H. D. ROGERS.

STAVE.

APPLICATION FILED APR. 7, 1915.

1,189,388.

Patented July 4, 1916.

FIG. 1.

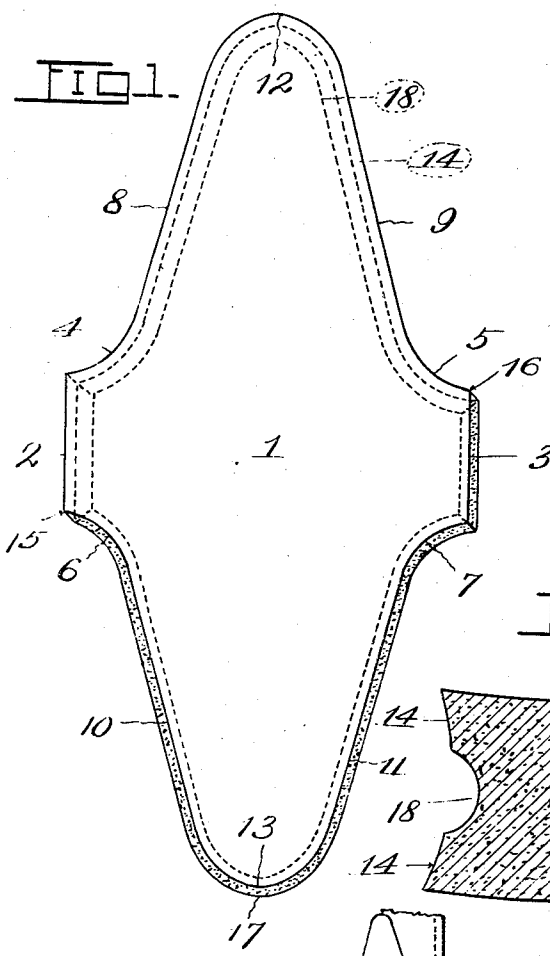


FIG. 2.

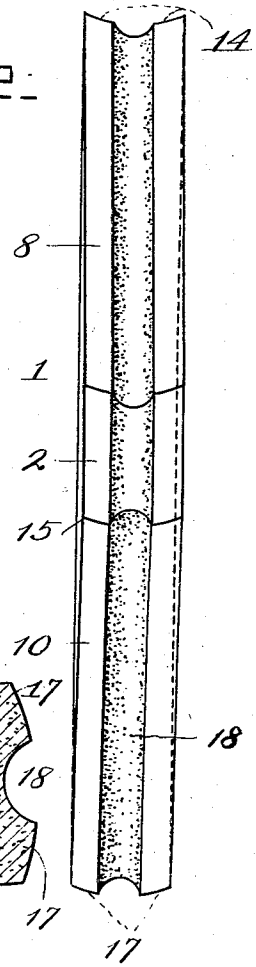
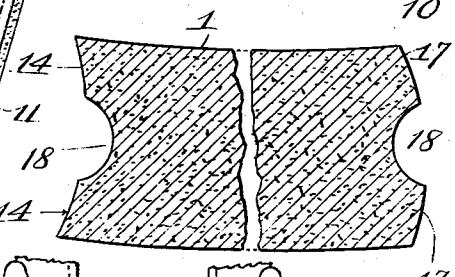
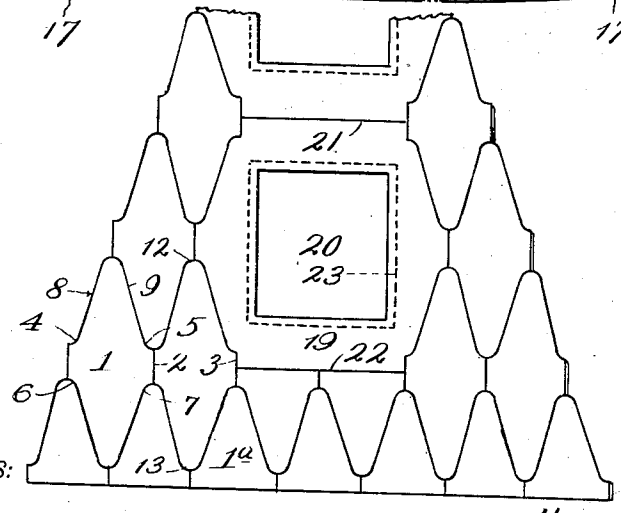


FIG. 3.





WITNESSES:

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FIG. 4.

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HOMER D. ROGERS, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-HALF TO ZINA R. ASHBAUGH, OF KANSAS CITY, MISSOURI.

