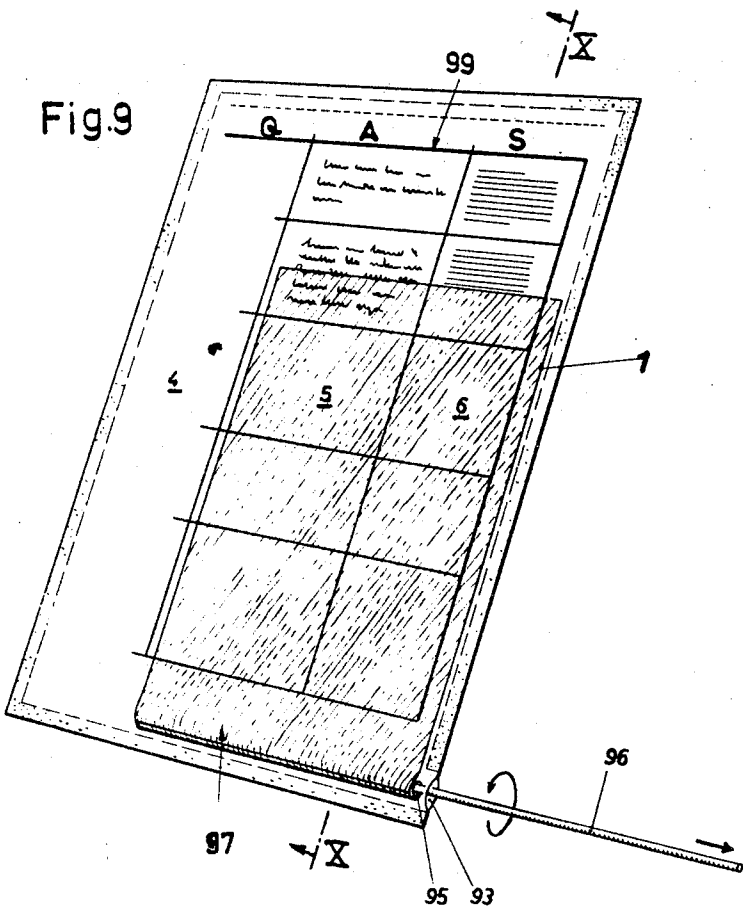
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5 Sheets-Sheet 5



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R 39,196; June 26, 1965, R 40,956
29 Claims. (Cl. 35—9)

ABSTRACT OF THE DISCLOSURE

A first sheet is provided on an exposed surface thereof with spaces in which problems are presented, empty spaces in which replies may be marked, and spaces in which the correct answers to the problems are shown. A second sheet having an impression-transferring face overlies the empty spaces and the spaces containing the correct answers. A sleeve surrounds both sheets so that the problem spaces are visible. Means is provided for permitting sliding movement of the second sheet with reference to the first sheet to expose the answer spaces after replies have been written on the second sheet and transferred thereby to the first sheet, but for preventing return movement of the second sheet so as to preclude changing of the once-written reply when the correct answer becomes visible.

The present invention relates to a writing arrangement. More specifically, the invention relates to a writing arrangement which may find use in testing the knowledge of a student. Still more specifically, it concerns a writing arrangement which, upon rendering of a written answer by a student, makes available to him the correct solution while simultaneously making it impossible for the student to change his answer in the light of the correct solution without being detected.

Correspondence schools, that is schools at which the student does not attend in person but from which he receives his study material by mail and to which he mails written tests he is required to take, are enjoying increasing popularity. Such schools offer a great variety of different courses and subjects. Also, there is an increasing tendency in regular public and private schools, in which the student attends in person, to utilize teaching materials which do not require constant supervision of students by a teacher. In these latter types of school, more and more use is therefore being made of teaching machines which, as soon as a student has given his answer to a problem passed by the machine, will provide him with the correct solution so that he may compare this with his answer.

The problem in all of these cases, whenever a test is to be given to the student without supervision, has always been to keep him from correcting his answer once he has written it down. Of course, the solution would seem to be basically simple in that the student is simply not given access to the correct solution until he has mailed his answer to the correspondence school or turned it over to the teacher who collects the tests in a regular school. However, it has been found that a student's ability to learn and to profit from tests is vastly increased if he is given access to the correct solution immediately after formulating his answer to the question involved. This, unfortunately, poses the above-mentioned problem of how to prevent the student from correcting his answer in the light of the correct solution which he has just learned. Heretofore this problem has been met in one of two ways, namely either by the honor system which is often used by the correspondence schools and whereby the student, who is frequently an adult, is trusted to understand that subsequent correction of his answer in the light of the correct solution simply presents a false picture to the

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school and thus is not in his best interests, or by providing rather complicated and therefore expensive machines, usually used by regular public and private schools, which make the correct solutions accessible to the student only after mechanically preventing him from making alterations to his answer. Such machines come under the general category of teaching machines and, as mentioned before, are usually rather expensive and thus present a sizable investment for the school involved.

Clearly, neither of these two methods is very advantageous, firstly because too many students, including adults, do not realize that "cheating" is simply harmful to their acquisition of knowledge rather than representing an advantage, and secondly because of the large capital investment required which restricts the use of teaching machines to the more affluent schools.

