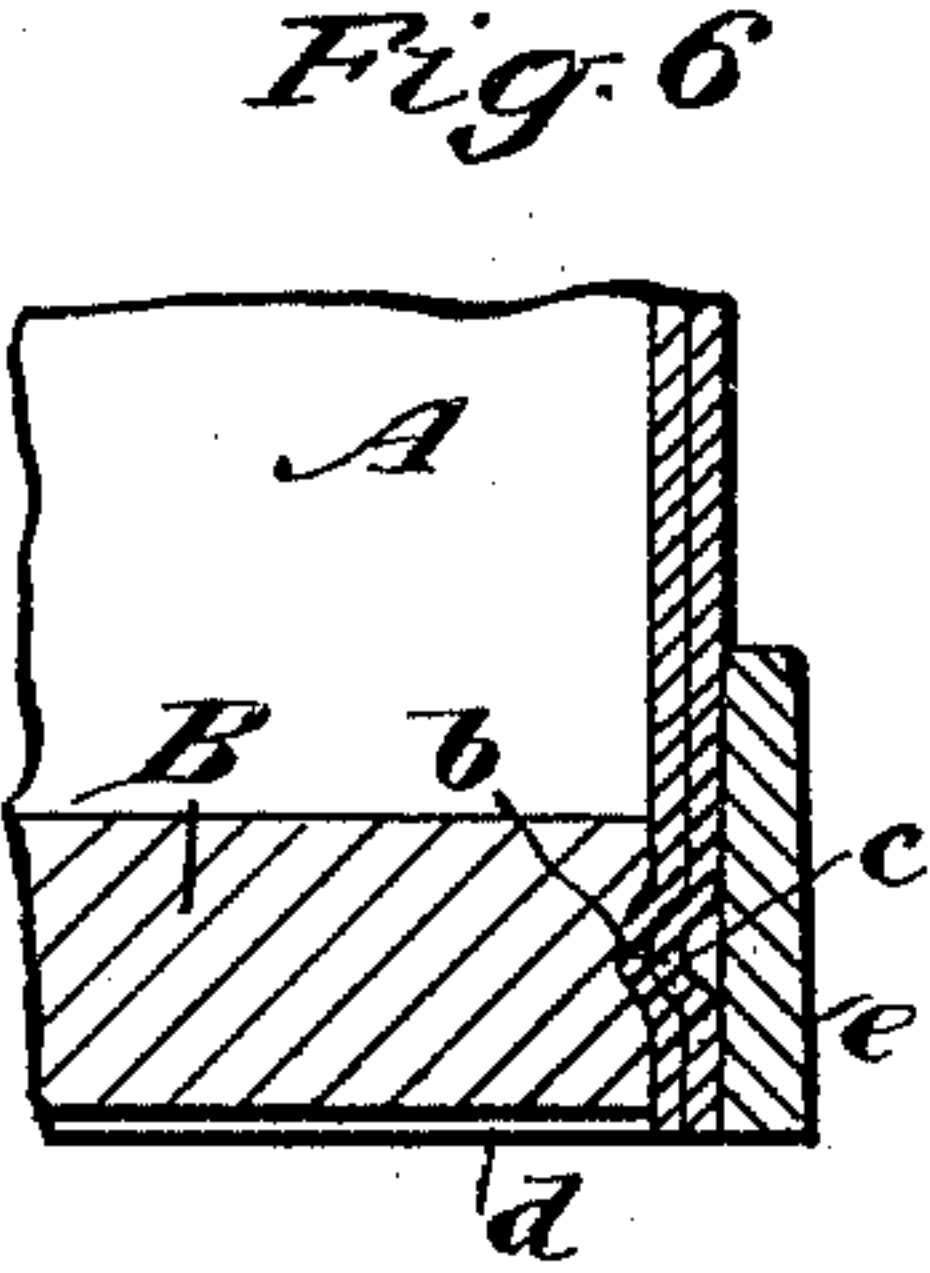
