This invention relates to a ballet slipper for toe dancers and has special reference to the provision of an improved toe construction for such ballet slippers. As is well known, ballet or dancing slippers embody a stiffened or box toe structure designed specially to support or sustain the thrust and weight of the dancer in toe dancing position. The stiffened or box toe structure in addition to performing the function of rigidly supporting the dancer's weight and aiding to maintain the form and shape of the dancing slipper, serves to provide a relatively hard outer toe section and surface which is well adapted for engagement with a dancing support or floor, particularly under pressure of the dancer's weight, such stiffened outer toe section being subject to the minimum frictional resistance and deformation during the act of dancing.

These stiffened or box toe structures, are however, often "soft" on the foot of the toe dancer; and in order to ease, soften and cushion the engagement of the toe of the dancer's foot with the toe structure of the dancing slipper it has been suggested to embody in or incorporate with the slipper box toe a cushioning medium or device. These prior cushion toe structures, however, do not adequately meet the requirements or desiderata of a ballet slipper, since they have been designed without full regard given to both the cushioning and stiffening characteristics desired for the toe construction.

For effectively solving the problem, it is desired that the outer toe section present a relatively stiff and external support for the slipper and a hard dancing surface for the floor, and that the cushioning section or medium present a relatively soft and yieldable support for the dancer's toe, and that both of these stiffened and cushioning sections be permitted to perform their functions independently and in combination without sacrificing one for the other. It is therefore a prime object of my present invention to provide a cushion toe for a ballet slipper embodying a stiffened outer toe section and a cushioning inner section designed and arranged to provide the necessary hard outer dancing surface and slipper support and the relatively soft and yieldable internal support for the dancer's toe.

Another serious defect in ballet or toe dancing slippers of the prior art resides in the absence or lack of a suitable reinforce-

dent for the dancing section of the slipper toe. These slippers are usually provided with an outer cover or layer of a finished material such as silk or satin which becomes readily frayed, mutilated and torn, particularly over the front section of the toe, which is due to the grinding and wearing impact of the stiffened toe structure with the dancing floor. This fraying and tearing of the outer or cover layer of the toe produces a ragged and unsightly appearance and materially shortens the life of a slipper, and the slipper is usually discarded although the remaining part of the slipper may still be in good condition. To lengthen the life of the slipper and to improve its appearance, it has been the practice in the dancing profession to provide a series of reinforcing stitches over the affected surface of the slipper toe. This stitching, however, gives the undesirable appearance of a "repaired" shoe and is not sufficiently integral with the toe structure to last for a substantial period of time.

It is a further prime object of my present invention to provide a stitched reinforcement for the dancing toe area of a ballet slipper constructed and designed to produce a neat and finished toe, the stitched formation being made such an integral part of the toe and the layer or layers of material composing the same as to produce a wear-resisting and durable toe construction. It is a corollary object of the invention to design a dancing toe structure which may be worn through several layers without becoming frayed or torn, this object being accomplished by the provision of a plurality of toe layers, through the bodies of which is incorporated a stitched formation, which formation provides a further and outer layer of a wear-resisting surface. It is a still further and corollary object of the invention to construct the reinforced toe by the stitched formation so as to aid in securing a further and resilient stiffening of the box toe section.

To the accomplishment of the foregoing and such other objects as will hereinafter appear, my invention consists in the elements and their relation one to the other, as herein- after more particularly described and sought to be defined in the claims, reference being had to the accompanying drawings which show the preferred embodiment of my invention, and in which:

Fig. 1 is a view of the slipper shown in
toe dancing position with a part broken away to show the interior construction thereof.

Fig. 2 is an enlarged front elevational view of the same.

Fig. 3 is an enlarged view taken in cross section in the plane of the line 3—3, Fig. 2, and

Figs. 4, 5 and 6 are views showing parts of the upper of the slipper and other parts incorporated therein in the process of making and constructing the finished slipper shown in Figs. 1, 2 and 3 of the drawings.

Referring now more in detail to the drawings and having reference first to Figs. 1, 2 and 3 thereof, the toe dancing slipper of my invention is shown to comprise a toe structure embodying a stiffened outer toe section generally designated as A and a cushioning section generally designated as B arranged interiorly of the stiffened outer toe section A, the arrangement being such that the stiffened outer toe section A presents a relatively hard and stiffened external support together at their lower ends and fastened to the sole 12 by the aforesaid stitches 11, and being fastened together at their upper ends by being stitched as at 19 to the cord or ribbon channel 15. The stiffened box toe A is provided with the usual box fastening means or cord 14 which is threaded through the yoke-shaped encircling channel 15.