Equally, clearly, an improvement over these two methods is desirable, and it is therefore a general object of the present invention to provide a means of overcoming the disadvantages which have been outlined heretofore with respect to making known to a student the correct solution to a question immediately upon his giving his own answer thereto, while preventing him from correcting such answer on the basis of the correct solution.

More specifically, it is an object of the invention to provide an arrangement in which the correct solution to a question will become accessible to the student only after he has completed his answer, and only after such answer can no longer be altered.

In accordance with one feature of the invention there is provided a writing arrangement of the type disclosed comprising, in combination, two sheet means arranged superimposed upon each other and movable relative to each other in a predetermined direction. One of these sheet means has an impression-transferring face facing an impression-receiving face on the other of the sheet means. There are further provided means maintaining the sheet means in superimposed position but permitting movement of one of the sheet means relative to the other in the predetermined direction. Finally, blocking means is provided, preventing movement of the sheet means relative to each other opposite to said predetermined direction whereby, when a marking is made by means of the impression-transferring face of the one sheet means on the impression-receiving face of the other sheet means while the two are superimposed, and thereafter the sheet means are moved relative to each other in the predetermined direction exposing the impression-receiving face, the impression-receiving face of the other sheet means cannot be covered again by movement of the sheet means relative to each other in the opposite direction.

It will be understood from what has been said before that such a writing arrangement in accordance with the present invention will be very much more simple than the teaching machines referred to above, and that it would be particularly suitable for use of correspondence-type schools by the very nature of its construction since it will be readily available.

Various different embodiments are possible and will be described hereinafter. Briefly, and most basically, the writing arrangement according to the present invention will comprise, as set forth above, a base sheet and a movable sheet which are superimposed upon each other. Advantageously, there will be provided a third sheet of transparent material which will be joined to the base sheet in such a manner as to constitute therewith an envelope, and the movable sheet will be received therein and be movable with respect to the base sheet. The blocking means will be provided in such a manner that the movable sheet can be moved in the predetermined direction but cannot be returned in the direction opposite to the predetermined direction. The questions to be answered

by the student may be indicated on any one of the various sheets and in any suitable manner. Of course, questions may also be posed on a separate sheet not connected with the inventive writing arrangement. A central concept in accordance with the present invention is, however, that there be provided a space on the inventive arrangement in which a student may write his answer. "Writing," it will be understood, is intended to encompass all types of markings and no restriction to the written word is intended. When doing so, the student will create an impression on the impression-receiving face of the sheet which is provided with such face, for example, the base sheet if the movable sheet is the one having the transfer face. A second space is provided in which the correct solution is indicated in a suitable manner, such as by printing in this second space markings, indicia, or similar symbols. Again, this second space may be provided on one or the other of the base and movable sheets, it being essential only that this second space be covered and remain covered by the movable sheet until the same has been moved in said predetermined direction. Such covering must remain effective until the impression-transferring face of the one sheet is moved out of superimposition with the markings created on the impression-receiving face of the other sheet. Since there are means provided which prevent returning of the movable sheet into its original state of superimposition with the base sheet, any later correction of the answer in view of the now-visible correct solution is not possible without detection.

The sheets can be provided of various different materials, such as paper, cardboard, or plastic. Obviously, the manufacturing cost of such an arrangement will be extremely low as compared to existing arrangements utilizing, for example, teaching machines as described before. Arrangements of the inventive type can be stacked, filed in file folders, readily transported, mailed and generally handled in a similar manner as a thin note-book or the like.

It is advantageous that in the basic construction, in which a movable sheet is interposed between a top sheet and a bottom sheet which are to form an envelope, the top and bottom sheets be joined together along three edges thereof by use of adhesives, if paper is involved, or, if the sheets are made of plastic, preferably by means of heat welding. Essential in this connection is that the outer sheets, that is the top and bottom sheets, must not be separable without showing damage and thus drawing the attention of the teacher or instructor.

In one embodiment the movable sheet will be blocked from reinsertion after having been moved in the predetermined direction by passing, during such movement, through a blocking means which deflects it through 180° and thus prevents reverse movement. This is an embodiment in which the movable sheet may be completely removed from the envelope during such movement.

In another embodiment a fourth, relatively stiff sheet is provided within the envelope, and the movable sheet will be originally superimposed with one side of the fourth sheet and will, after the student has written down his answer, be pulled around an edge thereof into superimposition with the other side of the fourth sheet. In this case the movable sheet may permanently remain in the envelope and a suitable means for moving it from one to the other side of the fourth sheet will be provided, such as a strip of material extending outwardly through a small opening in the envelope, or a similar expedient.

It is also possible to provide an arrangement in which the movable sheet is completely withdrawn from the envelope through an opening which is smaller than the width of the movable sheet. In this case, the movable sheet will be advantageously provided with a tapered portion of which one end will extend outwardly through the smaller opening so that, as the movable sheet is withdrawn through the opening, it will become creased in such

a manner that the fact of its withdrawal will be immediately obvious. At the same time, the fact that the opening is smaller than the width of the movable sheet prevents reinsertion thereof.

