

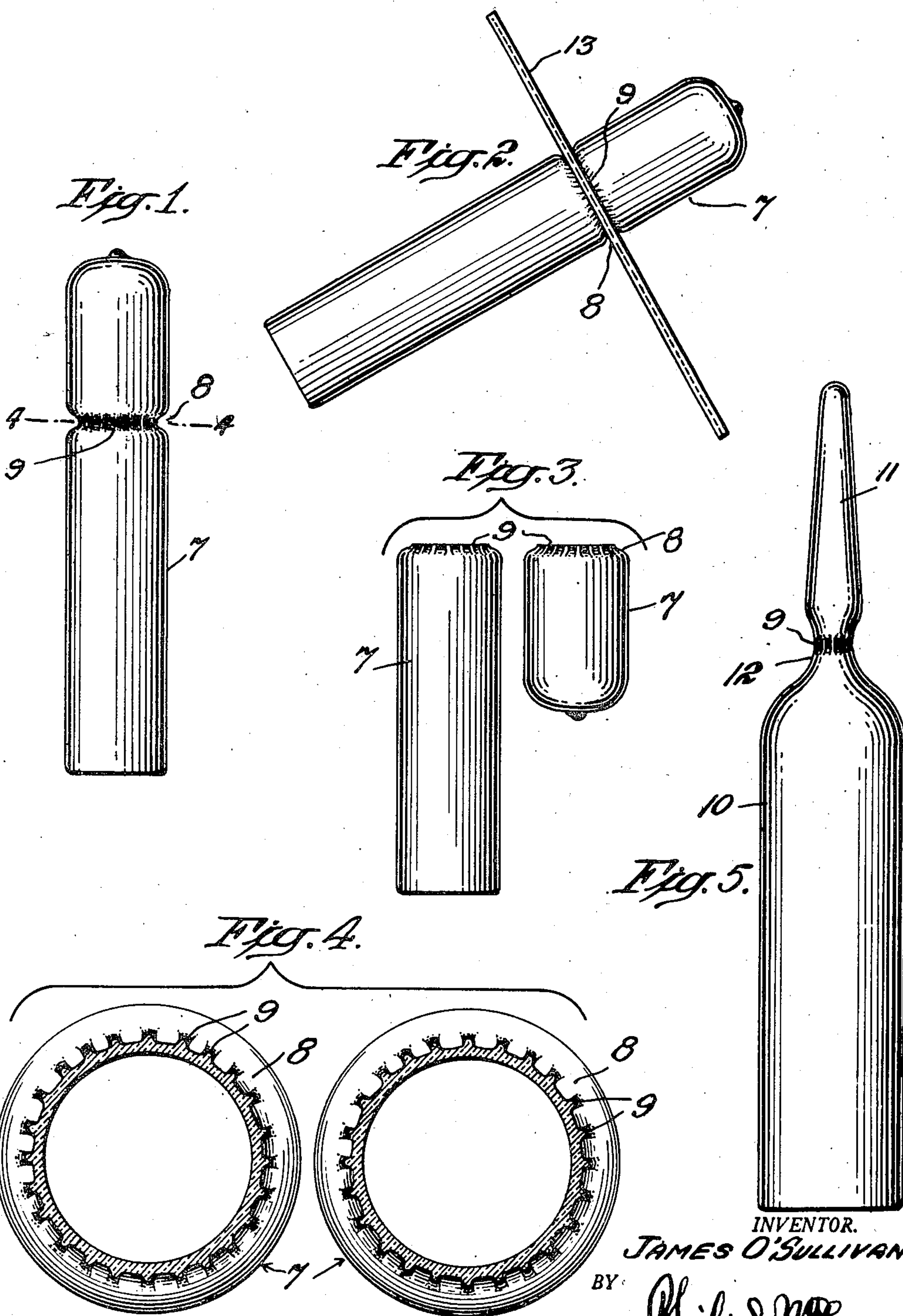
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AMPOULE

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AMPOULE

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2 Claims. (Cl. 215—32)

1

The invention herein disclosed relates to ampules.

Objects of the invention are to provide a container of this sort provided with means which will enable it to be quickly and easily and certainly broken on a definite, clean, straight line of cleavage.