The slipper upper 10 consists of a plurality of layers of material including an outer or cover layer 16 made of a finished fabric such as silk or satin, or the like, and a pair of lining layers 17 and 18, these layers being secured together at their lower ends and fastened to the sole 12 by the aforesaid stitches 11, and being fastened together at their upper ends by being stitched as at 19 to the cord or ribbon channel 15. The stiffened box toe A is produced by incorporating in the ballet slipper over the whole toe section thereof a plurality of sheets of material such as 20 and 21, preferably made of canvas, which are impregnated or coated with a paste which causes the canvas layers or sheets to harden and stiffen upon drying, resulting in the desired stiffened toe. The stiffening sheets 20 and 21 are preferably arranged as shown between the outer cover layer 16 and the first lining layer 17, and if desired, the stiffening layers are affixed to the cover and lining layers at the contiguous faces with either a hardening or stiffening paste or a flexible cement.

In accordance with my present invention, the cushioning means B comprises a pad of yieldable or cushioning material such for example as compacted cotton which is made thickest at the center and which is suitably skived at the circumferential edge to give the same the proper body and shape. To obtain the desired object of the invention the cushioning pad B is arranged between the stiffened outer toe section A and the toe extremities of the dancer's foot; and preferably this pad is inserted between the lining layers 17 and 18 at the frontal toe section of the slipper, as is clearly shown in Figs. 1 and 3 of the drawings. In the manufacture of the slippers this pad B is inserted after the shoe is removed from the last and "turned", the pad B being then placed against the lining 17, after which the lining 18 is arranged in position prior to the attachment of the shank 13 to the slipper.

By means of this recited construction it will be seen that the cushioning section and the stiffening section of the toe effectively cooperate one with the other, the stiffening section A being arranged exteriorly of the cushioning section B so that it effectively serves its intended purpose of forming a hard and relatively stiff external support for the slipper and a correspondingly hard surface for the dancing engagement with the floor. Conversely, it will be manifest that the cushioning section B being arranged interiorly of the stiffening section A serves in turn its intended purpose of softening the impact of the dancer's toe and providing a yieldable and cushioning support therefor.

For reinforcing the dancing toe area and for providing the wear-resistant and durable characteristics thereof, my invention further includes the provision of the stitch formation C incorporated in and stitched through the body of the outer or cover layer of the slipper upper forming a substantially integral wearing part thereof. The slipper toe comprises a front section 22 and an underneath or bottom section 23 which extends inwardly a substantial distance from said front section 22, as clearly shown for example in Figs. 1 and 3 of the drawings, each of these sections being at various times in contact with the dancing floor surface, as will be evident. To provide the optimum reinforcement over the entire wearing area the stitch formation C is incorporated in the toe so as to cover the toe areas of both said front and bottom sections 22 and 23, as will be clear from a consideration of such figures as 1 and 3 of the drawings.

Preferably, the outer cover layer 16 is reinforced and a substantial body is provided for the stitch formation by the provision of one and preferably a plurality of backing layers 24, 24 (shown herein as three in number) which backing layers are arranged preferably underlying the outer cover 16 and be-
between the same and the first canvas sheet 20 over the entire area of the stitch formation. The affected toe section of the cover 16 and the backing layers 24, 24 are stitched together by preferably closely arranged stitching threads, producing the configuration or stitch formation shown in the drawings. These stitches are incorporated in and run completely through all of the layers of the material, and when finished not only unite and bind these layers together integrally, but present both outer and inner superposed layers of stitches, the outermost layer defining a first wearing surface. The stitch formation may be given any contour or design, and for simplicity of manufacture I prefer to run the outer threads 25, 25 on both sides of a median plane of the slipper longitudinally and substantially parallel to such median plane.

In Figs. 4 to 6 of the drawings I show the upper of the slipper prior to its attachment to the sole and the manner in which the reinforced toe portion is made. The three backing layers 24, 24 of the reinforcement may take a configuration such as shown in Fig. 6 of the drawings, providing an enlarged portion 24 at one end and an elongated or tongue portion 24, 24 at the other end thereof. These backing layers may be made of a suitable material such as buckskin skived at the edges or may be made of canvas, the successive layers being of different and graduated dimensions such as shown in full lines in Fig. 6 of the drawings and dotted lines in Fig. 5 thereof, all for the purpose of providing a gradually diminishing body from the center towards the edges of the reinforced toe section. The plurality of backing layers 24 are superposed on the rear face 16 of the outer cover 16 of the upper and these layers are stitched together as already described, producing the formation, the front and rear views of which are shown in Figs. 4 and 5 of the drawings. It will be noted that the tongue sections 24 of the reinforcement provide a suitable strengthening tab for the cover or outermost layer of the upper, permitting the same to be firmly stretched over the last before the “turning” operation, this being an important advantage gained by the provision of the reinforcement at the bottom portion of the toe. In Fig. 4 of the drawings I indicate by the dash-dotted line 26 the line of division between the enlarged or bulbous portion 24 of the reinforcement which forms the front of the toe in the completed construction and the tongue shaped portion 24 which forms the bottom of the toe in the completed construction.

