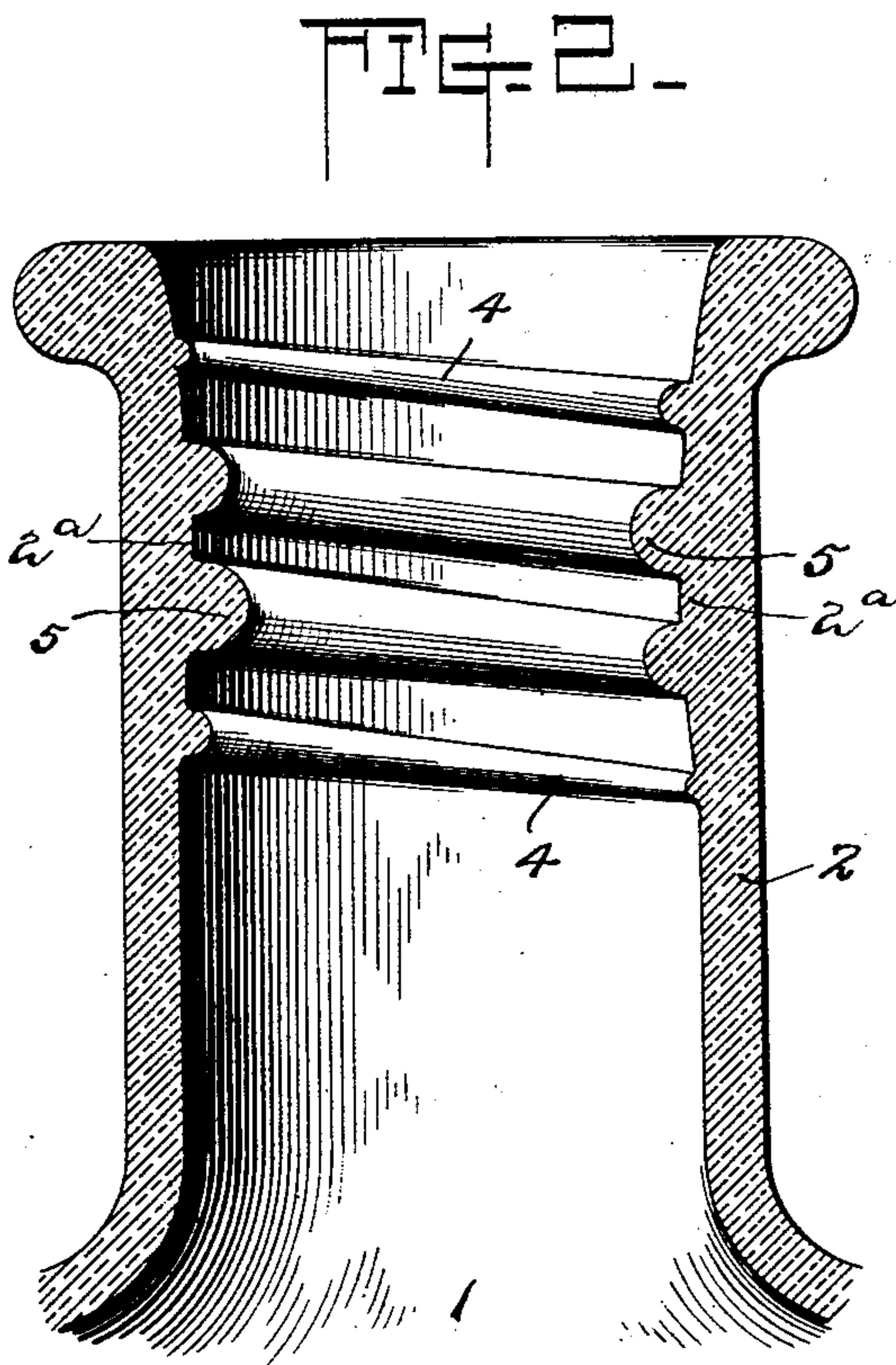