Again, the blocking means provided can be of the type in which opposing members interengage with one another to form an arrangement which will permit withdrawal of the movable sheet, but not reinsertion thereof. This can be in the form of interengaging projections on the respective top and bottom sheets, such projections facing each other inwardly across the opening through which the movable sheet is to be withdrawn. Also, the top and bottom sheets can be provided with depressions across the opening through which the movable sheet is to be withdrawn, such depressions being in the form of undulations so that a projection on the top sheet will be received in a corresponding depression in the bottom sheet, or vice versa. This is particularly advantageous if the top and bottom sheets are made of a plastic material whose inherent resiliency will bias the sheets against each other.

It is also possible to provide various intermediate sheets which correspond to the fourth sheet mentioned earlier, each of these being provided with a slot of the desired width and such slots being staggered relative to one another in said predetermined direction so that the movable sheet will be pulled through the successive slots in the predetermined direction, thus making reinsertion impossible. This results in a labyrinthine type of blocking means.

Alternatively it is possible to so arrange the movable sheet that, as a student writes his answer on the inventive writing arrangement, a fixed member such as a sheet of paper or the like arranged in the envelope and having an impression-transferring face of a particular and unusual color, will provide an impression on one side of the movable sheet. When the latter is withdrawn from the inventive writing arrangement, the correct solution, which is provided on the other side of the movable sheet, will then become visible to the student. However, the student will be unable to correct his answer since he will have no access to the sheet with the impression-transferring face of unusual color without tearing the writing arrangement, thereby making his tampering evident, and it will not be possible for him to obtain a sheet with an impression-transferring face of similar color since a very unusual color or combination of colors will have been chosen for this purpose. Of course, a blocking means will still be provided to further assure against tampering.

In another arrangement the sheets, which may all be of square or rectangular configuration, will be so arranged that the two outermost sheets define along one edge portion thereof an elongated hollow channel, and along an opposite edge portion thereof a second elongated hollow channel. Along the second channel and arranged on the side facing away from the first channel there will also be provided a slot through which the movable sheet may be withdrawn. In the first-mentioned channel there will be received a rod or the like of any suitable material, to which the movable sheet will be secured with an edge portion thereof. As the student withdraws the movable sheet, the rod will be pulled intermediate the respective outermost sheets from the first into the second elongated hollow channel and will be received therein with a snap action resulting from its deflection of the sheets. The movable sheet will then be removed from the rod, for instance by tearing it off, and it is not possible with this arrangement to return the rod from the second to the first elongated hollow channel without visibly damaging the inventive writing arrangement.

Also, the movable sheet means may be provided with a plurality of tooth-like strips projecting in the general plane of the movable sheet and spaced from one another, whereas a stationary sheet within the envelope is provided with complementary tooth-like strips which fit inter-

mediate those of the movable sheet so that, when the movable sheet is withdrawn, it is not possible to return it in such a manner that the respective strips interengage properly again.

It is furthermore possible to withdraw the movable sheet by first rolling it up in the above-mentioned predetermined direction, for instance about a suitable member which may be inserted into the envelope. It is then impossible to return the movable sheet means in the direction opposite the predetermined direction.

Of course, the various features of the embodiment mentioned may be combined in different ways, and all resulting combinations are to be understood as encompassed by the inventive concept.

The novel features which are considered as characteristic for the invention are set forth in particular in the appended claims. The invention itself, however both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawings, in which:

FIG. 1a is a perspective view of a writing arrangement incorporating one embodiment of the present invention;

FIG. 1b is a section through the embodiment of FIG. 1a, taken on the line I—I thereof;

FIGS. 2a-d show various embodiments of the blocking means used in the inventive writing arrangements;

FIG. 3 is a top-plan view of a further embodiment of the inventive writing arrangement;

FIG. 4 is a sectional view through an inventive writing arrangement showing a further embodiment of a blocking means;

FIG. 5 is a view similar to FIG. 4 and shows yet an additional embodiment of the blocking means;

FIG. 6 is a partial view, seen in perspective and partially sectioned, through another embodiment of the inventive writing arrangement;

FIG. 7 is a partial top-plan view of a further modification of the invention writing arrangement;

FIG. 8 is a view similar to FIG. 7 and shows yet another modification of a writing arrangement in accordance with the present invention;

FIG. 9 shows a further modification of the invention writing arrangement in a perspective view; and

FIG. 10 is a section taken on the line X—X of the embodiment shown in FIG. 9.

Discussing now the drawing in detail, and firstly FIGS. 1a and 1b thereof, it will be seen that the inventive writing arrangement shown in FIG. 1a consists of a top sheet or web 2 which is preferably transparent, a base sheet or web 8, and a movable sheet 1 received between these sheets 2 and 8. Edge portions of the sheets 2 and 8 are joined along three sides thereof. Along the fourth side the edge portion of the sheet 8 is folded upwardly so as to overlie a corresponding edge portion of the transparent sheet 2. This corresponding edge portion of the transparent sheet 2 will be suitably reinforced, as shown at reference numeral 11, for instance by a strip of material glued to it, and the reinforced edge portion of sheet 2 forms with the upwardly-bent edge portion of the sheet 8 a channel 9, thus constituting the blocking means 7. The movable sheet 1 can be pulled through channel 9 in the direction of the arrow shown in FIG. 1b by its outer end portion 3 which extends outwardly beyond the blocking means 7.