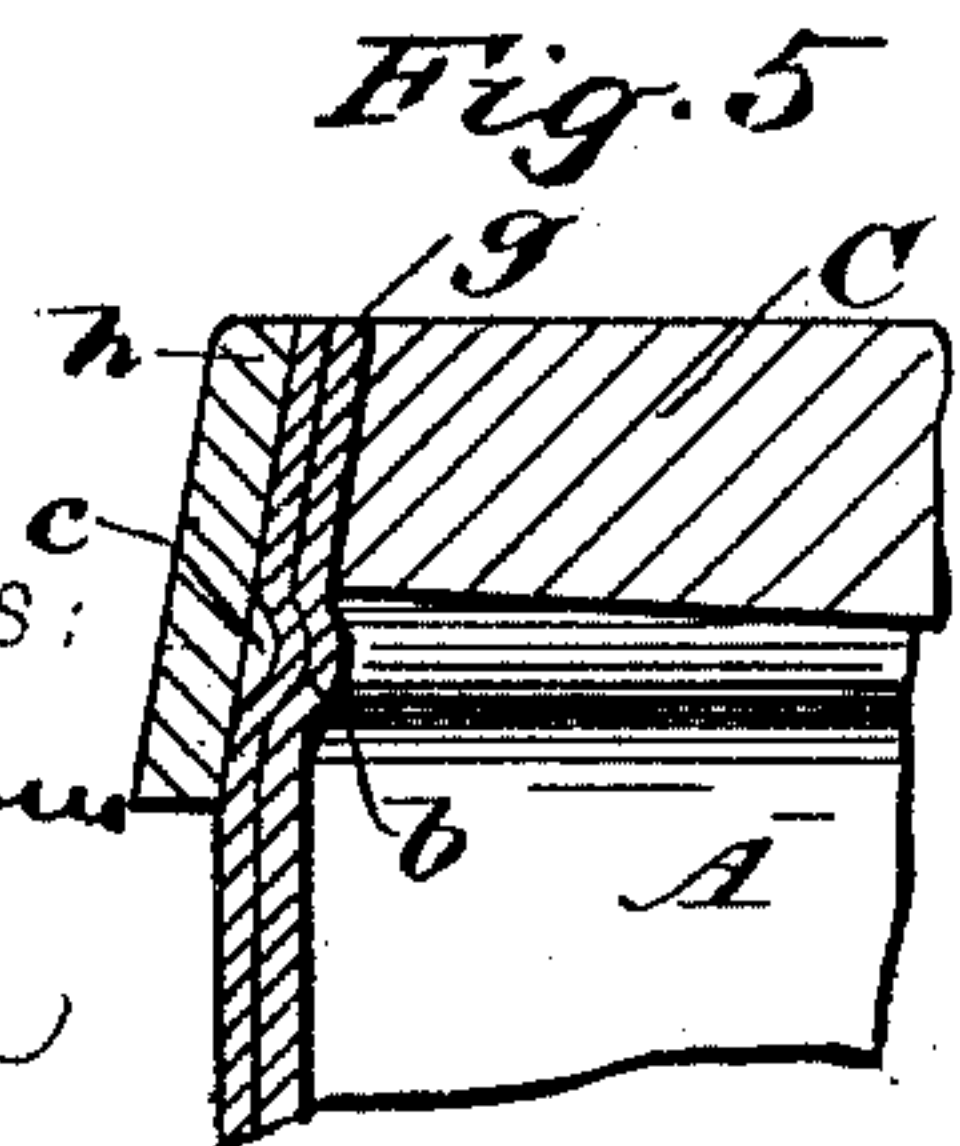
