No. 607,127. Patented July 12, 1898.

C. H. & A. T. OAKLEY.

FILLET.

(Application filed July 30, 1897.)

(No Model.)

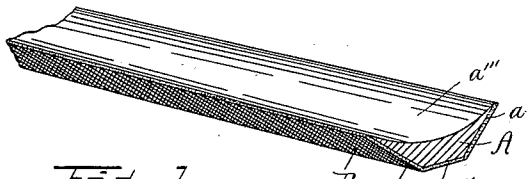


Fig. 1

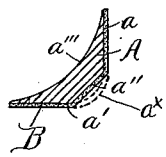


Fig. 2

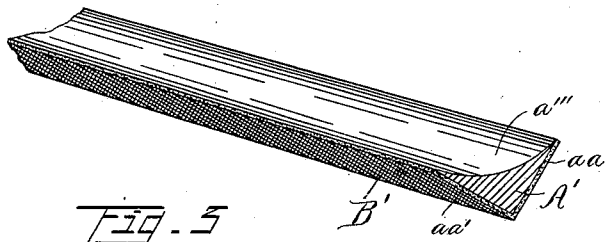


Fig. 3

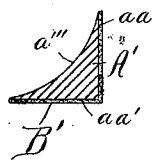


Fig. 4

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By J. A. Osborne & Co.,
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UNITED STATES PATENT OFFICE.

CLIFFORD H. OAKLEY AND ALFRED T. OAKLEY, OF CLEVELAND, OHIO.

FILLET.

SPECIFICATION forming part of Letters Patent No. 607,127, dated July 12, 1898.

Application filed July 30, 1897. Serial No. 646,451. (No model.)

To all whom it may concern:

Be it known that we, CLIFFORD H. OAKLEY and ALFRED T. OAKLEY, citizens of the United States, residing at Cleveland, in the county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Fillets, of which the following, with the accompanying drawings, is a full, clear, and an exact specification.

Our invention relates to that class of fillets that are used to fill up the angles in patterns for castings to strengthen them.

The fillets heretofore used have been made of wax, wood, leather, or lead. The first of these has never been produced as a marketable commodity. Pattern-makers have used wax in the form of sticks which have been pressed into the angles of patterns, the sticks of wax having no resemblance to the completed fillet. Wood fillets have been used in straight pieces, it being impracticable to provide wood fillets for curved angles. In filling curved angles with wood the wood has been slowly, tediously, and expensively carved by hand and fitted to place. Leather fillets are open to many serious objections, among such objections being the difficulty of making them of uniform quality, as the hides from which they are cut vary in thickness and in texture. They cannot be perfectly formed in cross-sections, particularly in the smaller sizes. The side opposite the sides that are in contact with the pattern is flat instead of curved, being bent when being placed. They do not approach the shape they have in cross-section when applied, and they have to be soaked in water before being applied. The lead fillets have to be hammered into place, a process that is slow and tedious, and the comparative cost of lead and the time required to place it in a pattern make its expensive. Further, the wood and the leather fillets cannot be placed readily in curves or short radii, and none of the fillets, except wax, can be placed and a smooth surface made in compound curves and in short and tortuous angles.

The object of our invention is to provide a flexible elastic filling that can be quickly and readily applied to any angle and that will readily adapt itself perfectly to curves either of long or short radii, as the case may require, that will always present a smooth and uniform surface on its exposed side when in place when applied, that is of uniform quality, that can be made of any desired shape in cross-section, and that is inexpensive.

Reference is here made to the claims for a detailed statement of our invention.

In the drawings, Figure 1 is a perspective view of a broken section of our improved fillet of the preferred form, and Fig. 2 is a cross-section thereof. Fig. 3 is a perspective view of a broken section of our improved fillet of a modified form, and Fig. 4 is a cross-section thereof.

Similar characters of reference designate like parts throughout the specification and the drawings.

Referring to the improved form of our fillet, (illustrated by Figs. 1 and 2,) A is the body of a fillet, that must be made of any material that has the qualities of elasticity and flexibility combined, and we preferably use rubber for this purpose. These fillets are molded into strips of any desired length and are wound upon spools, (not shown,) in which condition they are ready for the market. When being used, the fillet is unwound from the spool until the desired length is had for a part of the pattern, when the fillet is cut off and the severed piece put into place on the pattern. The preferred form of fillets has two flat sides a and a', that are in planes that approach each other and would form an angle if extended to a meeting-point and a surface a'' between said two flat sides. These three surfaces described are the surfaces that are to be placed into contact with a pattern when the fillet is placed in the angles of the pattern and secured thereto. The side of the fillet a''' opposite the contact-faces a, a', and a'' is concave, as illustrated. It is not necessary that the three sides or surfaces $a\,a'\,a''$ shall be planes; but the surfaces a and a' are preferably planes, while the surface a'' may be either a plane, as illustrated, or a curved surface, as shown by dotted lines $a^{\times}$ in Fig. 2, there being no preference as to the shape of the surface a''. The contact-faces of the fillet a, a', and a'' are covered with cloth or other textile or fibrous material B to produce a surface that will take glue well and secure the fillet to the pattern to which it

may be attached. The facing of the fillet described is vulcanized to the rubber, and the rubber is formed in molds. For the purpose of better illustrating the construction of the fillet the facing is exaggerated in the drawings. In the fillets that are made for use the covering presents simply a cloth-faced surface, the covering becoming so nearly an integral part of the article of manufacture that it is hardly distinguished from the rubber.

In the modified form of fillet illustrated by Figs. 3 and 4 the body of the fillet A′ is of the form of a right angle on the contact sides of the fillet, while the opposite side thereto is curved, as in the preferred form. The two contact sides *a a* and *a a′* meet and form an angle, as shown. This modified form of fillet also has a facing B′, that is in all respects like the facing B of the preferred form.

The preferred form of fillet provides for making a perfect contact in the angles of a pattern in which glue or other foreign substances may form an obstruction to prevent perfect contact where fillets of the form illustrated by Figs. 3 and 4 are used.

By reason of the combined qualities of flexibility and elasticity of our improved article of manufacture such fillets are easily and quickly applied to any angle; they readily adapt themselves to curves of either long or short radius; they can be made of uniform quality; they can be of the desired shape of cross-section in all sizes; they can be easily shaped to fit into any angle, however acute or tortuous, and, as compared with other fillets, they are inexpensive.

Our improved fillet provided with facing of the character described insures a perfect adhesion of the fillet to a pattern when glued thereto, and the curved outer surface of flexible and elastic material facilitates placing the fillet in position and leaving a smooth exposed surface.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A fillet of flexible, elastic material having a concave face and the sides opposite thereto covered with a facing of fibrous or textile material, substantially as described.

2. As a new article of manufacture, a fillet of molded rubber, formed with a curved side, and an angular side faced with fabric, substantially as set forth.

3. As a new article of manufacture, a fillet of molded rubber formed in a continuous length and having a curved side, and two or more angular sides, the latter sides being faced with fabric, substantially as set forth.

In testimony whereof we affix our signatures, in the presence of two witnesses, this 27th day of July, 1897.

CLIFFORD H. OAKLEY.
ALFRED T. OAKLEY.

Witnesses:
J. A. OSBORNE,
L. F. GRISWOLD.