

No. 844,369.

PATENTED FEB. 19, 1907.

O. KOSZTOVITS.

METHOD OF INSULATING THE INTERIOR SIDES OF HOLLOW BODIES.

APPLICATION FILED MAY 25, 1906.

Fig. 1

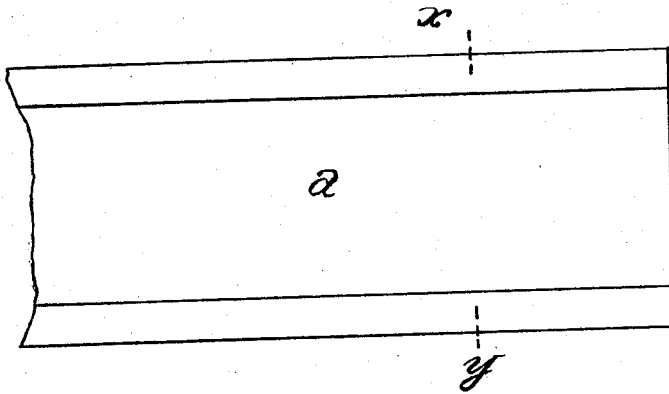


Fig. 2

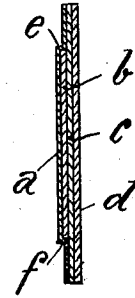


Fig. 3

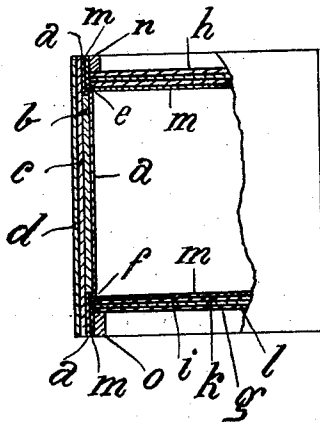
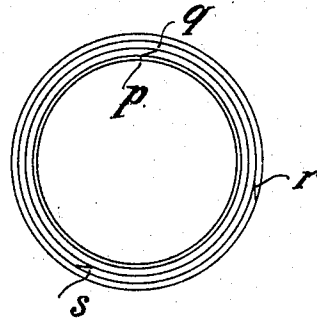


Fig. 4



Witnesses:

H. Fleischer

John U. Seifert.

Inventor:

Ogneslaw Kosztovits.

By his Attorney,

F. H. Richards.

UNITED STATES PATENT OFFICE.

OGNESLAW KOSZTOVITS, OF KLEIN-RIBATZKOL, NEAR ST. PETERSBURG,
RUSSIA.

METHOD OF INSULATING THE INTERIOR SIDES OF HOLLOW BODIES.

No. 844,369.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed May 25, 1906. Serial No. 318,637.

To all whom it may concern:

Be it known that I, OGNESLAW KOSZTOVITS, engineer, a subject of the Kingdom of Hungary, residing in Klein-Ribatzkol, near St. Petersburg, Russia, have invented certain new and useful Improvements in a Method of Insulating the Interior Sides of Hollow Bodies, of which the following is a specification.

The present invention relates to a new method of lining the interior sides, walls, or the like of hollow bodies, which are formed in a known manner of bending layers of wood glued together, the fibers of the layers crossing one another.

The purpose of lining the hollow bodies is to protect the wood against the action of the contents of the hollow bodies. As lining material thin sheets of any optional metal, galvanized or enameled paper, textile material prepared in the same or similar manner, linoleum, or any other suitable material may be employed.

Heretofore the hollow body of wood has been made as an independent body in a well-known manner on a bending-machine, the finished wood vessel being lined with an independent body made of sheet metal, &c. Even by the neatest workmanship it was impossible to fit or adapt the lining closely on all sides of the wood. The lining must therefore, if it is to be durable, be made in a greater thickness of material, thus making the lined cask exceedingly heavy. Such lined bodies have another decided defect, in that the different materials of which they are composed, being only in slight relationship to one another, undergo movements due to said materials quite independently of one another. Therefore loose places appear and spread at places of the most difference, conformably to the character of both bodies, and are naturally exceedingly difficult to discover and to close. All these defects are only perfectly avoided by firmly gluing the lining material to the flat plate of wood before bending on the beading-machine. This combined plate being as one piece is then bent on the bending-machine in the form of a hollow body. The lining side of the plate forms the interior of the hollow body.