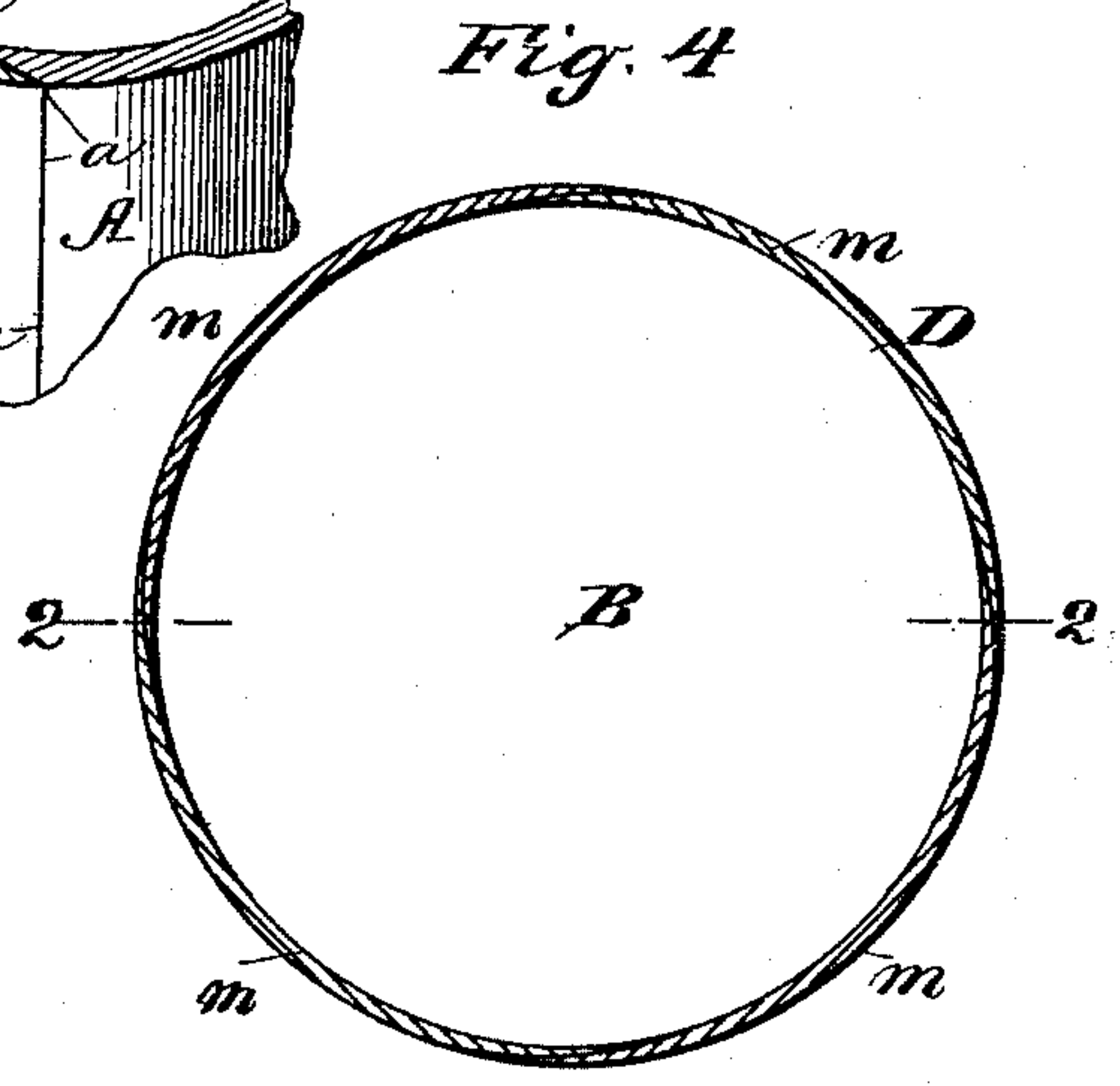
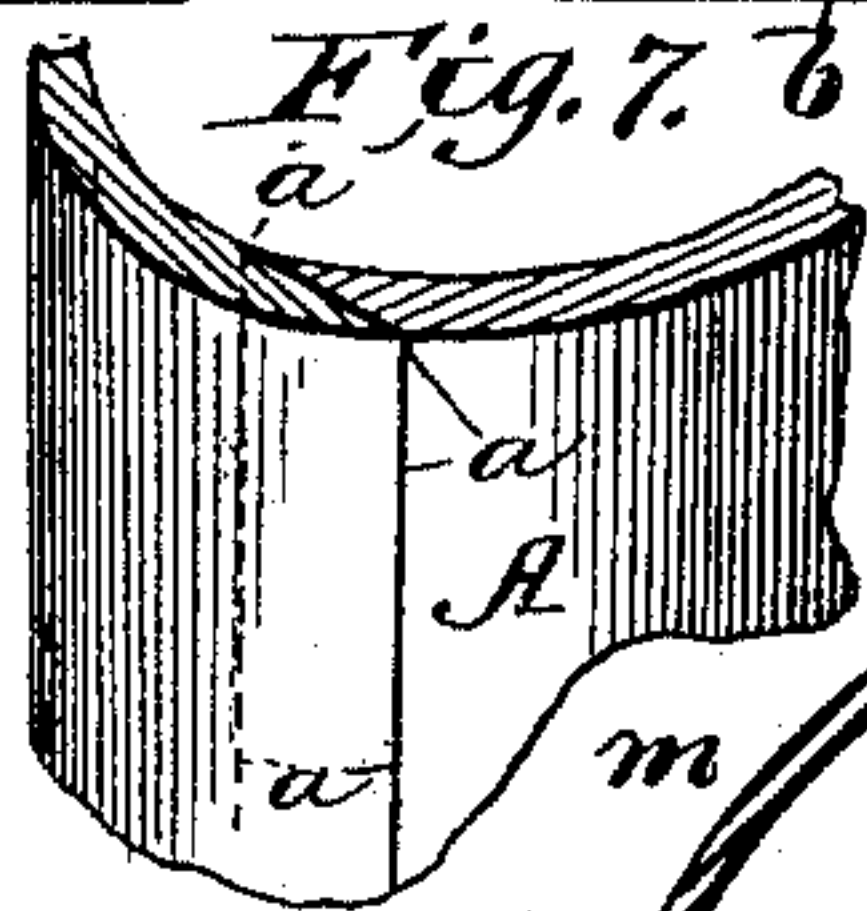