After producing the stitched reinforcement the two canvas sheets or layers 20 and 21, substantially of the configuration shown in Fig. 6 of the drawings are affixed as already described to the rear face of the reinforced cover 16 and in between the same and the lining section 17. In the assembling of the shoe or slipper, the upper so formed is then stretched over a last and all of the layers of the upper save the innermost lining 18 are stitched to the sole 12 as heretofore described.

Thereafter the embryo slipper produced is turned inside out, the cushioning pad B is then applied and the lining 18 superposed over the contiguous face of the pad, a flexible cement being employed for this purpose if desired, the insertion of the shank 13 and its attachment serving to hold all of the layers securely together at the bottom of the slipper.

The manner of making ballet slippers embodying the improved cushion and reinforced toe construction of my present invention and the many advantages thereof will, in the main, be fully apparent from the above detailed description thereof. It will be seen that the relative arrangement and combined construction of the stiffened portion A and the cushioning section B of the toe yields a structure which affords the maximum or optimal comfort to the dancer by interiorly cushioning the dancer’s toe and which permits the obtaining of the desired relatively hard and stiff external support of the slipper and relatively hard dancing surface therefor. It will be further seen that by incorporating the stitched reinforcement in the toe section of the slipper, the reinforcement is made substantially integral with and for a substantial thickness of the upper at the toe section thereof so that even though the surface of the toe becomes frayed or worn, the integrity of the toe structure is still maintained. Thus the interknitted stitches not only provide a very hardened and yet resilient wearing surface, but because the said stitching is through the body of one or more layers of material, there is provided a wearing surface extending to a very substantial depth. The manner in which the stitched construction is made also results in the production of a stiff yet resilient toe which assists in maintaining the proper shape of the toe even under rough usage. It will be further seen that the reinforcement lends attractiveness to the slipper, particularly when the stitches are made into an ornamental design, the ornamental and attractive appearance being maintained through long periods of use.

It will also be apparent that while I have shown and described my invention in the preferred form, many changes and modifications may be made in the structure disclosed without departing from the spirit of the invention, defined in the following claims.

I claim:

1. In a ballet slipper for toe dancers, a toe having a stiffened outer toe section and a cushioning section arranged interiorly of the stiffened outer toe section, the arrangement being such that the stiffened outer toe section presents a relatively hard and stiff external

2. In a ballet slipper for toe dancers, a toe having a stiffened outer toe section and a cushioning section arranged interiorly of the stiffened outer toe section, the arrangement being such that the stiffened outer toe section presents a relatively hard and stiff external...
support for the slipper and the cushioning section presents a relatively soft and yieldable internal support for the dancer’s toe during the act of toe dancing.

2. In a ballet slipper for toe dancers, a toe comprising a stiffened outer toe section embodying an outer layer of a finished material and a stiffening reinforcement attached internally to said layer, and a cushioning section arranged interiorly of the stiffened outer toe section, the arrangement being such that the stiffened outer toe section presents a relatively hard and stiff external support for the slipper and the cushioning section presents a relatively soft and yieldable internal support for the dancer’s toe during the act of toe dancing.

3. In a ballet slipper for toe dancers, a toe comprising a stiffened outer toe section embodying an outer layer of a finished material and a plurality of layers of canvas impregnated with a stiffening material attached internally to said finished layer, and a cushioning section arranged interiorly of the stiffened outer toe section, the arrangement being such that the stiffened outer toe section presents a relatively hard and stiff external support for the slipper and the cushioning section presents a relatively soft and yieldable internal support for the dancer’s toe during the act of toe dancing.

4. In a ballet slipper for toe dancers, a toe having a stiffened outer toe section, a flexible inner lining and a cushioning section arranged interiorly of the stiffened outer toe section and between the same and the inner lining, the arrangement being such that the stiffened outer toe section presents a relatively hard and stiff external support for the slipper and the cushioning section presents a relatively soft and yieldable internal support for the dancer’s toe during the act of toe dancing.

