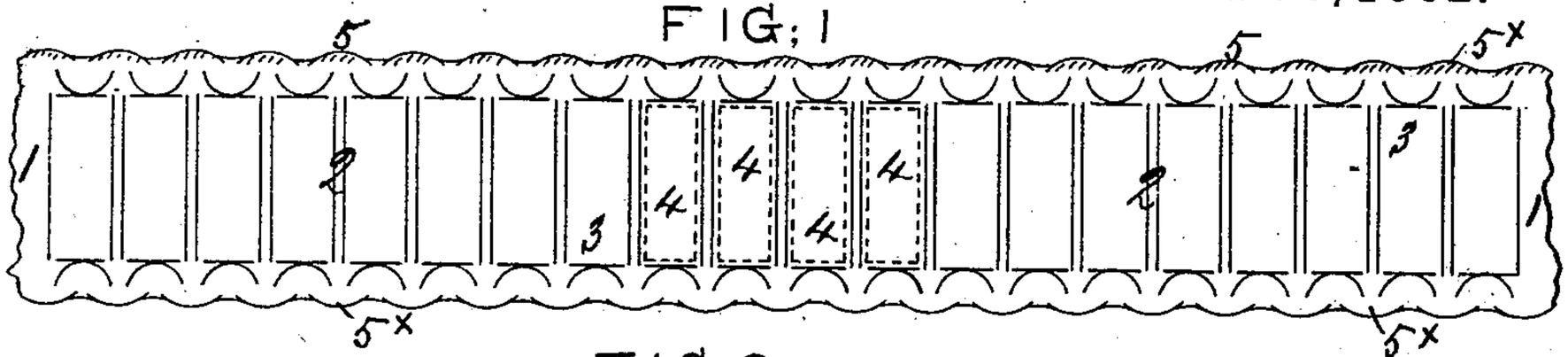
(No Model.)

F. W. BREWSTER.

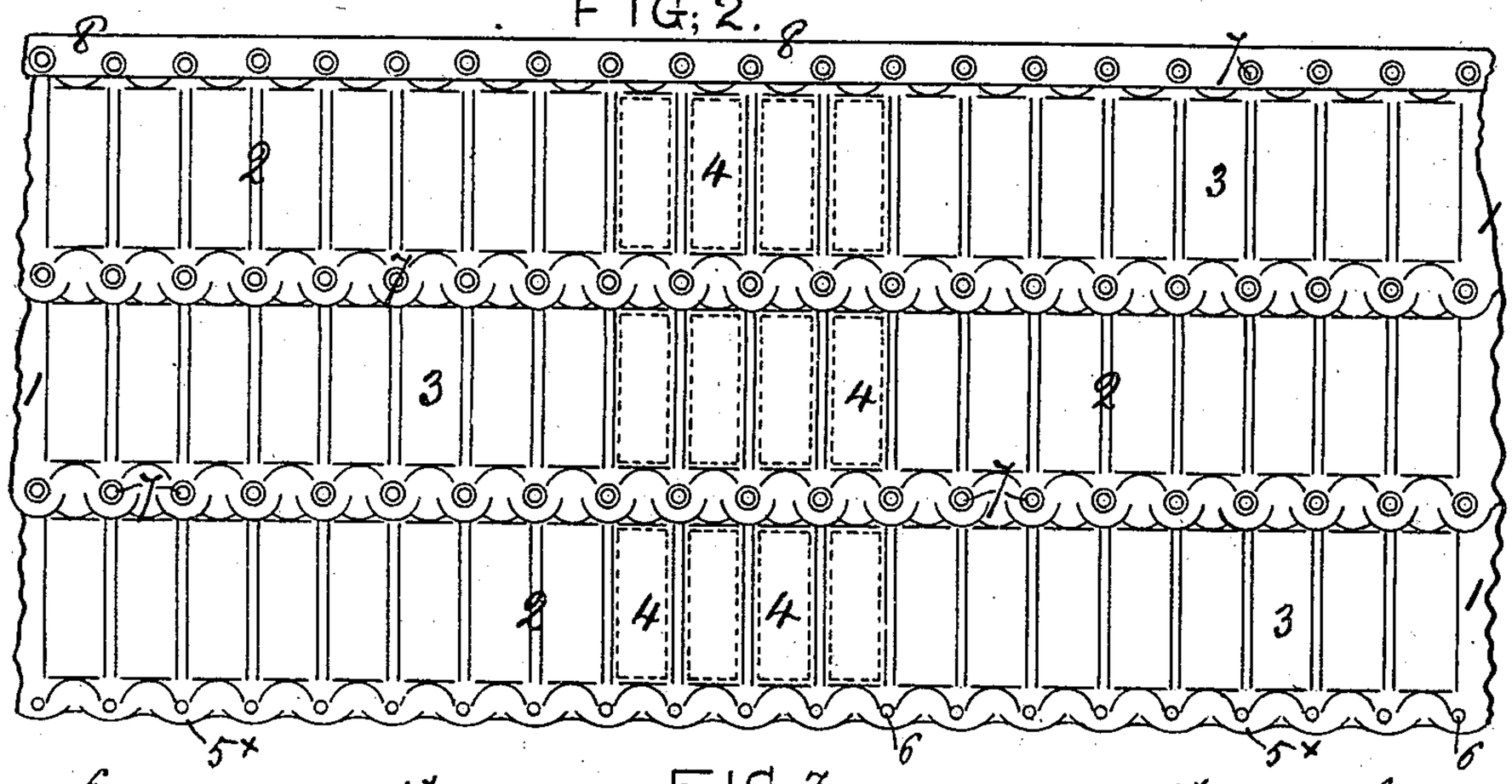
LIFE PRESERVER.