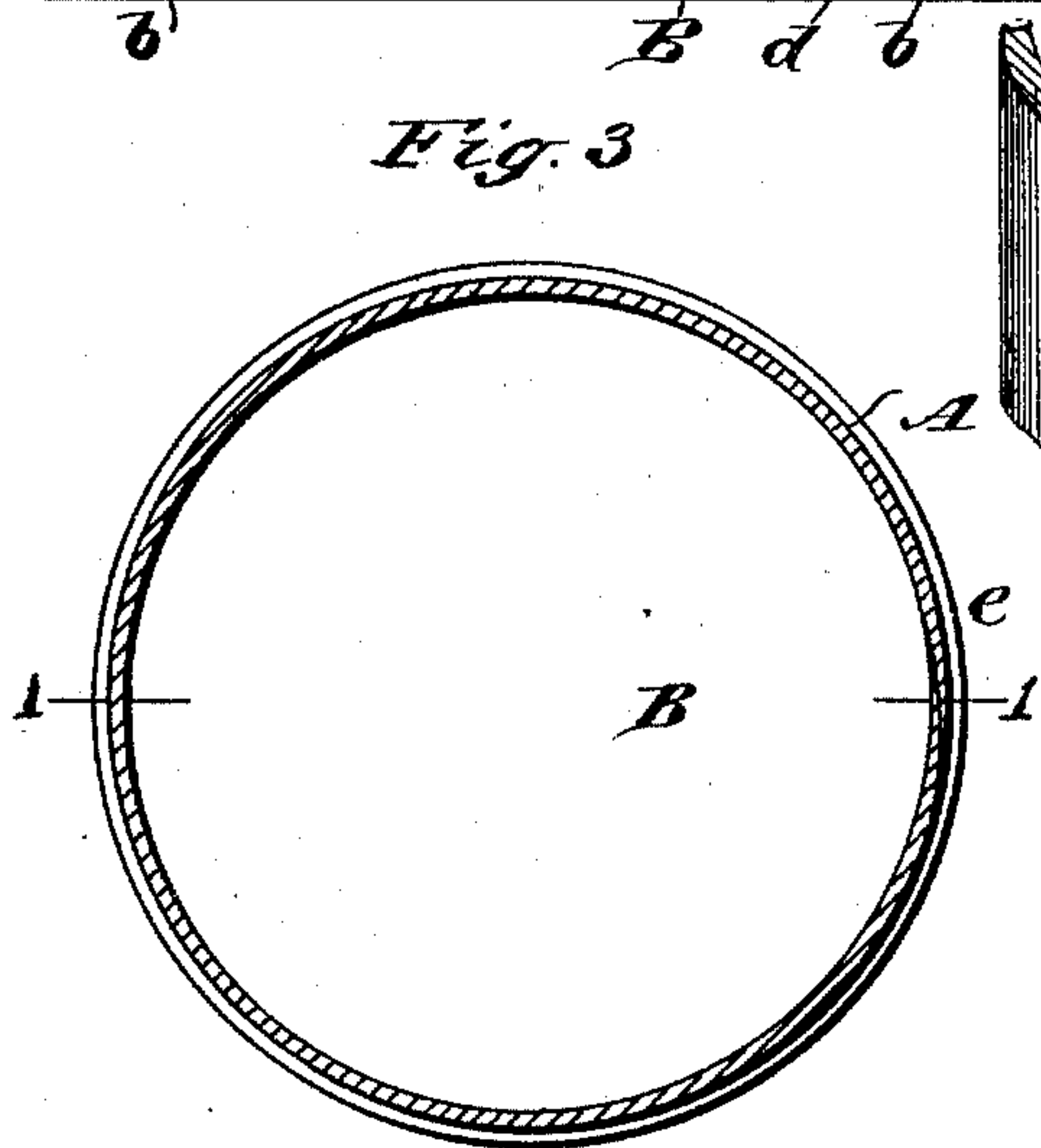
