Dec. 22, 1959 G. TOWLE 2,918,281

DIVING BOARD

Filed Feb. 18, 1957

Fig. 1.

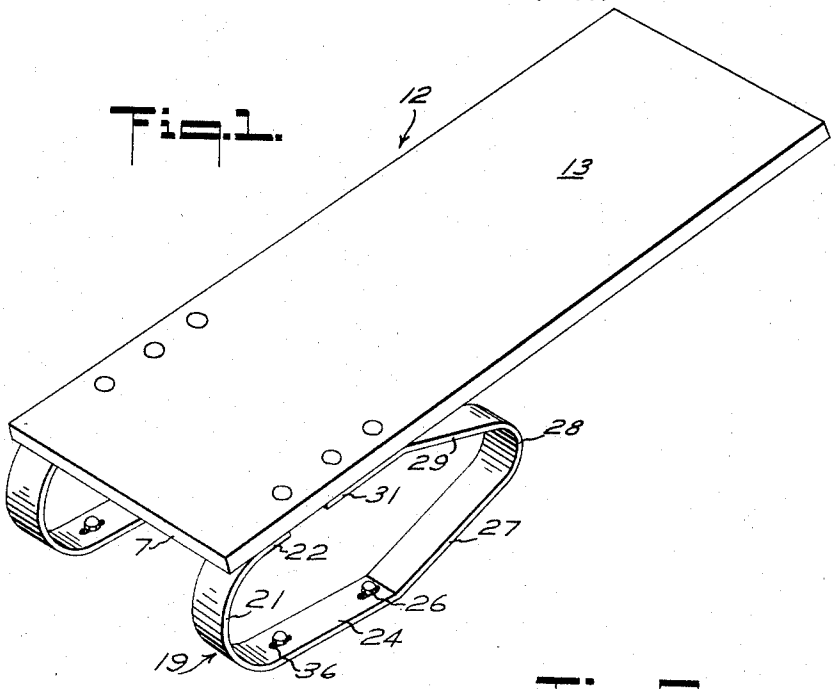


Fig. 2.

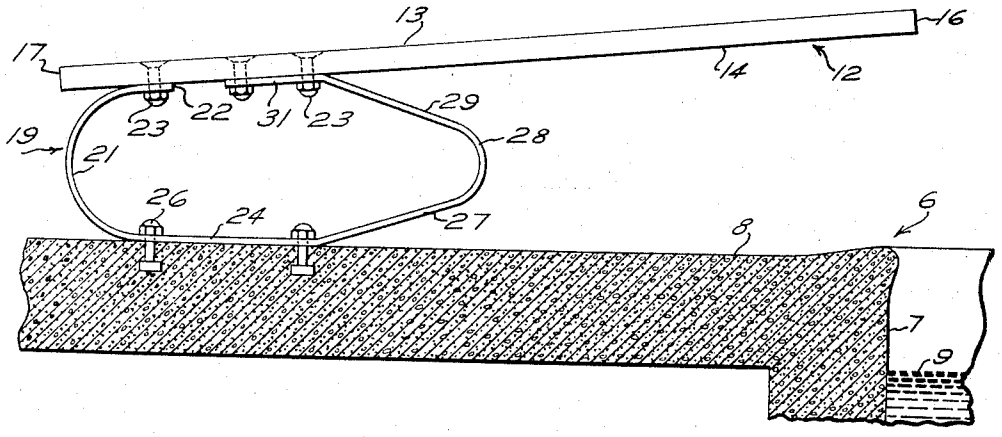
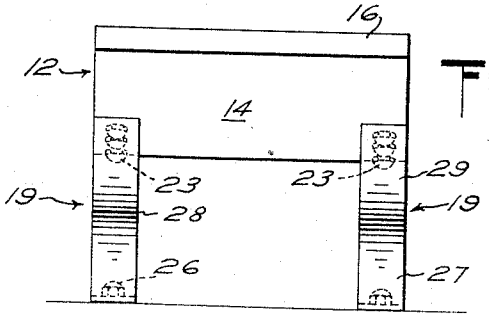


Fig. 3.



