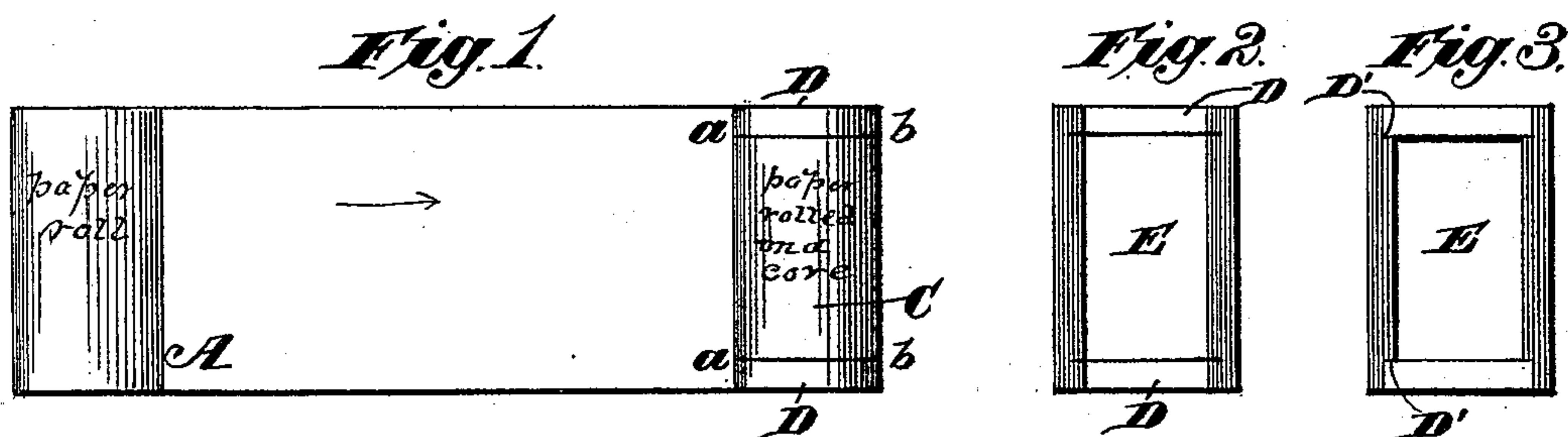
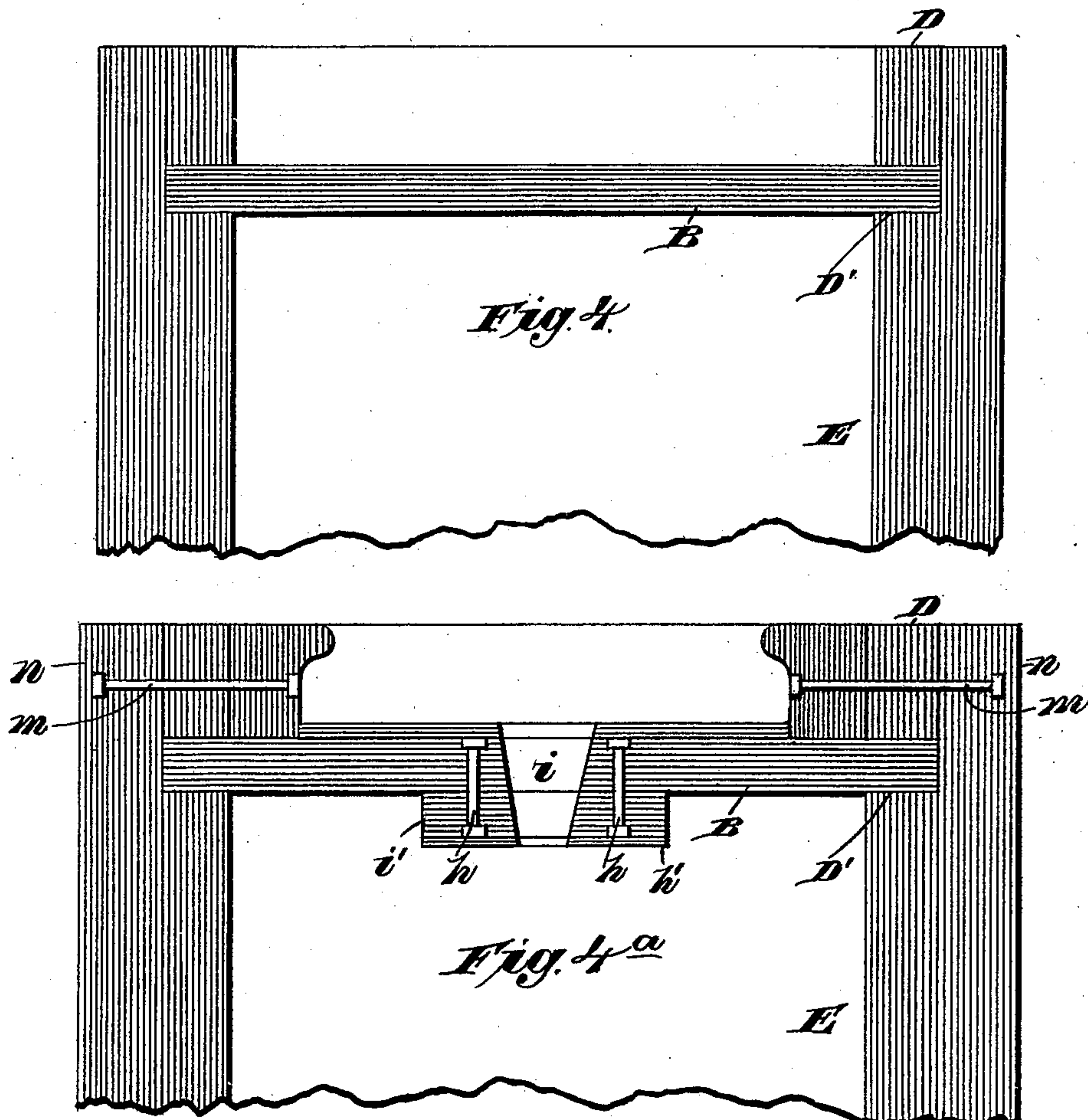