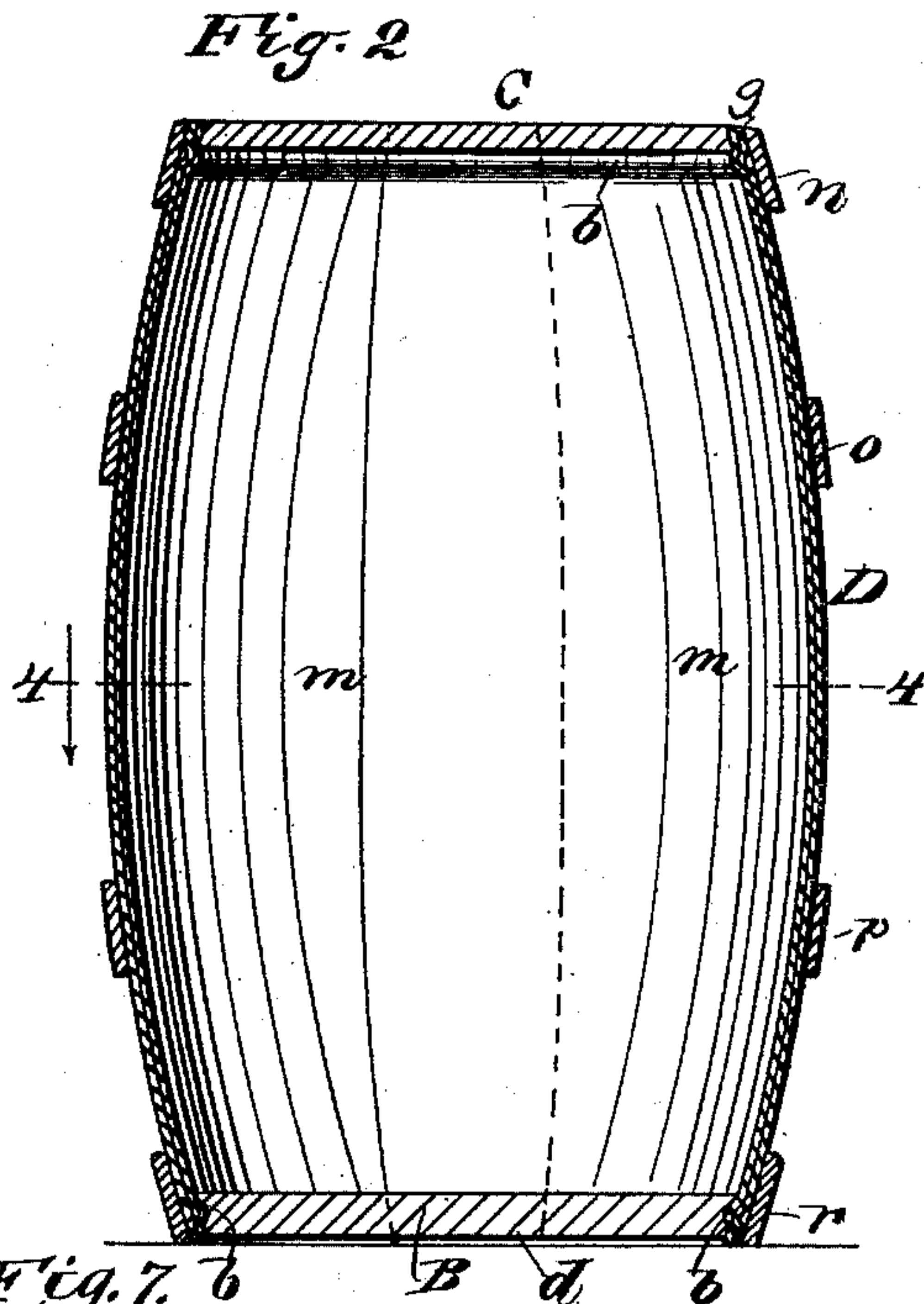