The plate of wood consists of one or more layers, the fibers of one layer crossing those of another layer. If it is desired to have a

thicker wall for the vessel, a second plate of wood, consisting of one or more layers of wood, is bent around the first plate and glued with the same and in such manner so that the union of the second plate is displaced with relation to the union of the first plate. The connection of the lining material with the wood layers, which on account of the gluing is a very intimate one, becomes exceedingly perfect in being bent through the pressure of the different materials on one another which thus takes place. The finished vessel thus appears as being made of one piece. The one material strengthens the firmness of the other, and the disturbing influence of differences in temperature is thereby greatly reduced.

In the drawings accompanying and forming a part of this specification is illustrated one form of construction as showing an example of making a cask in accordance with the present invention, and in which—

Figure 1 is a plan of a composite sheet for forming part of a vessel. Fig. 2 is a transverse section on the line xy of Fig. 1. Fig. 3 is a plan of the finished vessel, partly in section; and Fig. 4 is an end elevation of the finished vessel.

Figs. 1 and 2 show a plan and cross-section of the flat sheets of wood b , c , and d , glued to the thin sheet of metal a , by bending of which the cask is to be made. The sheet of wood b is in the present instance narrower than the other sheets, so that the sheet metal is bent up and down at two right angles, as at e and f . As will be seen from Fig. 3, these bends e and f form a suitable support for mounting the end members g and h in the finished bent cask. These members g and h also consist of several layers of wood i , k , and l , glued together, so that the fibers of one layer cross those of another layer, and around the cylindrical part and on the inside of which the sheet-metal covering m is attached. The cylindrical part of the sheet-metal covering m lies against the sheet metal a , and both can be soldered to one another, forming an airtight joint. As is usually done, more protective rings n and o can be fastened at the inner surface of the periphery of the cask.

It will be seen from the cross-section of the cask in Fig. 4 how the unions of the lining and of the sheets of wood, glued on one another, are preferably distributed. The union

p of the sheet metal is soldered or folded up. Over that is the union *q* of the sheet of wood, affixed to the sheet-metal casing. The unions *r* and *s* of the other sheets of wood are, however, arranged displaced from union *q* from one another.

While the construction of parts described in the foregoing specification are preferred, it is to be understood that numerous changes of construction and operation may be made without departing from the spirit and scope of this invention, and it is to be understood that the same is not limited by the positive terms employed in connection with the description excepting such as the state of the art may require.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A method of lining the interior of hollow bodies, bent of one or more layers of wood, the fibers of which cross one another, consisting in firmly gluing the lining material to a flat plate of wood and as one piece bending the same on the bending-machine to a hollow body.

2. A method of lining the interior of hollow bodies, bent of one or more layers of wood, the fibers of which cross one another, consisting in firmly gluing and lining material onto a flat plate of wood, and as one piece bending the same on the bending-machine to a hollow body, the lining material adapted to form the inside surface of said hollow body.

3. A method of lining the interior of hollow

bodies, bent of one or more layers of wood, the fibers of which cross one another, consisting in firmly gluing the lining material onto a flat plate of wood, and as one piece bending the same on the bending-machine to a hollow body, the lining material adapted to form the inside surface of said hollow body and composed of sheets of impervious material.

4. The method of forming a hollow body consisting of gluing together a layer of wood and a layer of sheet metal, then bending such secured layers into the form of a cylinder, then putting in end members, and joining the longitudinal meeting edges of the metal lining by soldering.

5. The method of forming a hollow body consisting of gluing together a layer of wood and a layer of sheet metal, then bending such secured layers into the form of a cylinder, joining the longitudinal meeting edges of the metal lining by soldering, and then putting in end members composed of a layer of wood and a layer of sheet metal glued together and uniting the metal lining of such end members to the metal lining of the hollow body by soldering.

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

OGNESLAW KOSZTOVITS.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.