STAVE.

1,189,388. Specification of Letters Patent. Patented July 4, 1916.

Application filed April 7, 1915. Serial No. 19,781.

To all whom it may concern:

Be it known that I, HOMER D. ROGERS, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Staves, of which the following is a specification.

My invention relates to improvements in staves to be employed in the erection of circular walls and straight walls; and also in the construction of containers, such, for instance as silos, grain bins, reservoirs, etc., and in order that the invention may be fully understood, reference will now be made to the accompanying drawing, in which:

Figure 1 is a side elevation of the stave. Fig. 2 is an edge view of the stave. Fig. 3 is a broken cross section, enlarged, of the stave. Fig. 4 is an elevation of a silo in the course of construction.

1 designates the body of the stave which has two short parallel sides 2 and 3 intermediate its ends. Elliptical curved portions 4, 5, 6 and 7, communicate at one end with the terminals of the parallel sides 2 and 3, and at their opposite end with margins 8, 9, 10 and 11, respectively. The margins 8 and 9 converge toward one end of the body 1 and are connected by an elliptical curved portion 12. The margins 10 and 11 converge toward the opposite end of the body 1 and are united by an elliptical curved portion 13. A part of the edge of the body 1 is beveled inwardly as indicated at 14, such bevel extending around the elliptical curved portion 12 and thence to the angles 15 and 16 formed by the juncture of the straight sides 2 and 3 with the elliptical curved portions 6 and 5, respectively. The remainder of the edge of the body portion is beveled outwardly as indicated at 17. The bevel portions 14 and 17, respectively, of the edge of the body 1 are interrupted by a groove 18, completely surrounding the edge of said body 1 and occupying about one-third of the lateral area of said edge.

In cross section the body 1 is, preferably, of segmental form as disclosed by Fig. 3, and its edges are approximately radial to the center of said segment.

In erecting a container, such for instance as a silo, a suitable foundation is first provided and upon such foundation a course of half staves 1^a is laid with their tapered ends containing the bevel portion 14, upward as disclosed by Fig. 4. The succeeding courses are then built up of full length staves, the curved ends 12 and 13 of which snugly fit within the seats formed by the elliptical curved portions 4, 5, 6 and 7 of the abutting staves, the parallel sides 2 and 3 constituting vertical guides which insure perpendicular placement of the staves. As a course of staves is laid upon the one below the outwardly beveled edges 17 of the upper staves are fitted into the inwardly beveled edges 14 of the lower staves; thus the staves are firmly secured from lateral displacement. The staves are further secured together by cream cement, or other suitable binder, poured into the grooves 18 as the laying of each course of staves is completed.

When the container is to be in the form of a silo, door frames 19 with openings 20 are provided. Each frame has parallel top and bottom edges 21 and 22, respectively, while its sides are formed to snugly fit the abutting sides of the staves 1, as disclosed by Fig. 4. The inner margin of the opening 20 is rabbeted as indicated at 23 to receive a door (not shown) for closing said opening 20.

The door frames 19 are placed one upon the other, the lowermost one being placed upon two half staves as disclosed by Fig. 4. The upper course of the silo is finished with half staves, and two half staves, are interposed between the upper edge, of the top frame 19 and the upper course of half staves just referred to. Each door frame 19 is of such proportions as to occupy the space of three whole staves and four half staves.

While the staves, are preferably, made of cement or other artificial stone material, I reserve the right to construct said staves of any suitable material to suit the conditions under which they are to be used.

While I have shown and described the preferred form of the stave, I reserve the right to make such changes in the details of construction as properly fall within the spirit and scope of the claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. A stave of the character described, consisting of a body portion of segmental configuration in cross section and of less width than length, said body portion being bounded by two short parallel margins at

its greatest width, inwardly curved margins communicating with the ends of said parallel margins, margins communicating with said inwardly curved margins and converging toward the ends of the body portion, and curved margins at the ends of said body portion connecting the terminals of the converging margins, substantially as shown and described.

2. A stave of the character described, comprising a body portion one-half of the surrounding edge of which is beveled inwardly while the other half is beveled outwardly, said body portion being of less width than length and bounded by two short parallel margins at its greatest width, inwardly curved margins communicating with the ends of said parallel margins, margins communicating with said inwardly curved margins and converging toward the ends of the body portion, and curved margins at the ends of said body portion connecting the terminals of said converging margins, substantially as shown and described.

In testimony whereof I affix my signature, in the presence of two witnesses.

HOMER D. ROGERS.

Witnesses:

F. G. FISCHER,

L. J. FISCHER.