INVENTOR
GEORGE TOWLE
BY
Gardner & Zimmerman
ATTORNEYS

United States Patent Office 2,918,281 Patented Dec. 22, 1959

2,918,281

DIVING BOARD

George Towle, Walnut Creek, Calif.

Application February 18, 1957, Serial No. 640,778

9 Claims. (Cl. 272—66)

This invention generally relates to diving boards, and is more particularly directed towards a novel supporting sturcture whereby the board may be properly positioned adjacent a swimming pool or the like.

Heretofore, it has been general practice in diving board construction and installation to provide a relatively long board cantilevered outwardly from a torsion type of support. These boards are usually made of relatively expensive wood so constructed and arranged that the board itself possesses a relatively large amount of resiliency to provide the necessary spring action required in proper diving technique. While this type of construction has proved satisfactory from a utilitarian standpoint, it is relatively expensive, and accordingly, many owners of private pools have for this reason avoided the installation of diving boards of any type.

It is therefore an object of the present invention to provide a diving board and a support therefor which may be manufactured and installed at a low cost, and in which the board itself may be formed of a relatively short length of a more inflexible material than used in conventional boards, but without departing from the proper functions thereof during use.

Another object of my invention is to provide a diving board of the character described in which the supporting element merely comprises a pair of spring members, with one of such members positioned adjacent each side of the board, the spring being so arranged as to perform the dual function of providing the sole support for the board and likewise providing the necessary resiliency or spring action required of the board.

A further object of the present invention is to provide apparatus of the character described in which each of the springs consists of a generally continuous piece of strap metal or the like in which the ends of the strap are secured to the under surface of the board and an opposed portion of the strap is arranged to be permanently affixed to the pool deck adjacent the water in the pool.

The invention possesses other objects and features of advantage, some of which with the foregoing, will be set forth in the following description of the preferred form of the invention which is illustrated in the drawing accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by the said drawing and description may be adopted within the scope of the invention as set forth in the claims.

Referring to said drawing:

Figure 1 is a perspective view of a diving board provided with the spring supports of the present invention.

Figure 2 is a side elevational view of the apparatus shown in Figure 1 illustrated in operative position on the deck of a swimming pool.

Figure 3 is a front elevational view of the structure shown in Figure 1.

As hereinabove explained, the apparatus of the instant invention includes a diving board, and a novel type of resilient support therefor, and for purpose of explanation

is shown in Figure 2 in operative position on a swimming pool deck, generally indicated by the numeral **6**. The swimming pool is provided with the conventional side walls **7** and surrounding the pool itself is a generally horizontal deck **8** formed of concrete or any other suitable material. Generally, a diving board is positioned adjacent the end of the pool having the maximum depth of water **9** and as here illustrated the diving board is arranged so that its distal end is substantially coterminous with the end of the deck **8** at the end wall **7** of the pool.

The diving board per se, which is generally indicated by the numeral **12** in the drawing may be formed of relatively inexpensive wood of flat rectangular configuration, and will be seen to be substantially shorter than the boards conventionally employed for such purpose. The board **12** is provided with an upper surface **13** on which the diver stands and a lower surface **14** disposed in opposed relation to the deck **8**. One end **16** of the board, as previously mentioned, is substantially aligned with the end wall **7** of the pool, while the other end **17** is adapted to be secured to and supported on the deck in a manner presently to be explained.

It will be apparent that the shorter the length of the board **12**, the smaller will be the amount of deflection when a person stands or jumps on the board adjacent the distal end **16** thereof. Accordingly, it is necessary that the support on which the board is positioned affords an additional degree of flexibility or resiliency so that the end **16** of the board may be deflected from its normally upwardly inclined position as shown in Figure 2 to a more horizontal position in parallel relationship to the deck **8**. It will be understood, of course, that this deflection permits the diver the proper spring effect in jumping from the board.

In view of the above, and as an important feature of the present invention, the end **17** of the board is supported in a manner to fulfil the foregoing requirements. As here illustrated, there is provided a pair of springs, each being substantially identical and mounted one adjacent each longitudinally extending edge of the pool at the rear end thereof. These springs, generally indicated by the numeral **19**, comprise a length of strap metal having a width substantially less than the width of one-half of the board so as to provide a substantial space between the confronting edges of the springs when installed on the board. The thickness of the spring will depend to a large extent on the type of metal used and the amount of resiliency required for the board.