In the embodiment shown in FIG. 1a it will be seen that there is provided on the left hand side of the inventive writing arrangement an area 4 in which the question or questions are indicated, an area 5 in which the student will insert his answer, and an area 6 in which there is provided the correct solution which will remain covered by the movable sheet 1 until the same is almost withdrawn from the inventive writing arrangement. Of course it will be understood that in this embodiment the movable sheet 1 is a sheet of carbon paper or a similar material having

an impression-transferring face so that, when the student writes on the transparent top sheet 2 and thereby presses on the sheet 1 in the space 5, an impression is created in the corresponding space 5 of the base sheet 8. When now the sheet 1 is withdrawn in the direction of the arrow in FIG. 1b, then initially that portion of sheet 1 which was superimposed with the corresponding portion of the sheet 8 in the space 5 is withdrawn therefrom, and subsequently reveals the correct solution in space 6. As a result of the deflection of sheet 1 through 180° by the blocking means 7 it is no longer possible to return the sheet 1 to its original position so that the student cannot make any correction in his answer after seeing the correct solution in space 6.

Various modifications of the embodiment shown in FIGS. 1a and 1b are possible. Thus, the top sheet 2 may be transparent over its entire extension and both questions and correct solutions may be printed in the respective areas of the base sheet 8. Again, an edge portion 8' of the base sheet 8 may be folded upwardly on the side opposite the blocking means 7 and be secured to the transparent top sheet 2. The questions may then be printed on the edge portion 8', in which case the base sheet 8 must receive printing on both sides, namely on one side on the edge portion 8' and the solution on the side opposite the one side.

As it is evident in FIG. 1a, the embodiment shown there provides a separate sheet 1 for each of the questions and the associated answers and correct solutions. Thus, whenever a student has answered one of the questions, he will withdraw one of the sheets 1. Of course, such sheets can be of varying width to allow for different-size spaces 5 and 6. Naturally, any desired number of such smaller sheets 1 can be provided, or else the sheet 1 can be a single large sheet. In the specific embodiment of FIG. 1a the edge portion 8a, which overlies the blocking means 7, is secured intermediate the individual movable sheets 1 with the top sheet 2 and preferably also with the base sheet 8, and this can be accomplished by stapling, gluing, or in another suitable manner, so that each channel 9 is only as wide as the corresponding movable sheet 1. The points where the edge portion 8a is jointed to top sheet 2 and base sheet 8 are indicated with reference numeral 10. It is also possible, and has been found advantageous, to join the top sheet 2 with the base sheet 8 intermediate the respective movable sheets 1, for example by means of glue spots, streaks or lines 13.

FIG. 7 shows a modification of the embodiment of FIG. 1a. In this arrangement the base sheet 8 is completely enclosed in an envelope 70 which is closed on all four sides. The spaces for the correct solutions are indicated with reference numeral 6 and are respectively covered by a movable sheet 1 which is folded downwardly about the edge 74 of the base sheet 8, as indicated in phantom lines in FIG. 7. The spaces 4 provided for the answers are preferably not covered by the respective movable sheets 1, and they may be provided on the upper face of the base sheet 8, or on the top sheet 2. Secured to the downwardly folded portion of the respective movable sheet 1 is a strip 73 of thin cardboard, strong paper, or another suitable material such as a thread, and the point at which element 73 is secured to the sheet 1 is reinforced as shown with reference numeral 75, for example by securing a strip of cardboard thereto. The reinforcing means 75 is provided to distribute the stress exerted by member 73 over the entire width of the movable sheet 1 to prevent tearing of the latter. Of course, the member 73 and the reinforcing means 75 may be integral or suitably joined.

The member 73 passes underneath the base sheet 8 and extends through an opening 72 provided in a lateral edge 71 of the envelope 70. Its end portion 3 extends outwardly of the envelope 70 and the student, after writing his answer in the space 5 provided for this purpose, will pull the end portion 3, thereby pulling the respective mov-

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able sheet 1 about the edge 74 of the base sheet 8 until it is juxtaposed with the downwardly directed face of the sheet 8. In so doing the student first exposes the space 5 of base sheet 8 onto which his answer has been transferred, and subsequently the space 6 where he will find the correct solution to the problem. The movable sheet 1 will now be juxtaposed with the opposite or underface of the base sheet 8 and cannot be returned to its original position.

Of course, it will be understood that it is possible to arrange the sequence of the spaces 4, 5 and 6 in a different manner and that it is only essential that the space 6, in which the correct solution is indicated, does not become visible until after the movable sheet 1 has already been withdrawn from the space 5.

