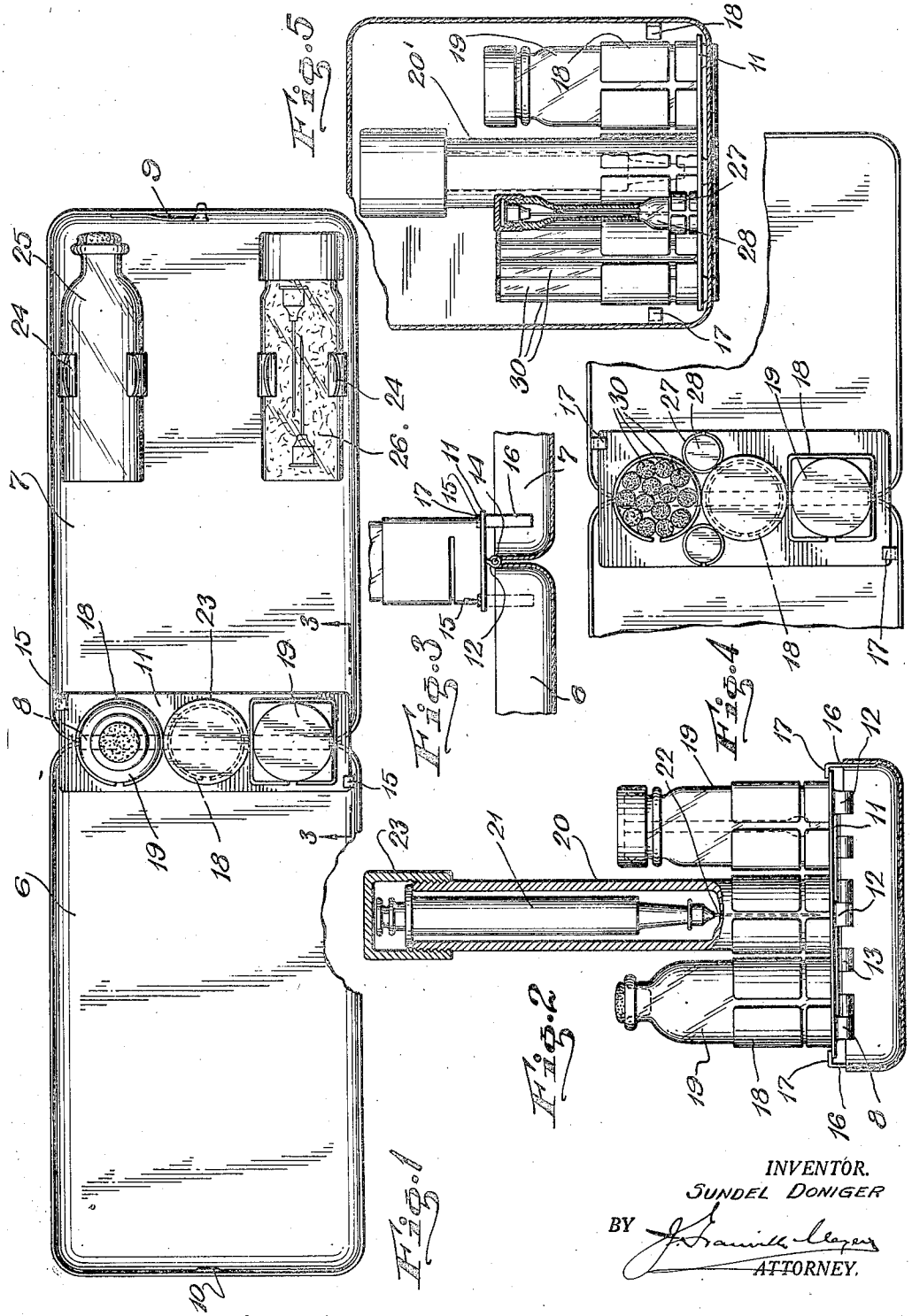
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MEDICINAL KIT

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MEDICINAL KIT

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4 Claims. (Cl. 206—12)

My invention relates to kits, and particularly to kits adapted for medicinal uses, such as self-administration of insulin by diabetics, and emergency use by physicians, and provides a kit for transportation of the necessary implements and medicaments compactly and in an always sterile condition, with convenient and stable means of exposing and supporting them while in use.

As is well known, persons afflicted with diabetes use insulin which they administer to themselves by injection with a hypodermic needle. The treatment requires that the skin at the area where the injection is to be made be painted with alcohol or iodine before the injection is made so that it is necessary to have a vial of alcohol or iodine available whenever it is time for an insulin treatment. It is also necessary to have available a hypodermic needle, syringe and the insulin. Furthermore, the needle must be sterile, and it is quite desirable to have an extra supply of needles. It is also a fact that diabetes is quite prevalent among travelers who must take with them the implements and supplies above mentioned. It has been the custom for such persons to carry the syringe, needles, insulin and alcohol in a box either padded or having clips to hold the bottles, syringe, and needles against contact with each other to prevent breakage. The person who must use the insulin must individually remove the bottles and syringe from the box and set them on a supporting surface until he has completed the treatment. On trains and vehicles there is not always available a convenient or adequate supporting surface on which to set the bottles and it is not infrequent that the bottles are broken.