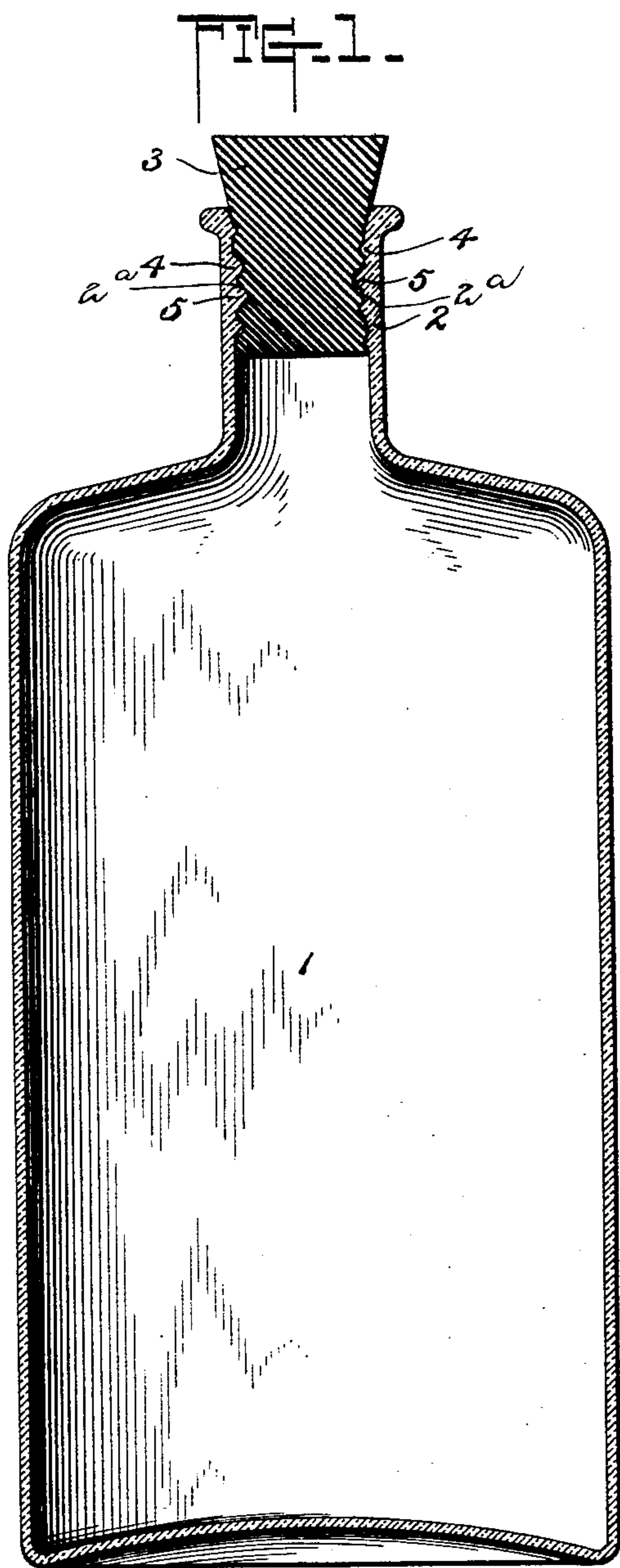