Another embodiment of the present invention is shown in FIG. 8 and it will be seen that the arrangement there is substantially similar to FIG. 7 as far as the subdivision of the arrangement into various strips is concerned. However, in this arrangement the respective sheets 1 are not pulled around to the underside of the base sheet 8. Rather, they are provided with tapered edge portions 80 whose narrow sections 83 extend through openings 87 provided in the margin of the envelope which is constructed by folding an edge portion 84 of the base sheet upwardly and securing it to the top sheet 2. The opening or slot 87 is much narrower than the width of the respective movable sheet 1 and the tapered portion 83 of the respective movable sheet 1 is advantageously provided with a separate strip 82 secured to the tapered portion 83 and constituting a tab 83a by which the sheet 1 may be pulled through the opening 87. Of course, it is also possible simply to fold the edge portion 80 of sheet 1 so as to obtain the desired tapered configuration. In use of the embodiment of FIG. 8 the student will write his reply or answer to the questions shown in space 4 into the space 5, whereby the impression-transferring lower face of sheet 1 will make a record of his answer on the impression-receiving face of the base sheet 8. The student will then withdraw the sheet 1 by means of the pull tab 83a, and on passing through the slot 87 the sheet 1 will be wrinkled so that its reinsertion in proper form becomes impossible. If desired, the sheet 1 may be zig-zag folded to make withdrawal through the narrow slot 87 easier. The slots 87 need not be directly at the edge of the portion 84; they can be arranged inwardly thereof if desired.

Turning now to FIGS. 2a-2d it will be seen that they shown various blocking means. FIG. 2a shows a top sheet 2 and a bottom sheet 8 intermediate which there is received a movable sheet 1. The top sheet 2 and the bottom sheet 8 are provided on their facing surfaces with projections 15, 16 and 17 which are so arranged that they will interengage with one another. In other words, edges 15, 16 and 17 are slanted towards the right side of the drawing in FIG. 2a, that is the side at which the arrangement is provided with the opening through which the movable sheet 1 will be withdrawn. These projections 15, 16 and 17 are so arranged that they will interengage with one another, that is that projection 17 is received intermediate the projections 15 and 16. This forces the movable sheet 1 to pass over an undulating path upon being withdrawn through the blocking means, and its reinsertion is thus not possible.

FIG. 2b is substantially similar to FIG. 2a and shows the projections 16 and 17 to be of slightly different configuration. The effect, however, is the same as in FIG. 2a.

FIG. 2c is again slightly different in that the top sheet 2 is provided on its inwardly directed face with projections 18 and 19 and the bottom sheet 20 is provided on the inwardly directed face with recesses 20, 21 which respectively correspond to the projections 18 and 19. Thus, as the movable sheet 1 is withdrawn towards the right in FIG. 2c, it must deflect the projections 18 and 19 out of the corresponding recesses 20 and 21 and, as soon

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as it is completely withdrawn, the projections 18 and 19 will again be received in the recesses 20 and 21. A reversal of direction of the sheet 1 is not possible, either before it is completely withdrawn or after the withdrawal is completed.

FIG. 2d is another embodiment of a blocking means and shows the top and bottom sheets 2, 8 to be corrugated transversely of the opening through which the movable sheet 1 is to be withdrawn. These corrugations result in a number of projections and depressions 22, 23 on top sheet 2, and corresponding projections and depressions 24, 25 on the bottom sheet 8. Again, the movable sheet 1 must pass over an undulating path and cannot be returned in a direction opposite to the direction of withdrawal without wrinkling it and thus making it impossible to superimpose it in its original position, and without the use of implements which would destroy the connection between top sheet 2 and base sheet 8.

The embodiments of FIGS. 2a-2d are particularly suited for construction from plastic materials. It should be understood, of course, that various other configurations of the interengaging means are suitable for the purpose at hand.

Discussing now the embodiment of the invention as shown in FIG. 3 it will be seen that the movable sheet 1 here consists of two portions, that is of a movable portion 1a and a stationary portion 1b. Each of the portions 1a and 1b is provided with tooth-like strips 30 (in case of the portion 1a) and 32 (in case of portion 1b). The projections or strips 30, 32 of each of the portions 1a, 1b are spaced from one another so as to leave spaces 30a, 31 between them. They are of such length as to overlie the space 5 provided for the student's answer, whereas the space 6 in which the proper solution will finally become visible, is covered by the solid section of the portion 1a. In the original position of the portions 1a, 1b the strips 30 are received between the strips 32 in the spaces 31 defined thereby, and conversely the strips 32 are received in the spaces 30a between the strips 30 of portion 1a. The student will write his answer into the space 5 and, since the strips of both portions 1a and 1b have impression-transferring faces facing the base sheet 8, such markings will be transferred to the base sheet 8. Advantageously, the width of each of the strips 30, 32 will be such that any writing will cover two or more of the strips. Upon removal of the portion 1a the strips 30 are withdrawn from the spaces 31 of the portion 1b and subsequently, when the portion 1a has been completely withdrawn, the solution provided in the spaces 6 becomes visible. A return of the portion 1a to its original position, in which its strips 30 are received in the spaces 31 of the stationary portion 1b, is impossible since the strips 30 will no longer properly be received in the spaces 31. Of course, the portion 1b will subsequently be removed, for example by the instructor, so that the student's answer becomes visible. A correction of his answer by the student is not possible without reinserting the portion 1a, which course of action is prevented by the impossibility of properly arranging the strips 30, 32. Obviously, if the portion 1a is not inserted, then any correction attempted in space 5 would be transferred to the base sheet 8 only by the portions 32, that is not over the entire height of each of the letters, and would thus be immediately recognizable as a correction made after withdrawal of the portion 1a. Advantageously the strips 32 are secured, for instance adhesively, to the top sheet 2 so that only the spaces 31 are free for withdrawal of the strips 30. This prevents a later insertion of an impression-transferring sheet corresponding to portion 1a, but not provided with the strips 30.