No. 254,599. Patented Mar. 7, 1882.

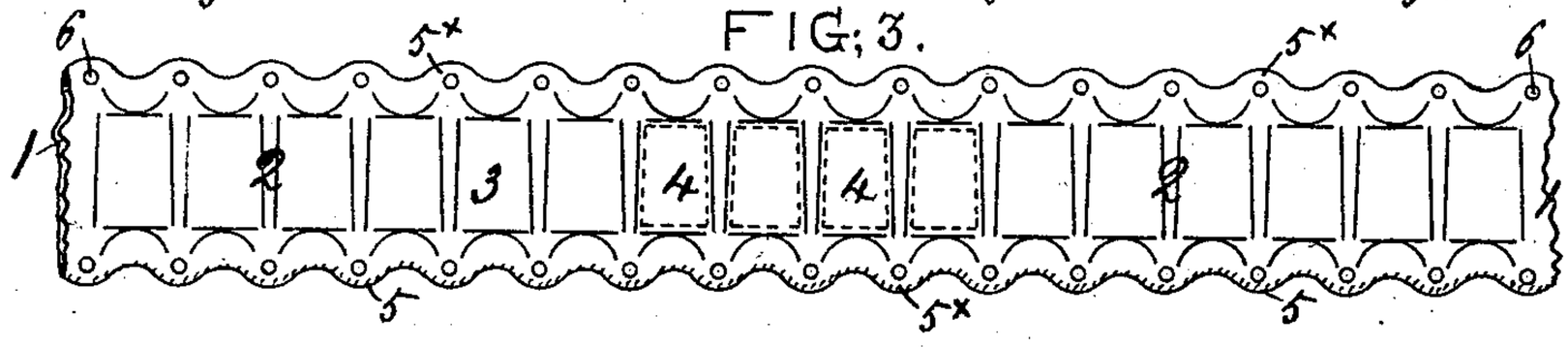
FIG; 1



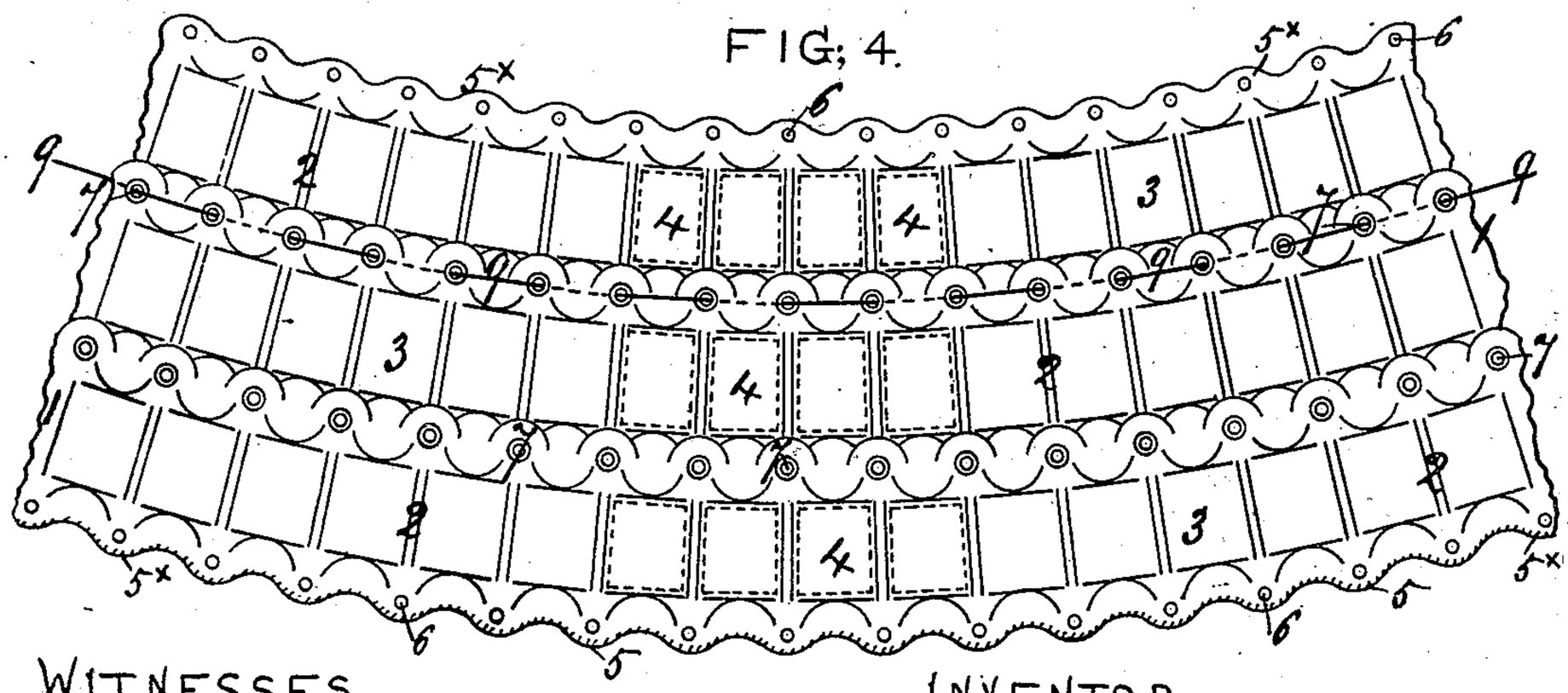
FIG; 2.



FIG; 3.



FIG; 4.



WITNESSES

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FRANCIS W. BREWSTER, OF WESTMINSTER, ENGLAND.

LIFE-PRESERVER.

SPECIFICATION forming part of Letters Patent No. 254,599, dated March 7, 1882.

Application filed January 12, 1882. (No model.) Patented in England May 16, 1881, and in France October 14, 1881.

To all whom it may concern:

Be it known that I, FRANCIS WENTWORTH BREWSTER, a subject of the Queen of Great Britain and Ireland, of St. Stephen's Club, in the city of Westminster, England, have invented certain Improvements in Buoyant Devices for Life-Preserving Appliances or Garments, of which the following is a specification.

This invention relates to improvements in buoyant devices for life-preserving appliances or garments.

The invention is illustrated on the annexed drawings in Figures 1, 2, 3, and 4, which will be hereinafter more particularly referred to.

I am aware that in the manufacture of buoyant or life-preserving garments or appliances cork, air-tubes, and other buoyant material or means have been employed in a great variety of ways; but hitherto the buoyant material has been adapted to the garment or other article or appliance in such a way as to render the latter cumbrous and inconvenient in wear, not flexible to the form, and with no facility for freedom of perspiration, or of ventilation, or of reversal as regards which side is worn nearest the body if worn as an ordinary garment.

The object of my invention is so to compose a buoyant device as that any appliance or garment made up or fitted therewith shall, as a life-preserving appliance or a garment, yet be convenient to and available for general wear and flexible to the form, the buoyant device permitting of free perspiration and ventilation, and being of a flexible, strong, and durable construction, and reversible as regards which side is worn nearest the body.