(No Model.)

H. MILCHSACK.  
MANUFACTURE OF CYLINDRICAL AND PRISMATICAL BARRELS  
FROM PAPER.

No. 306,632.

Patented Oct. 14, 1884.



Witnesses.  
Robert Corbett.  
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Inventor.  
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Attys.



# UNITED STATES PATENT OFFICE.

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ASSIGNOR TO FRIEDRICH WESTPHAL, OF SAME PLACE.

MANUFACTURE OF CYLINDRICAL AND PRISMATICAL BARRELS FROM PAPER.

SPECIFICATION forming part of Letters Patent No. 306,632, dated October 14, 1884.

Application filed April 10, 1884. (No model.) Patented in Belgium November 30, 1883, No. 63,389, and December 21, 1883, No. 63,651; in Italy December 31, 1883, XVII, 16,161; XXII, 139, and XVII, 16,256; XX, 226.

*To all whom it may concern:*

Be it known that I, HERMANN MILCHSACK, a subject of the King of Prussia and Emperor of Germany, residing at Bergisch-Gladbach, in the Kingdom of Prussia and German Empire, have invented new and useful Improvements in the Manufacture of Cylindrical and Prismatical Barrels from Paper, of which the following is a specification.

10 This invention relates to the manufacture of air and water tight barrels and other vessels from paper or analogous material, and has for its object to provide novel and efficient means whereby a strong, compact, and durable barrel or vessel is produced which is capable of resisting considerable pressure, and wherein the heads are strongly and firmly secured in place. This I accomplish by the following method—namely, winding or forming  
15 upon a suitable core the body or shell of the vessel of a determined thickness of the paper or other material, which is provided with an adhesive substance, cutting rings or strips at or near the ends of the body, and leaving the  
25 cut rings or strips unprovided with the adhesive substance for the space of one revolution, the paper or other material continuing the winding or forming of the material supplied with an adhesive substance, removing the cut  
30 ring or strip to the depth of the portion free from the adhesive substance, placing heads provided at their contact-points with an adhesive substance into the receiving-openings thus produced, and replacing the rings or strips  
35 provided with an adhesive substance, all as will more fully hereinafter appear in detail, reference being had to the accompanying drawings, in which—