Specifically it is a purpose of the invention to provide an ampul which will more readily accept a file mark so that a straight, quick stroke of a file will insure the opening of the ampul on a clean line of severance without requiring exercise of such force as might tend to break the ampul.

Special objects of the invention are to accomplish the objects mentioned in a simple, inexpensive form of construction which can be readily produced under normal and practical manufacturing methods.

Other desirable objects attained by the invention are set forth or will appear in the course of the following specification.

The drawing accompanying and forming part of the specification illustrates certain present commercial embodiments of the invention, but it is contemplated that certain modifications and changes may be introduced, all within the true intent and broad scope of the invention as hereinafter defined and claimed.

Fig. 1 in the drawing is a front elevation of one of the new ampules showing particularly the ridged, constricted neck portion of the same;

Fig. 2 is a plan view illustrating application of a file or like implement to the ridged neck portion of the ampul;

Fig. 3 is a front view showing the cleanly severed parts of the ampul;

Fig. 4 is an enlarged cross sectional view as on the plane of line 4—4 of Fig. 1;

Fig. 5 is a front elevation showing the invention embodied in a different and possibly more conventional type of ampul.

The invention, as particularly disclosed in Figs. 1 and 4, involves first the provision of an ampul such as 7 with a constricted neck portion 8 and with ridges or serrations 9 transversely crossing or intersecting the base of such peripheral groove or constriction.

The formation of the circumferential groove may reduce and possibly thin down the wall of the container somewhat, but the ridges 9 bridging any constriction reinforce and strengthen this incorporated weakness.

Additionally and possibly more important, the cross ridges 9 provide grip or "bite" for the file

2

13 or like instrument such as ordinarily employed for opening containers of the ampul type.

While the cross ridges possibly may be formed in other ways, they are at present produced by a knurling roller operating against the periphery of the base tube of which the ampul is formed, in the presence of a glass softening heating flame directed at the line of constriction of the tube.

The ridges across the constriction reinforce the glass against breakage and contrarywise, provide a means which will enable the container, upon application of a scoring or scratching implement such as a file, to be severed the more easily, quickly and cleanly.

These fine ridges extending across the groove of the constriction enable a file or other cutting, scratching or marking implement to more readily grip or penetrate the surface film or skin of the glass, and this is the factor which provides the start of a definite and clean line of cleavage.

The invention has the further advantage that it may be incorporated at practically no additional cost, since the cross ridges may be introduced by a roll for grooving the constriction in the tube and which, in addition to its grooving function, is knurled to mold the desired cross ridged configuration to the grooved wall of the tube.

The invention is applicable to ampules generally, and to that end is shown in Fig. 5 as incorporated in an ampul 10 of the more conventional type having tapered, pointed, closed end 11 and a reduced neck portion 12, the latter, as in the first illustrated embodiment, having fine cross ridges 9 bridging the constricted portion and providing individual grips enabling a file to immediately cut the surface film of the glass.

By forming the cross ridges with a knurling tool, these may be produced during manufacture at no additional cost. The configuration of such ridges may be varied and take different form so long as edges are provided which will afford a grip for the cutting edges of the file. These edges enable the cutting tool to set up a chain reaction establishing a continuous, straight, clean cleavage of the glass, highly desirable for ampuls, suture tubes and the like. The extent and shape of the constriction may vary according to the impression made by the knurling tool or the like employed for rolling the edges in the periphery of the tube.

What is claimed is:

1. An easy to open glass ampul having a definite but substantially unweakened line of cleavage and comprising a constricted portion of the

3

ampul molded in file-catching cross serrations such that the surface skin of the glass remains unbroken.

2. An easily opened glass ampul having a constriction molded in ridges crossing the base of the constriction with the surface skin of the glass remaining unbroken, said ridges reinforcing weakened portions formed between the cross ridges whereby said ampul, though substantially unweakened, may be quickly opened on the line of said constriction by drawing a file over the unbroken surface skin of the molded cross ridges and applying stress across the broken ridges to

4

initiate a chain-like reaction causing fracture of the ridges in succession about the ampul.

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## REFERENCES CITED

The following references are of record in the file of this patent:

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