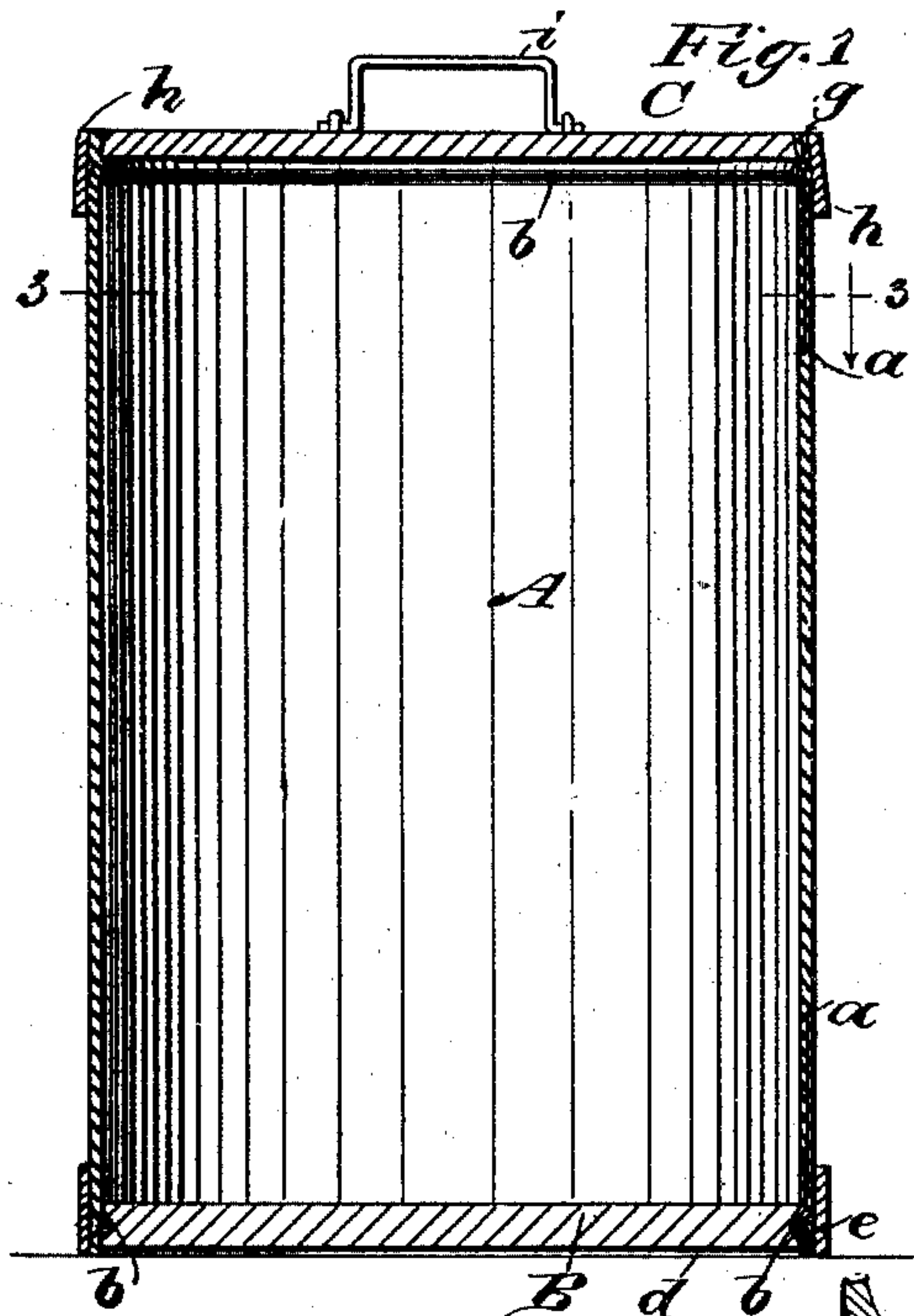