With the foregoing in mind it is the object of my invention not only to provide a kit of compact size which may be conveniently carried even in the pocket of the user, but to also construct and arrange as a part of the kit means for holding the containers for the liquids, syringe, and needles within the kit when closed and when the kit is fully opened to support the bottles and syringe container without possibility of the bottles being knocked over or shaken from their supported position during the administration of an insulin treatment.

I preferably provide the foregoing arrangement and accomplish the above mentioned results in connection with a box or receptacle composed of two parts hinged together. The support or supports for the bottles and syringe is or are mounted on the hinge and each part of the box is provided with an element or elements engageable with the support or supports at the final opening stage of the container to place the support or supports in horizontal position with the bottles and syringe container firmly and conveniently held in upright position thereon for use. I may also make the box or kit of such a size as to carry either a large supply of the necessary fluids and implements or may make the same of a miniature size convenient for pocket use.

The above features and the objects and advantages of the invention will be pointed out in full and become more apparent during the course of the following detailed description of the accompanying drawing wherein

Fig. 1 is a top plan view of a kit embodying the invention in open position and showing the bottles held in upright position on their support;

Fig. 2 is a vertical sectional view through one part of the receptacle or kit looking toward the bottles and their support;

Fig. 3 is a sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a fragmentary top plan view similar to Fig. 1 showing a modified arrangement of bottles, syringe, container and needles; and

Fig. 5 is a sectional view through one part of the kit when in closed position.

In Fig. 1 the numerals 6 and 7 designate two similar generally rectangular dished receptacle or kit parts hinged together at 8 and one being provided with a resilient keeper 9 to receive the tongue 10 on the other to hold the receptacle or kit closed.

I have illustrated my invention in Fig. 1 in the form of a plate or platform 11 of a length approximately the same as the inner width of the parts 6 and 7. As shown in Figs. 2 and 3, the platform 11 has depending tubular lugs 12 which are alined with similar lugs 13 on the parts 6 and 7 to receive the pin 14 whereby the platform 11 and parts 6 and 7 are all hingedly connected. The parts 6 and 7 carry elements designated generally by the numeral 15, preferably located at the sides of the parts. I have shown each element as comprising an upright leg 16 secured to an inner face of one of the sides of the parts of the kit in any suitable manner, as by soldering or welding, and terminating at a horizontal upper end 17 extending slightly over a portion of the platform 11. Obviously the elements may be formed as extensions of the sides of the parts 6 and 7. Being rigidly connected to the parts 6 and 7, the elements 15 move therewith through arcs around hinge 8. When the kit is closed they occupy the position shown in Fig. 5 with the ends 17 above and at right angles to the plat-

form or plate 11. However, when the kit is swung open the ends 17 eventually assume the horizontal position shown in Fig. 1 and act not only to position the plate 11 in a horizontal plane but also to maintain it in such position as long as the kit is fully opened. The plate 11 is thus prevented by the elements 15 from swinging in opposite directions on the hinge.

As best shown in Figs. 2 and 3, the plate 11 has rigidly mounted thereon, holders 18, in the nature of split cups which resiliently grip the bottles 19 and syringe holder 20. I may provide a block of resilient rubber on the plate instead of the cups, and form sockets in such block to receive the bottles and implements. The syringe holder 20 may be sufficiently long, as shown in Fig. 2, to hold both the syringe 21 and needle 22 applied to the syringe. The container 20 has a screw top 23 and may be partially filled with alcohol or other sterilizing fluid so that when the syringe and needle are removed for use the needle will be sterile. When the kit is closed the container 20 will be housed between the parts 6 and 7 and will extend, in the embodiment shown in Figs. 1 and 2, approximately to the ends of the parts 6 and 7, whereas the bottles 19 are much shorter. I may provide one of the parts of the kit with clips 24 to hold an extra bottle 25, either for the alcohol or insulin, and a container 26 for extra needles or cotton. The bottle 25 and container 26 will be above the ends of the bottles 19 and on opposite sides of the upper portion of the container 20 when the kit is closed.

In some instances it may be desirable to have a shorter kit than that illustrated in Figs. 1 and 2, and I have shown in Figs. 4 and 5 a modification, whereby this may be obtained by providing extra holders 27, similar to holders 18 in structure but of much smaller size, on opposite sides of the bottles 19 and container 20' which is identical with the container 20 except that it is much shorter and only of sufficient length to hold the syringe without the needle applied thereto. The holders 27 are adapted to receive needle containers 28 of known type. Other than the dimension and arrangement of holders the construction and operation of the complete kit shown in Figs. 4 and 5 is identical with that shown in Figs. 1–3, that is, the plate 11 is mounted on the hinge in the same manner and is positioned and held in the same manner as described in connection with Fig. 1 by movement of the kit parts.