According to my invention I manufacture the buoyant device of a great number of independent parts, each of which is separately buoyant, and is separately inclosed, the parts being inclosed and united or connected to form the buoyant device in the improved manner hereinafter described. The independent buoyant parts may each consist of cork, or of an air-tube or vessel made of any suitable material, or of any other suitable buoyant material, the buoyant substance used being quite immaterial to my invention, and being hereinafter referred to throughout my specification simply as "corks" for avoidance of repetition. The form and exact sizes in which the separate corks may be made is also immaterial to my invention. They may be square, cylindrical, or conical, depending upon what part of the body the garment or appliance to be made up therewith is intended to cover, surround, or fit—for example, for such garments as vests I prefer to use cylindrical corks, and for garments shaped as capes, cloaks, or jackets I prefer to use conical or tapering corks, so that the figure may be the better fitted.

In making a buoyant device according to my invention I first separately and independently inclose series of corks in separate rows or strips, either side by side in lateral rows or end to end in vertical rows; and I then unite the rows or strips of separately-inclosed corks, as and by the means hereinafter described. I prefer to separately inclose the corks in lateral rows, and I effect this by doubling a strip, 1, of jean or of any other suitable strong fabric or cloth, and then stitching across the same at equal distances, as at 2, so as to form a succession of cases or pockets, 3, into each of which a cork, 4, is inserted, as shown by the inner dotted lines, the openings or mouths of the cases or pockets then being sewed up longitudinally of the strip, as at 5. With cylindrical corks the cross-stitchings 2 are made parallel; but with conical or tapering corks the stitchings in the straight extended row are made in angular relation to each other, as shown in Fig. 3, and the small ends of the corks are first inserted from the larger end of the case or pocket. In strips of different lengths, but intended for inclosing the same number of corks, as in making tapering buoyant garments or appliances, the distances between the cross-stitchings 2 vary, as in Fig. 4. When the corks are thus separately inclosed in lateral or vertical strips or rows the upper and lower or the side edges of each strip present series of curves or scallops $5^{\times}$, projecting opposite the cross-lines of sewing 2. I then punch eyelet-holes 6 through the doubled fabric in all of these projecting scallops and opposite each end of the cross-lines of sewing 2. I then unite a series of such strips or rows of separately-inclosed corks by overlapping the perforated or

punched projecting curves or scallops, one strip upon the perforated projecting curves or scallops of another, intended to be the next adjacent strip, and I insert in the then superposed perforations metal eyelets 7, which I properly clinch, so as firmly and strongly to unite the said strips into a flexible buoyant device of any desired shape or size. When a series of strips are thus connected the corks in the lateral rows also assume vertical rows of an equal diameter if made with cylindrical corks, or radiating rows, which gradually taper or decrease in diameter from the outermost to the innermost lateral row if made with conical corks; but if first connected in vertical rows they, in being thus connected, of course assume lateral rows. This improved method of separately inclosing the corks allows of any life-preserving garment or appliance fitted or made up with such a buoyant device as a part of it taking readily to the form of the wearer, and the making the rows or strips of corks separately and uniting them by metal eyelets, as described, allows of perfect flexibility in every direction, and of free ventilation and perspiration when worn as an ordinary garment, and renders the connection of the parts very strong and the whole device very durable, and not liable to be quickly worn or come apart.

The improved buoyant device may be used as a life-preserving appliance by itself when provided with proper attachments, such as straps; or it may be combined with any garment or other appliance for rendering the same buoyant by eyelets, stitching, or otherwise; or it may be simply trimmed and then worn as an ordinary garment. The metal eyelets serve also for another purpose of utility—that is, laces 9 may be run through them for allowing of a jacket or cape or similar garment made up or fitted with this device being drawn in at parts the better to fit or conform to the figure of the wearer, and they also serve as a means of uniting a binding, 8, of strong tape or other material to the outer sides or ends of the outer strips or rows of corks.

I claim as my invention—

As a new article of manufacture, buoyant devices for life-preserving garments, consisting of a series of strips of fabric or material stitched across to form pockets, inclosing rows of corks or similar buoyant material, the series of such separately-inclosed rows or strips being connected by eyelets, all substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

F. W. BREWSTER.

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