FIG. 4 shows still another embodiment of the invention and it will be seen that there are provided a top sheet 2, a base sheet 8 and a movable sheet 1. Top sheet 2 and base sheet 8 form along the left-hand edge portion of the envelope constituted by them an elongated hollow chan-

nel 41 and on the opposite edge portion inwardly adjacent the outlet through which the movable sheet 1 may be withdrawn, a second elongated hollow channel 41a. Other than this, the writing arrangement shown in FIG. 4 is constructed in the manner described herebefore and the student will insert his answer to a question in the usual manner. In other words, he will write on the top sheet 2 and will thus transfer his writing via the transfer face of movable sheet 1 onto the impression-receiving face of the base sheet 8. Subsequently, he will withdraw the movable sheet 1 by its pull tab 3 and will thus simultaneously move an elongated rod or similar member 40, which is secured to an edge portion of the movable sheet 1 and received in the elongated channel 41, towards the right in FIG. 4 until it is received in the elongated channel 41a. As shown in the drawing, the sheets 2 and 8 will advantageously be reinforced in the region of the elongated channel 41a. In fact, a plastic material having a certain amount of elasticity is preferred for this embodiment as it will tend to bias the sheets 2 and 8 towards one another, thus causing the rod 40 to be received in channel 41a with a snap action. Outwardly of the elongated channel 41a there is provided a further blocking means, for instance of the type shown in FIG. 2d, so that, when the rod 40 is received in the elongated channel 41a, it is impossible to manipulate it from the exterior of the envelope in such a manner as to return it to the first elongated channel 41. Of course, the sheet 1 will be removed from the rod 40 and the rod, together with the additional blocking means 32, will prevent reinsertion of the sheet. If an attempt were to be made to restore the rod 40 to its original position in the elongated channel 41 before the movable sheet 1 is removed from the rod 40, then the sheet 1 would tear loose from the rod 40 because it is gripped in the undulating channel of the blocking means 42.

FIG. 5 shows another embodiment of the blocking means. There is provided in FIG. 5 a top sheet 2, a base sheet 8, a movable sheet 1 and a further fixed sheet 50. The fixed sheet 50 overlies the movable sheet 1 over part of the surface thereof and both the fixed sheet 50 and the top sheet 2 are provided with exit slots 51, 52 which are so spaced from one another that the movable sheet 1, upon being withdrawn, must pass through a stepped labyrinth. Clearly, it is possible to withdraw the movable sheet 1 over this path, but it is not possible to reinsert it. Rather, the sheet 1 would be prevented from entering into the slot 51 and would additionally serve to block the insertion. Advantageously there is provided to one side of the slot 51, that is spaced therefrom in the direction of possible reinsertion of sheet 1, a connection between the top sheet and the fixed sheet 50 so that, even if the movable sheet 1 is reinserted through slot 52, it will be blocked by this connection 53 which may be a streak or dot or line of an adhesive material. Thus, there is created a blind channel 54 which, as mentioned above, will block further movement of the sheet 1 if an attempt is made to reinsert the same. Of course, additional steps can be added simply by providing additional fixed sheets 50. Also, the slots 51, 52 can be provided closer to or farther spaced from the right-hand edge of the writing arrangement. Also, if additional steps are to be provided, the additional fixed sheets 50 need not extend over the entire width of the writing arrangement.

Coming now to FIG. 6 and the embodiment of the inventive arrangement as shown therein, it will be seen that the movable sheet 65 shown there is not provided as a carbon sheet having an impression-transferring face, as has been the case heretofore with respect to the movable sheet 1. Rather, the movable sheet 65 in the embodiment of FIG. 6 is provided in the space 4 with the question which, however, can also be provided on the cover sheet 2. On its lower face the movable sheet 65 is provided with the correct solution to the question so that the solution becomes visible only after the mov-

able sheet 65 has been withdrawn from the writing arrangement. As is evident from the drawing, the movable sheet 65 directly overlies base sheet 8 in the area 5, and is spaced from the base sheet 8 in the area of space 4 and at the edge portion opposite thereto by respective sheets or strips 63, 64 which extend along the opposite lateral edge portions of the top and bottom sheets 2, 8. In the area of the space 5 a further sheet 62, which is fixedly received in the arrangement, is provided and has an impression-transferring face facing the upper side of the movable sheet 65. It will be obvious that, as the student has provided his answer in the space 5, he can withdraw the movable sheet 65 in the direction of the arrow found in FIG. 6, so that the sheet 65 must then pass through the stepped channels provided by the strips or sheets 63, 64. It is no longer possible to reverse the action of the sheet 65 once it has been even partially withdrawn since the stepped channels provided by the strips or sheets 63, 64 prevent such reinsertion. Additionally, the transfer sheet 62 will be of a color which is not ordinarily obtainable commercially so that, after the student has withdrawn the sheet 65 and has seen the correct answer on the reverse side thereof, he will not be able to correct his answer on the upper side thereof without knowledge of the instructor. Also, it is possible to use sheets 62 of different color from test to test.