5. In a ballet slipper for toe dancers, a toe comprising a stiffened outer toe section having a stitched reinforced toe surface, and a cushioning section arranged interiorly of the stiffened outer toe section, the arrangement being such that the stiffened outer toe section presents a relatively hard and stiff external support for the slipper and the cushioning section presents a relatively soft and yieldable internal support for the dancer’s toe during the act of toe dancing.

6. In a ballet slipper for toe dancers, a toe comprising a stiffened outer toe section embodying an outer or cover layer, a plurality of stiffening canvas layers next adjacent thereto and a lining layer contiguous to the canvas layers, a flexible inner lining layer, and a cushioning pad arranged interiorly of the stiffened outer toe section and between the two lining layers, the arrangement being such that the stiffened outer toe section presents a relatively hard and stiff external support for the slipper and the cushioning section presents a relatively soft and yieldable internal support for the dancer’s toe during the act of toe dancing.

7. A ballet slipper for toe dancers comprising an upper having an outer cover layer, a reinforcement for the toe portion of said cover layer, and a layer of stitches superposed on, incorporated in and stitched through the reinforced toe portion of said outer cover layer, said layer of stitches covering the toe area normally in contact with a dancing surface during the act of toe dancing and defining a stiff, hard and durable exterior dance wearing surface.

8. A ballet slipper for toe dancers comprising an upper having an outer cover layer, a reinforcement for the toe portion of said cover layer and a stitch formation incorporated in and stitched through the body of said reinforced toe portion, said stitch formation presenting an exterior superposed dance wearing surface.

9. A ballet slipper for toe dancers comprising an upper having an outer cover layer, a reinforcement for the toe portion of said cover layer, and a substantially continuous layer of closely arranged stitches superposed on, incorporated in and stitched through the reinforced toe portion of said outer cover layer, said layer of stitches covering the toe area normally in contact with a dancing surface during the act of toe dancing and presenting a relatively hard and durable exterior dance wearing surface.

10. In a ballet slipper for toe dancers, a toe having a reinforced outer toe section and a cushioning inner section, said reinforced outer toe section including an upper cover layer and a layer of stitches superposed on, incorporated in and stitched through the body of said upper cover layer.

11. In a ballet slipper for toe dancers, a reinforced cushion toe comprising an upper cover layer and a formation of stitches superposed on, incorporated in and stitched through the body of said upper cover layer, said formation of stitches covering the toe area normally in contact with a dancing surface during the act of toe dancing and presenting a relatively hard and reinforced exterior dance wearing surface, and a cushioning means associated with said toe to cushion the toe of the dancer.

12. In a ballet slipper for toe dancers, a toe comprising a stiffened outer toe section embodying an outer layer of a finished material and a stiffening reinforcement attached internally to said layer, and a cushioning section arranged interiorly of the stiffened outer toe section, the arrangement being such that the stiffened outer toe section presents a relatively hard and stiff external support for the slipper and the cushioning section presents a relatively soft and yieldable internal support for the dancer’s toe during the act of toe dancing.
support for the dancer's toe during the act of toe dancing, and a reinforcement for said outer toe section comprising a formation of stitches incorporated in the body of said upper layer over the toe dancing area thereof.

18. In a ballet slipper for toe dancers, a reinforced toe comprising an upper cover layer, a backing layer arranged at the toe portion of the upper cover layer, and a stitch formation incorporated in and stitched through the bodies of both said upper and backing layers, said stitch formation presenting an exterior superposed dance wearing surface.

19. In a ballet slipper for toe dancers, a toe having a front section and an underneath or bottom section extending inwardly a substantial distance from said front section, said sections embodying an outer cover, a reinforcement for said toe, and a stitch formation incorporated in and stitched through the body of the outer cover of said slipper, said stitch formation covering the reinforced toe area in both said front and bottom sections of the toe which are normally in contact with a dancing surface during the act of toe dancing and presenting a relatively hard and durable exterior dance wearing surface.

20. In a ballet slipper for toe dancers, a toe having a front section and an underneath or bottom section extending inwardly a substantial distance from said front section, said sections embodying an outer cover or layer and a backing sheet or layer underlying the same, and a reinforcement for said toe comprising a stitch formation incorporated in and stitched through the bodies of said cover and backing layers, said stitch formation covering the toe area in both said front and bottom toe sections which are normally in contact with a dancing surface during the act of toe dancing and presenting a relatively hard and durable exterior dance wearing surface.


SALVATORE CAPEZIO.