As best shown in Figure 2, each of the springs **19** has what may be termed as a substantially semi-cylindrical rear end portion **21** terminating in a short flat tangential extension **22** at its upper end whereby such end may be suitably secured by bolts **23** or the like to the lower surface **14** of the board. The portion **21** extends substantially coterminous with the rear end **17** of the board and at its lower end is integrally formed with a flat tangential base portion **24** having a substantial length whereby a pair of anchoring bolts **26** may be provided at longitudinally spaced portions therealong securing the spring to the deck **8**. Continuing forwardly, the spring has an upwardly directed angular leg portion **27** which merges into an arcuate portion **28** having a radius of curvature substantially less than that of the rear end portion **21** and being less than 180° in arcuate extent. Then, another rearwardly directed leg portion **29** is provided which is directed upwardly from a horizontal axis substantially at the same angular inclination as the portion **27** is directed downwardly. The leg portion **29** is then bent angularly downwardly to provide a flat extension **31** in generally coplanar relationship with the other end portion **22** of the strap and with the respective strap ends in opposed adjacent relation. Additional bolts

23 are utilized to secure the extension 31 to the board in the same manner as the portion 22 was secured. As will be noted, the flat portions 22 and 31 are directed angularly upwardly and forwardly relative to the base portion 24 so that the board is normally positioned with the forward end 16 raised higher than the rear end 17 and the entire plane of the board disposed at an angle of about 5 degrees from a horizontal plane.

It will be readily apparent that the forward portions of the spring including the angular leg portions 27 and 29 which are joined together by the forward arcuate portion 28 extend a substantially greater distance from the flat portions 24 and 31 than does the arcuate rear portion 21 extend rearwardly from the flat portions 22 and 24. Thus, when a weight is positioned on the upper surface 13 of the board adjacent the forward end 16, the spring may be readily compressed or flattened in a resilient manner so that the diver, for all practical purposes, will have the same amount of spring as he would on a conventional and more expensive diving platform.

Preferably, the base portion 24 is provided with longitudinally extending slots 36 which will facilitate the installation of the spring onto the pool deck. Otherwise, it would be essential to space the bolts 26 at a precise distance from each other if only mere apertures were provided in the spring to receive the same.

It will be readily understood that when a diver stands or jumps on the front end 16 of the board, the rear end 17 must be well anchored to the supporting structure. Actually, the necessary spring effect is created by the portions 27, 28 and 29, the legs 27 and 29 moving from and towards each other, and at the same time, such portions serve as the fulcrum for the board. The portion 21, being on the opposite side of the fulcrum from the front end of the board will be expanded and compressed oppositely to the leg portions 27 and 29. Such an arrangement not only provides a proper rear stanchion support for the board, but also affords an additional spring effect. Since the radius of curvature of portion 28 is relatively small as compared to portion 21, and by virtue of the scissor-like action of the leg portions 27 and 29, ready flexing is provided. Actually, since the portion 21 serves primarily as an anchor or stanchion for the board, the same could be made substantially vertical, but the arcuate shape is preferable from a manufacturing standpoint as well as for cooperating movement with the flexing of the main spring arrangement which includes the portions 27, 28 and 29.

From the foregoing description it will be seen that while the diving board construction of the instant invention is simple in construction and operation, and is capable of being produced at a fraction of the cost of a conventional diving board, it fulfills substantially all of the requirements of a board and may be easily installed by the user.

What is claimed is:

1. Apparatus of the character described comprising a generally rectangular platform, a pair of generally continuous metal straps positioned subjacent and within the peripheral extent of an end of said platform with one strap extending under each of the edges thereof, each of said straps having a rearwardly directed arcuate portion, and a generally flat upper and lower portion extending generally tangential and forwardly from said arcuate portion, the lower of said flat portions being adapted to be seated on a supporting surface and provided with means for receiving securing means, and means securing the upper of said flat portions to the lower surface of said platform, the forward end of said strap having a forwardly directed arcuate section with an upper portion thereof secured to said platform in spaced longitudinal alignment with said upper flat portion.