(No Model.)

E. COLE.
BARREL.

No. 482,675.

Patented Sept. 13, 1892.



WITNESSES:
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UNITED STATES PATENT OFFICE.

EMERSON COLE, OF BROOKLYN, NEW YORK.

BARREL.

SPECIFICATION forming part of Letters Patent No. 482,675, dated September 13, 1892.

Application filed January 18, 1892. Serial No. 418,458. (No model.)

To all whom it may concern:

Be it known that I, EMERSON COLE, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Barrels, of which the following is a full, clear, and exact description.

This invention relates to an improvement in barrels and similar packing-cases, the object being to produce a device of the character indicated from pasteboard or thin wood sheets and suitable hoops which will be light, strong, durable, and inexpensive, a further object being to provide a simple and substantial support and connection for the heads of the barrel or similar packing-case with the body of the same which will strengthen the structure at points of junction and permit light material to be used in its manufacture.

To these ends my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal axial section of a packing-case having a body that is cylindrical and embodying the improvements, taken on the line 1 1 in Fig. 3. Fig. 2 is a longitudinal axial section of the improvement as applied to a vessel having a bilged body and taken on the line 2 2 in Fig. 4. Fig. 3 is a transverse section on the line 3 3 in Fig. 1. Fig. 4 is a transverse section on the line 4 4 of Fig. 2. Fig. 5 is an enlarged broken and sectional view of an upper end portion of the device shown in Fig. 1. Fig. 6 is an enlarged broken sectional view of a lower end portion of the device shown in Fig. 1; and Fig. 7 is a broken perspective view of the upper portion of a cylindrical barrel or case, showing a detail of construction, the top edge being in section taken on the line 3 3 in Fig. 1.

The essential features of the improvement consist in the novel method and means provided for a removable attachment of the heads of the packing case or barrel to the cylindrical or bilged body, whereby strength and lightness are secured, and also in the peculiar construction of the body of the packing case or barrel, whereby a variation in

diameter at the ends is afforded by lap-joints that remain tight if the diameter is altered.