(No Model.)

G. W. MARTIN.
STOPPER NECK.

No. 591,782.

Patented Oct. 12, 1897.



Witnesses

A. M. Poynton.
John H. Cromwell.

By *his* Attorneys,

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George W. Martin,

UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON MARTIN, OF HENDERSON, KENTUCKY, ASSIGNOR OF
ONE-HALF TO HARRY MORGAN STANLEY, OF SAME PLACE.

STOPPER-NECK.

SPECIFICATION forming part of Letters Patent No. 591,782, dated October 12, 1897.

Application filed September 26, 1896. Serial No. 606,961. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON MARTIN, a citizen of the United States, residing at Henderson, in the county of Henderson and State of Kentucky, have invented a new and useful Stopper-Neck, of which the following is a specification.

This invention relates to new and useful improvements in stopper-necks for bottles and other similar storing vessels.

The object of the invention is to provide a stopper-neck adapted for securely holding soft expanding stoppers against the greatest pressure usually found in bottles and other similar vessels wherein aerated and similar liquids are stored, thereby preventing such stoppers being accidentally displaced therefrom; to so construct the neck as to permit the stoppers being readily inserted within and removed from the same, and, further, to enable the stoppers retaining their perfect shape.

With these objects in view the invention consists, substantially, in the construction, combination, and arrangement of parts, as will be hereinafter fully illustrated, described, and claimed.

In the accompanying drawings, Figure 1 is a vertical transverse sectional view of a bottle the neck of which is constructed in accordance with the present invention, an expanding stopper being illustrated as disposed therein. Fig. 2 is a similar view, on an enlarged scale, of the neck of the bottle with the stopper removed.

Similar numerals of reference indicate corresponding parts in both figures.

Referring to the drawings, 1 designates a bottle or other storing vessel, which may be of any ordinary construction and is provided with a neck 2, for receiving a soft expanding stopper 3, formed of cork, rubber, leather, or any other suitable material.

The neck 2 is provided with a thickened portion 2^a at its interior and intermediate its ends, and said portion 2^a gradually increases in thickness from its inner and outer ends to its center for the purpose of compressing the stopper 3 as the same is screwed into the neck 2 and permitting said stopper to expand therein. Formed on the thickened portion

2^a is a series of screw-threads 4, the edges of which are preferably round, so as to present a blunt surface to the sides of the stopper 3, and it will be noted that the threads 4 from the inner and outer terminals thereof gradually increase in width and thickness until the central portion 5 is reached, where the greatest width and thickness is attained. By reason of this construction it will be obvious that as the stopper 3 is screwed into the neck 2 the same is compressed by the threads 4 from the outer terminal thereof to the central portion 5, but immediately after passing said central portion 5 the stopper begins to expand and continues thus to do from the fact that the portion of the threads 4 to the inner terminal of the same diminishes in width and thickness, and thereby permits such expanding of the stopper 3. It will also be seen that the thickened portion 2^a greatly assists the threads 4 in compressing the stopper, for while said threads only compress that portion of the stopper with which they contact the thickened portion 2^a compresses the entire surface of the sides of said stopper, and after the latter passes the central portion 5 of the threads 4, which is substantially at the center of the thickened portion 2^a, the stopper will expand, as described, and thus be securely held in the neck 2.

From the foregoing it will be apparent that I have provided a stopper-neck adapted to securely hold soft expanding stoppers against the greatest pressure usually found in bottles and other vessels in which aerated or similar liquids are stored, whereby such stoppers are prevented from being accidentally or otherwise than manually displaced therefrom; that the construction of the threads 4 will permit the stoppers being readily inserted within or removed from the neck; that the stoppers will retain their perfect shape; that a greater amount of time will not be consumed to place the stoppers in the neck than in the ordinary construction, and, finally, that stoppers having their sides straight may be employed with as satisfactory results as those provided with tapering sides.

While the invention has been described and illustrated in connection with a bottle, it will be understood that the same may be used in

connection with jugs, oil-cans, or any other form of vessel in which it is desired to retain the stoppers from displacement.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

A stopper-neck for bottles and like vessels, having its internal diameter gradually reduced from its upper end downwardly to a point intermediate its ends, from which point it again gradually increases toward its lower end, and provided with an internal thread having a rounded bearing-surface which gradually increases in depth and width from its

ends to its middle portion, the depth and width of the thread being greatest where the internal diameter of the neck is smallest, whereby a stopper is permitted to expand in the neck above and below the deepest and widest portion of the thread, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE WASHINGTON MARTIN.

Witnesses:

POSEY D. BULL,
J. GUY SAUDEPUS.