Obviously, the holders 18 and bottles 19 may be of various dimensions, that is, they may be made of smaller diameter than illustrated to reduce the width of the kit and under the arrangement shown in Figs. 4 and 5, the bottles 19 may be as tall as the container 20'. In fact various modifications in size and shape of the kit, support 11, and the bottles and containers may be made without departing from the invention, which, as should be obvious from the foregoing, provides an extremely simple, desirable, durable and convenient kit for persons who must carry with them the sterilizing fluids, syringe, needles and the insulin for treatment by personal application through injection.

When the keeper 9 is operated to release the tongue 10, the kit may be swung open on the hinge 8, and during opening movement of the parts 6 and 7, the movement of the support 11 and elements carried thereon is partly limited by the elements 15 until at full open position when the parts 6 and 7 occupy a common plane and afford a base, the support 11 is in a substantially horizontal position with all of the elements needed for the treatment conveniently exposed, arranged and supported against accidental displacement.

Thus far I have described the kits only in connection with supplies for treatment of diabetes, and although it should be obvious that the kit is well adapted to other uses, I have illustrated in Figs. 4 and 5 how the kit may be supplied for emergency use by physicians by showing a plurality of small vials 30 arranged in one of the holders 18 and a bottle of alcohol or iodine in the other holder. This provision may be made also under the arrangement shown in Fig. 1 or in modifications of the invention. The vials 30 usually contain drugs of various kinds in tablet form, such as morphine, antitoxins, etc., of a predetermined and sufficient amount to enable the physician to quickly mix and administer the necessary injection in case of emergency, as it often happens that accidents involve many persons and a physician arriving on the scene is called upon to make many injections. With my device, he could readily mix the solution with the distilled water contained in the small vials for each application, and, of course, the vials as well as the iodine or alcohol would be supported and exposed for use in the manner above described.

It will also be seen that the elements 15 also constitute obstacle means limiting the relative amount of opening movement of the parts 6 and 7 on their hinge connection, as when the ends 17 contact opposite sides of the plate 11 the parts 6 and 7 are prevented from having further opening movement, and I prefer to so construct and arrange the parts and position the elements 15 that the parts 6 and 7 are prevented from further opening movement when substantially in a common plane, which, of course, will be substantially parallel to the plane of the plate 11.

I propose to use the same case for a urinalysis test outfit also required by every diabetic patient and which he is taught to do for himself. It consists merely, in the place of the vials as above, one bottle containing benedict solution, two test tubes, a test tube holder, and a small bottle or cup to hold the specimen. Also a little cigar lighter arrangement over which the test tube with the specimen is heated.

I claim:

1. A pocket kit of the character described comprising two case members having a hinge connection therebetween, arranged to swing apart in opening the kit, a plate attached to said hinge connection within the case, means on said plate for holding a container, and means on said case members engageable with said plate during opening movement of said members to move the plate into horizontal position and at complete open position of said members to rigidly maintain the plate in said position against movement on said hinge connection, said means being movable away from and out of engagement with the plate as the case is closed.

2. A kit of the character described comprising two case members having a hinge connection therebetween, arranged to swing apart in opening the kit, a support attached to said hinge within the case and extending on opposite sides of the axis of the hinge, means on said support to receive and hold a container, and means on the case members adjacent opposite sides of the support and engageable with the top of the

support at full open position of the case members to rigidly hold the support and container supported thereon in vertical position for use.

3. A pocket kit of the character described comprising two case members having a hinge connection therebetween, arranged to swing apart in opening the kit, a plate mounted on the hinge connection within the case, means on said plate to receive and hold a container, said plate extending across and beyond the axis of the hinge and corresponding in dimension substantially to the inner cross sectional dimensions of the kit, and obstacle means carried by the case members and engageable with the plate during opening movement of said members to limit the relative opening movement of said members and at full open position of said members to rigidly maintain the plate against movement on said hinge connection and in horizontal position, said means being movable away from and out of engagement with the plate as the case is closed, and said plate being held against movement by the walls of the case when the case is closed.

4. A kit for medicinal uses comprising two case members having a hinge connection therebetween, arranged to swing apart in opening the kit, a plate attached to said hinge connection within the case and having cups to receive containers for medicinal elements, and lugs on each of said members engageable with the plate at a predetermined relative opening position of the members to limit the relative opening movement of said members and to maintain the plate at full open position of said members in a plane substantially parallel with the plane of said members at said open position whereby said members and plate rigidly support the containers in upright position, said means being movable away from and out of engagement with the plate as the case is closed, and said plate being held against movement by the walls of the case when the case is closed.

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