As shown in Fig. 1, the shell or body A is cylindrical and made of a thin sheet of material, which may be of wood, metal, or pasteboard. For packing-cases that are not large, and that it is essential should be produced cheaply, pasteboard is preferably used in the formation of the body. From the points *a*, that may be any preferred distance from the ends of the body A, the material forming the latter is adapted to overlap at the junctional edges, which from said points are left unfastened, and the material tapered to join and produce a smooth exterior surface. Near the edge of the body A at each end an inwardly-projecting bead *b* is formed by indenting the material of the body with suitable mechanism, whereby a corresponding groove is produced on the exterior, as indicated at *c* in Figs. 5 and 6. The bottom head B is preferably made of wood, that is in disk form, and of an equal diameter with the interior of cylindrical body A, so that it will fit within the same closely, and to adapt said head for insertion its peripheral edge is grooved of a proper depth and form to receive the bead *b*, which will enter the groove if the body A is expanded at the end. When the head B is introduced, the lapped joint at the lower end of the body A will resume its normal form, and, as shown at *d* in Fig. 6, the head will be held a short distance from the terminal edge or chine of the barrel. There is a bottom hoop *e* provided, which is of proper relative diameter to fit closely upon the lower portion of the body A, the inner wall of said hoop being flared from the normally lower edge upwardly, so as to cause the hoop to start freely when applied to the body of the receptacle and contract the material of the latter slightly as it is driven thereon, which will result in sealing the joint between the lapped portions of the body and firmly securing the head B in place. The upper head C of the cylindrical case or barrel A is made slightly conical on the periphery, the lower surface being of greater area than the upper face and the lower edge of such relative diameter will cause it to fit against the inner surface of the chine *g* at the point where the lid en-

gages with the inwardly-projecting bead *b*. The upper hoop *h* is contracted in diameter from the lower edge upwardly, so as to cause the material of the body *A*, which is engaged by the hoop when it is driven thereon, to the correspondingly-tapered or rendered coniform, the contraction of the chine *g*, as stated, hugging its inner face closely against the tapered periphery of the head *C* and sealing the crevices between the overlapping joint portion of the body in an obvious manner.

If the device shown in Fig. 1 is to be used for a portable receptacle, there may be a handle *i* secured upon the head *C*, of the ordinary folding type, so as to facilitate carriage of the closed packing-case and also to aid in the removal of the head when necessary. To effect the latter it is only necessary to force the hoop *h* from the chine *g*, which will release the lid or head and allow the body material to expand sufficiently for the removal of the head.

In Figs. 2 and 4 the improvement is shown applied to a vessel in barrel form, which is by preference made of wood, having four staves *m*, that are chamfered on the edges, so as to lap and produce a smooth joint on each side of the staves, as indicated in Fig. 4. The staves *m*, composing the barrel-body *D*, are suitably formed to produce a bilge on the barrel when these are assembled and secured together by the hoops *n o p r*, the upper hoop *n* holding the top head *C* in the chine upon the bead *b* and the lower hoop *r* securing the lower head *B* in place, as shown in Fig. 2, the formation of the upper and lower heads and the beads, as well as the manner of supporting the heads by said beads, being the same as has been described with reference to the cylindrical bar-

rel or packing-case shown in Figs. 1, 3, 5, and 6. It is claimed for this improved method of construction that the body of the receptacle, whether made cylindrical or in staves and bilged, may be constructed of cheap material and all the joints be made tight and strong, the entire structure being substantial, as well as neat and shapely.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a shell or body which is provided with a longitudinal slit near the end and having the edges of said slit chamfered and overlapping and an inwardly-extending head thereon near the end edge of the body, of a head that is disk-like and coniform on the edge seated on the interior bead and a hoop adapted to compress the end wall of the body against the edge of the head and seal the overlapping joints of the body, substantially as described.

2. The combination, with a body or shell which has a longitudinal slit near each end extending through the ends, the edges of which slits are chamfered and overlapping, and an inwardly-projecting bead at each end of the body, of a coniform top head seated on an adjacent bead, a peripherally-grooved lower head interlocking with an adjacent bead, and a hoop at each end adapted to compress the body against the edges of the heads and close the overlapping edges of the body-slits, substantially as described.

EMERSON COLE.

Witnesses:

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