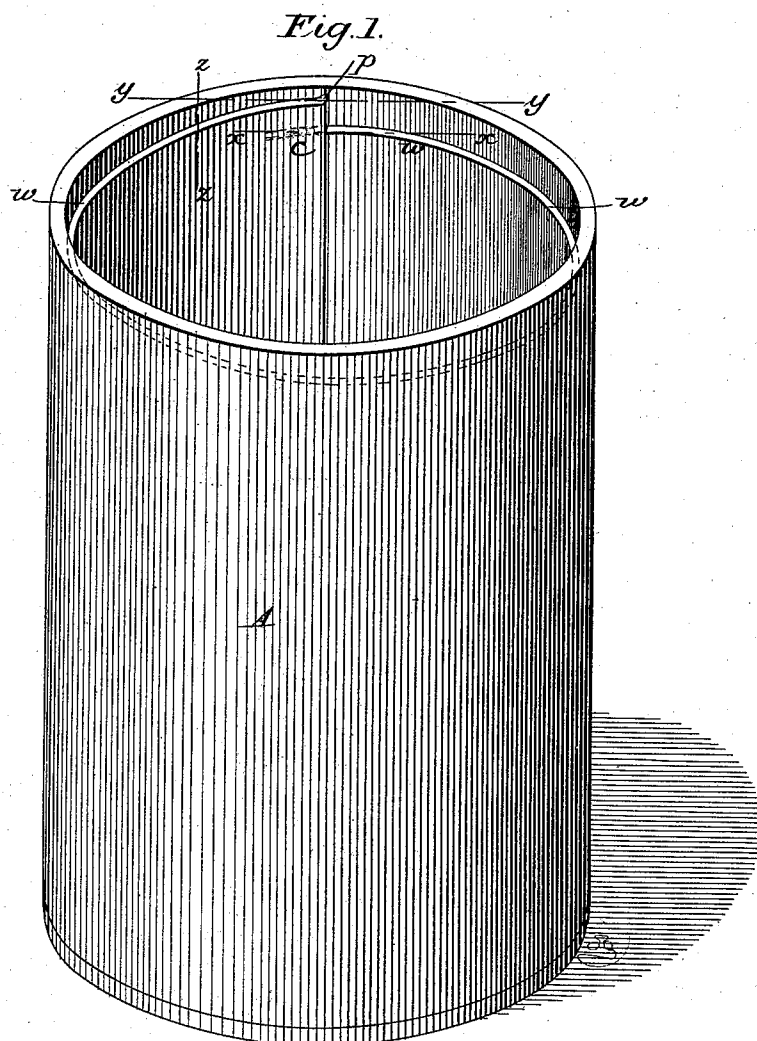
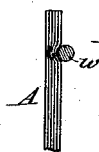


(Model.)

G. F. SPEER.
Paper Vessel.

No. 235,584.

Patented Dec. 14, 1880.



Attest.

Sidney P. Hollingworth
P. R. Stansbury

Inventor.

Garrett F. Speer,
By his Attorneys,
Stansbury & Munro.

UNITED STATES PATENT OFFICE.

GARRETT F. SPEER, OF PHILADELPHIA, PENNSYLVANIA.

PAPER VESSEL.

SPECIFICATION forming part of Letters Patent No. 235,584, dated December 14, 1880.

Application filed November 16, 1880. (Model.)

To all whom it may concern:

Be it known that I, GARRETT F. SPEER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Paper Vessels; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of a paper barrel or cylindrical package having my improved screw-thread applied. Fig. 2 is a horizontal section on line *x x* of Fig. 1. Fig. 3 is a horizontal section on line *y y* of Fig. 1. Fig. 4 is a vertical section on line *z z* of Fig. 1.

The same letter marks the same part in all the figures.

My invention relates to paper barrels or vessels made by winding or molding paper upon a cylindrical mandrel or roller; and it consists in the application to the inner side of one or both ends of such a vessel of a spirally-arranged wire, partially embedded in the paper, but projecting sufficiently to form a screw-thread to enter a spiral groove of corresponding size and pitch in the sides of a head or lid adapted to fit the vessel and receive the thread, the wire being introduced into place during the manufacture of the vessel or after its completion, all as hereinafter more particularly set forth.

In the drawings, A marks the body of the barrel, open at the upper end to show the spiral wire thread *w*, one end of which is in-

serted, by means of a hooked point, *p*, in the wall of the barrel, and the other end, *c*, held by a covering of one or more layers of paper laid upon it during the process of manufacture.

In applying the wire in the manner described I use a machine which will form the subject of another application. The wire is cut into the proper lengths and receives the required "set" as it is laid in place by the machine. I also contemplate, in some cases, placing the wire in the vessel after the body of the vessel is molded or wound by coiling the wire on a mandrel and slipping the coil into a spiral groove formed in the body of the vessel to receive it. I contemplate the use of flat as well as round wire, and in the larger vessels of rattan. Such screw-threads are much stronger and more durable than those molded or cast in the body of the paper vessel, and render such vessel safely applicable to purposes for which it could not, as ordinarily made, be properly used.

What I claim, and desire to secure by Letters Patent, is--

A paper vessel provided on the inside of either end with a projecting spiral thread of metallic wire or equivalent material, applied and embedded in the body of the vessel, substantially in the manner described, and for the purpose set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

GARRETT F. SPEER.

Witnesses:

GEO. F. GRAHAM,
CHAS. F. STANSBURY.