Coming, finally, to the embodiment shown in FIGS. 9 and 10 it will be seen that there the inventive writing arrangement comprises a top sheet 2 and a base sheet 8 which are joined along all four edges in a suitable manner. Only a slot or opening 93 remains free. Interposed between sheet 2 and sheet 8 is the movable sheet 1 which again has a transfer face and which at one marginal portion is provided with a loop 97 or with another engagement-promoting configuration. A rod or the like 96 is inserted through the opening 93 and secured to the loop of sheet 1. Of course, the rod may be supplied separately and be inserted through the opening 93 only after the various answers have been supplied in the spaces 5. The main point is that, as the rod 96 is turned in the direction of the arrow shown in FIG. 9, the movable sheet will be wound about its loop 97 into a roll 98. This roll can then be withdrawn through the opening 93.

As is evident from FIG. 9, the top sheet 2 may be provided with an impression or marking 99 which subdivides it into a space or spaces 4 for questions, 5 for answers and 6 for the correct solution. The student will write his replies to the questions into the space or spaces 5, whereby a copy of such writing will be made on the base sheet 8 in the corresponding space 5 thereof. When the student now winds the sheet 1 about the rod 96, the sheet 1 will be withdrawn downwardly and will simultaneously free an answer space 5 and the associated solution space 6. Subsequently, the student will reply to the next question and so on. It is not possible, after once rolling up the sheet 1 to even a slight extent, to reverse movement of the sheet 1, and thus a later insertion of the answer in the spaces 5 is not possible.

Various modifications are of course possible. Thus, it is sufficient if the top sheet 2 is transparent over the spaces 6 where the correct solution is to be seen. Also, the base sheet 8 and the spaces for the questions 4 and answers 5 can be constructed from the base sheet 8 by upwardly folding an edge portion thereof. In this case, the top sheet 2 would then simply be of a width corresponding substantially to the width of the spaces for correct solutions 6 and would be suitably secured to the upwardly folded edge portion of sheet 8. This arrangement has the advantage that the possibility of errors resulting from improper collating of individual top sheets 2 and bottom sheets 8 is eliminated.

It will be understood that each of the elements described above, or two or more together, may also find a useful ap-

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plication in other types of writing arrangements differing from the types described above.

While the invention has been illustrated and described as embodied in a writing arrangement, it is not intended to be limited to the details shown, since various modifications and structural changes may be made without departing in any way from the spirit of the present invention.

What is claimed is:

1. A writing arrangement of the type disclosed comprising, in combination, two sheet means arranged superimposed upon each other, one of said sheet means being movable relative to the other in a predetermined direction and having an impression-transferring face facing an impression-receiving face of the other of said sheet means; means maintaining said sheet means in superimposed position but permitting movement of said one of said sheet means relative to the other in said predetermined direction; first information-conveying means for presenting a first information; second information-conveying means for presenting second information related to said first information, said second information-conveying means being visually inaccessible to a user of said arrangement until relative movement of said one sheet means in said predetermined direction; and blocking means preventing movement of said one sheet means relative to the other opposite to said predetermined direction whereby, when a marking is made by means of said impression-transferring face on said impression-receiving face while said sheet means are superimposed, and thereafter said one sheet means is moved relative to the other in said predetermined direction exposing said impression-receiving face and rendering said second information-conveying means visually accessible, said impression-receiving face of said other sheet means cannot be covered again by movement of said one sheet means relative to the other in said opposite direction.

2. A writing arrangement as defined in claim 1, wherein one of said sheet means is a movable sheet, and the other is a non-movable sheet.

3. A writing arrangement as defined in claim 2, wherein said means maintaining said sheets in superimposed position comprises elongated sleeve means having an open side, said movable sheet being received in said sleeve means and being adapted to be withdrawn therefrom through said open side.

4. A writing arrangement as defined in claim 3, wherein said sleeve means comprises a top web and a bottom web.

5. A writing arrangement as defined in claim 4, wherein at least one lateral edge portion of said bottom web is folded over so as to overlie an edge portion of said top web.

6. A writing arrangement as defined in claim 5, wherein said edge portion of the bottom web is secured to the edge portion of the top web, said edge portions together defining channel means of substantially U-shaped cross-section constituting said blocking means, and through which said movable sheet is withdrawn in said one direction.

7. A writing arrangement as defined in claim 5, wherein said edge portion of the bottom web is secured to the edge portion of the top web at a plurality of longitudinally spaced locations, said edge portions together thus defining a plurality of channels of substantially U-shaped cross-section constituting said blocking means; and further comprising additional ones of said movable sheets received within said sleeve means with slight spacing in longitudinal direction of the sleeve means, and withdrawable in said predetermined direction through the respective channels.

8. A writing arrangement as defined in claim 6, wherein said edge portion of at least said top web is reinforced to prevent yielding thereof when said movable sheet is withdrawn through said channel means.

9. A writing arrangement as defined in claim 6, wherein markings constituting said second information-conveying means are provided on any one of said webs and movable sheet, such markings being normally concealed and being

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revealed only upon withdrawal of said movable sheet in said predetermined direction and through said channel means.