40 Figure 1 is a plan view, representing the winding or forming of the paper from a roll upon a core; Fig. 2, a longitudinal central sectional view of the body or shell of a barrel or vessel after removal from the core; Fig. 3, a similar section, representing the rings at each  
45 end of the barrel or vessel as having been removed to allow the insertion of the heads. Figs. 4 and 4<sup>a</sup> represent vertical central sec-

tions (on an enlarged scale) of ends of completed barrels or vessels.

Similar letters indicate corresponding parts. 50

In the drawings, the letter A indicates a roll of paper or analogous material. From this roll the material is wound onto a core of a cylindrical, prismatic, or other suitable shape and of the proper length. When, by the winding up of the endless strip of material, which is first to be provided with a suitable adhesive substance, a suitably-thick cylinder, C, Fig. 1, has been formed on the core, an incision or cut, *a b*, is made into the cylinder at each end, which incision or cut passes through the entire thickness of material thus far wound up; but the endless paper or material for forming the remainder of the body is not cut off. The winding or forming of the body is now continued until the desired thickness is reached, forming the body E of the barrel or vessel; but the material at each end from the ends of the body up to the incisions *a b* for a single revolution is left unprovided with adhesive material. The body is now formed as shown in section in Fig. 2. The rings or cut portions D D are now taken out, thus forming rabbets D', for supporting or adjusting the heads or ends, as shown in Fig. 3 in section. The heads, after first being covered at their contact-points with adhesive material, and being of a size to fit exactly, are pressed into place so as to form an air-tight closure. Over the heads or ends the rings or cut portions D D are now replaced, as seen in Fig. 4, after first having their outer and under faces covered with adhesive material. 55 60 65 70 75 80

The bottoms or heads of the receptacle may consist, like the body, of a desired number of layers of material united by an adhesive substance. 85

The ends of the finished receptacle may be trimmed as desired, to present a neat appearance. 90

The heads B can be formed by pasting upon one another any desired number of layers of paper or analogous material. If the exit-open-



ing *i*, Fig. 4<sup>a</sup>, is desired in the head B, the latter can be provided with the re-enforcement *i'* about such opening, which re-enforcement may be confined in place by rivets *h*, and after the 5 rivets are secured one or more layers, *h'*, of paper or other material may be attached by cement, so as to cover the rivet-heads.

The rings D can be secured, if desired, by rivets *m*, the outer heads of which may be covered by one or more layers, *n*, of paper cemented to the barrel or vessel after the rivets 10 are secured in place, as in Fig. 4<sup>a</sup>.

With reference to the formation of the body or shell, it should be noted that the paper or 15 other material while being wound or formed is provided on its inner face with adhesive substance; but to facilitate the removal of the rings or strips D the material at its edges for the space of one revolution is left unprovided 20 with adhesive substance to the depth of the inner edges of the rings D, after which the winding is continued with adhesive substance applied to the inner face of the material, as before.

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

The method of forming receptacles from paper or analogous material by forming or winding upon a suitable core the body or sides of the receptacle of a certain thickness of the 30 material provided with an adhesive substance, cutting rings or strips at or near the ends of the body, and leaving the cut strips or rings unprovided with the adhesive substance for the space of one revolution of the material, 35 continuing the winding or forming of the material supplied with an adhesive substance, removing the cut rings or strips to the depth of the portion free from the adhesive substance, placing bottoms or heads, provided at their 40 contact-points with an adhesive substance, into the receiving-openings thus formed, and replacing the rings or strips provided with an adhesive substance, substantially as set forth.

In testimony whereof I have hereunto set 45 my hand and seal in the presence of subscribing witnesses.

HERMANN MILCHASCK. [L. S.]

Witnesses:

SAMUEL SPACKMAN,  
WILHELM KAYSER,  
AUG. SCHUMACHER.