2. Apparatus as set forth in claim 1 in which the forward end of said strap continues upwardly from said lower flat portion and is provided with a forwardly directed arcuate portion terminating in a rearwardly directed second upper flat portion substantially coplanar with and opposed to said first mentioned upper flat portion, and means for securing said second portion to the under surface of said board.

3. Apparatus as set forth in claim 2 in which said upper flat portions are inclined forwardly and upwardly from a horizontal plane and said lower flat portion is disposed in a generally horizontal plane whereby said board is resiliently supported in an upwardly and forwardly inclined direction.

4. Apparatus for supporting a diving board platform on a horizontal supporting surface comprising a pair of arcuate resilient members having an upper tangential portion secured to the under surface of said platform and a lower tangential portion secured to said supporting surface with one of said members positioned adjacent each edge of said platform, a resilient strap adjacent each of said edges forwardly of the tangential portions of said members and each being deformed to provide a lower flat portion secured to said surface, a forwardly and upwardly directed first leg portion, a rearwardly and upwardly directed second leg portion and an upper flat portion extending rearwardly from said second leg portion secured to said platform and generally coplanar with said upper tangential portion, and an arcuate portion interconnecting said leg portions whereby the latter may flex from and towards each other in response to a weight placed on said platform.

5. Apparatus as set forth in claim 4 wherein said lower flat portion lies substantially in a horizontal plane, and said upper flat portion lies in a plane inclined forwardly and upwardly approximately 5 degrees from the horizontal.

6. Apparatus as set forth in claim 4 in which the radius of curvature of said arcuate resilient members is greater than that of said arcuate portions interconnecting the leg portions.

7. Apparatus of the character described comprising a generally rectangular platform, a pair of resilient supports for said platform, one of said supports positioned subjacent each edge of said platform adjacent the rear end of the latter, each of said supports including a strap having a rearwardly directed arcuate portion and a forward strap portion having a forwardly directed arcuate portion, said rearwardly directed arcuate portion having forwardly directed upper and lower integral extensions, said forwardly directed arcuate portion having rearwardly directed upper and lower integral extensions, means securing said upper extensions to the lower surface of said platform, and said lower extensions being adapted to be seated on and supported by a horizontal supporting surface.

8. Apparatus of the character described comprising a generally rectangular platform, a pair of resilient supports for said platform, one of said supports positioned subjacent each edge of said platform adjacent the rear end of the latter, each of said supports including a strap having a rearwardly directed arcuate portion and a forward strap portion having a forwardly directed arcuate portion, said rearwardly directed acuate portion having forwardly directed upper and lower integral extensions, said forwardly directed arcuate portion having rearwardly directed upper and lower integral extensions, means securing said upper extensions to the lower surface of said platform, and said lower extensions being adapted to be seated on and supported by a horizontal supporting surface, the radius of curvature of said rearwardly directed arcuate portion being subtantially greater than that of said forwardly directed arcuate portion.

9. Apparatus of the character described comprising a generally rectangular platform, a pair of resilient supports for said platform, one of said supports positioned subjacent each edge of said platform adjacent the rear end of the latter, each of said supports including a strap

having a rearwardly directed arcuate portion and a forward strap portion having a forwardly directed arcuate portion, said rearwardly directed arcuate portion having forwardly directed upper and lower integral extensions, said forwardly directed arcuate portion having rearwardly directed upper and lower integral extensions, means securing said upper extensions to the lower surface of said platform, and said lower extensions being adapted to be seated on and supported by a horizontal supporting surface, longitudinally spaced means securing said lower extensions to a supporting surface with the rearmost means positioned closer to the rearmost portion of said rearwardly directed arcuate portion than the forward means relative to the foremost portion of said forwardly directed arcuate portion.

References Cited in the file of this patent

UNITED STATES PATENTS

1,289,382	Brurock	Dec. 31, 1918
2,560,436	Green	July 10, 1951
2,645,483	Smith	July 14, 1953
2,764,413	Wisner	Sept. 25, 1956