10. A writing arrangement as defined in claim 7, wherein said top and bottom webs are secured together intermediate the individual sheets of said plurality of movable sheets.

11. A writing arrangement as defined in claim 4, wherein said blocking means is arranged inwardly adjacent said open side of said sleeve.

12. A writing arrangement as defined in claim 4, wherein edge portions of said top and bottom webs adjacent said open side of said sleeve resiliently engage one another, and wherein said blocking means comprises labyrinth means in said edge portions.

13. A writing arrangement as defined in claim 12, wherein said edge portions are provided with respective corrugations transversely of their elongation, the corrugations of the top and bottom webs being complementary so that, when said edge portions resiliently engage one another, depressions on one edge portion will receive corresponding projections on the other, thus constituting said labyrinth means.

14. A writing arrangement as defined in claim 12, wherein said labyrinth means comprises a plurality of depressions provided in one of said edge portions, and a plurality of projections provided on the other and respectively receivable in said depressions.

15. A writing arrangement as defined in claim 12, wherein said labyrinth means comprises a plurality of projections on one and a further plurality of projections on the other of said edge portions, said pluralities of projections facing one another and defining an undulate path through which said movable sheet must move while being withdrawn in said predetermined direction, and which will prevent movement of said movable sheet in opposite direction.

16. A writing arrangement as defined in claim 4, wherein said movable sheet comprises at least a portion consisting of parallel strips extending parallel to said predetermined direction and spaced from one another by a given distance transversely of said predetermined direction; and further comprising an additional sheet having an impression-transferring face facing said impression-receiving face of the nonmovable sheet, said additional sheet being stationary and being provided with at least a portion having strips complementary to the strips of said movable sheet, said strips of the additional sheet being normally received intermediate the strips of said movable sheet and the latter being withdrawn when said movable sheet is withdrawn.

17. A writing arrangement as defined in claim 4, wherein said top and bottom webs are of resiliently flexible material, and wherein said sleeve has opposite said open side a closed side and said webs are provided inwardly spaced from the respective sides with a pair of mirror-symmetrical bulges, thus defining adjacent each side a passage elongated transversely of said predetermined direction, and wherein said blocking means comprises bar means received in the passage adjacent said closed side and said movable sheet is secured to said bar means so that, when said movable sheet is moved in said predetermined direction, said bar means will be pulled along from said passage adjacent the closed side and be received in said passage adjacent the open side.

18. A writing arrangement as defined in claim 17, and further comprising biasing means biasing said edge portions adjacent said open side toward one another.

19. A writing arrangement as defined in claim 4, wherein said blocking means comprises means defining a stepped channel adjacent said open side, said movable sheet being withdrawable in said predetermined direction through said stepped channel.

20. A writing arrangement as defined in claim 4, wherein said sleeve has opposite said open side a closed

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side, and wherein a portion of said movable sheet adjacent said closed side is folded about the corresponding edge of said non-movable sheet so as to engage a face of the latter which is opposite the face facing said movable sheet; and further comprising withdrawal means secured to said portion of the movable sheet and extending through said open side thereof so that, when said movable sheet is withdrawn in said one direction, it will pass about said corresponding edge of said non-movable sheet and become juxtaposed with the opposite face thereof.

21. A writing arrangement as defined in claim 20, wherein said open side of said sleeve defines a slotted opening of a width less than the corresponding dimension of said movable sheet so that the same may be withdrawn therethrough, but not be reinserted.

22. A writing arrangement as defined in claim 21, wherein said withdrawal means comprises a strip secured to said portion of said movable sheet and having a portion having a width less than that of said slotted opening.

23. A writing arrangement as defined in claim 22, wherein said portion is a first end portion extending outwardly through said slotted opening, and a second end portion, said second end portion being secured to said portion of the movable sheet.

24. A writing arrangement as defined in claim 23, and further comprising reinforcing means reinforcing said second end portion where the latter is connected to said movable sheet.

25. A writing arrangement as defined in claim 23, wherein said strip is wider at said end portion and tapers in the direction toward said first end portion.

26. A writing arrangement as defined in claim 4, wherein said blocking means defines a stepped channel adjacent said open side through which said movable sheet may be withdrawn in said predetermined direction, and wherein the sheet having said transfer-receiving face is said movable sheet.

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27. A writing arrangement as defined in claim 4, wherein said sleeve has adjacent said open side a closed side extending transversely thereto, wherein said open side defines a slotted opening adjacent said closed side which is considerably shorter than the length of said open side, and wherein an edge portion of said movable sheet is provided with an engaging means positioned so as to constitute an inner extension of said opening so that, when a rod means is inserted through said opening, it will engage said engaging means whereby said movable sheet may be moved in said predetermined direction by turning said rod means about its axis and winding said movable sheet thereon, whereupon the thus-rolled-up movable sheet may be withdrawn through said opening.

28. A writing arrangement as defined in claim 27, wherein said engaging means is a loop provided on said edge portion of said movable sheet.

29. A writing arrangement as defined in claim 4, wherein said sheets have outlined thereon at least two areas one of which is provided so that markings may be made therein, and in the other of which indicia are provided constituting said second information-conveying means, and wherein further said indicia are normally covered by said movable sheet and are exposed only during movement of the same in said predetermined direction.

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