

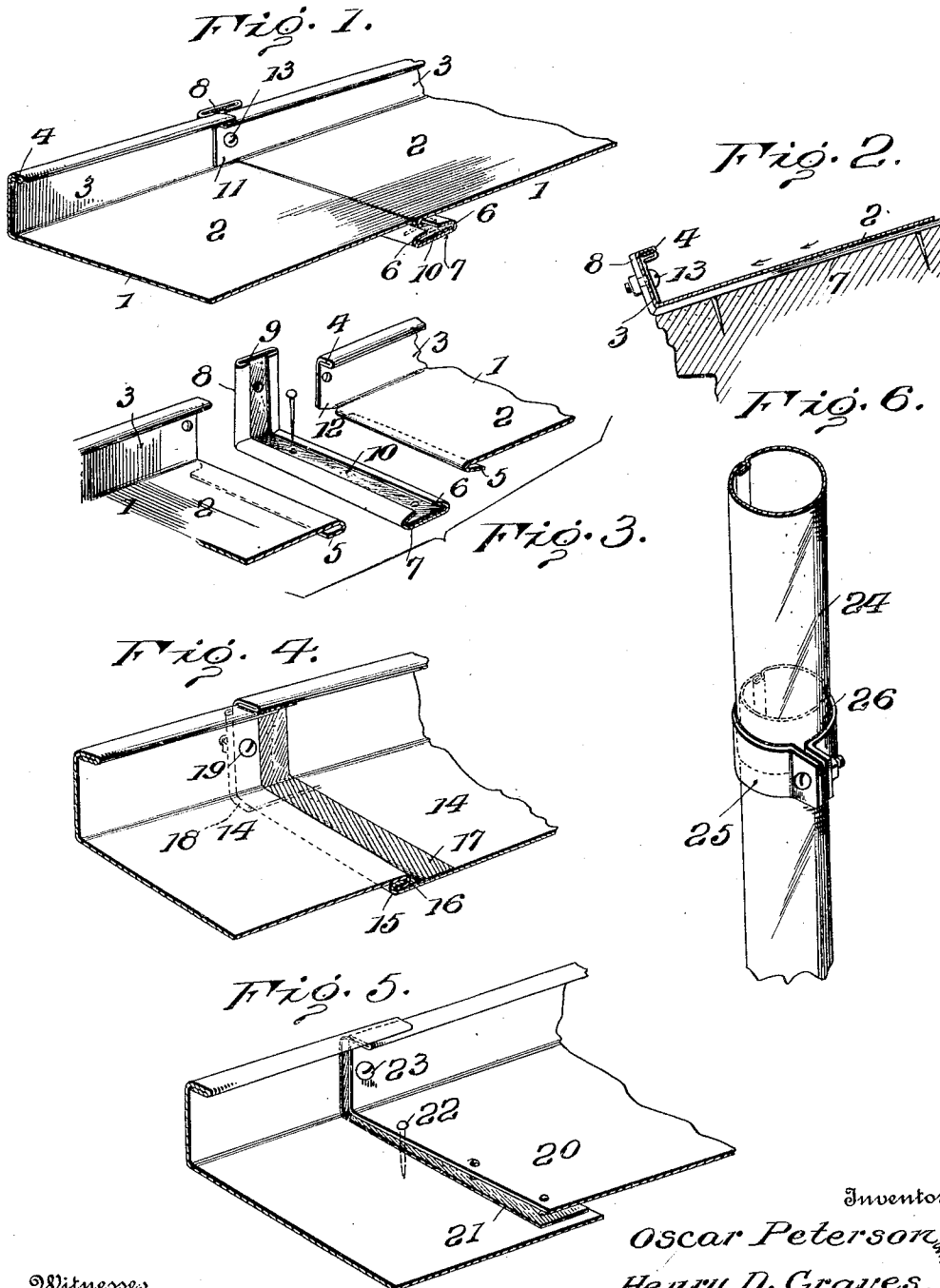
O. PETERSON & H. D. GRAVES.

ROOF GUTTER.

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1,126,854.

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Witnesses
for Invention
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OSCAR PETERSON AND HENRY D. GRAVES, OF LINCOLN, KANSAS.

ROOF-GUTTER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, OSCAR PETERSON and HENRY D. GRAVES, citizens of the United States, residing at Lincoln, in the county of Lincoln and State of Kansas, have invented certain new and useful Improvements in Roof-Gutters, of which the following is a specification.

This invention relates to roof gutters and has for its object the provision of means whereby the several gutter sections may be connected so as to provide a water-tight joint, and a further object of the invention is to provide a gutter which will have a neat appearance when in position upon the roof and may be secured upon the roof by unskilled labor.

Other incidental objects of the invention will appear as the description of the same proceeds. The invention is illustrated in the accompanying drawings and consists in certain novel features which will be first fully described and then more particularly pointed out in the claims following the description.

In the drawings Figure 1 is a perspective view showing one embodiment of the invention; Fig. 2 is a transverse section of the same in position upon a roof; Fig. 3 is a detail perspective view showing the parts of the joint separated but in their proper relative positions; Fig. 4 is a perspective view showing a different form of joint; Fig. 5 is a view of another modification, and Fig. 6 shows the invention applied to a down-spout.

In carrying out our invention we employ gutter sections 1 which may be of any desired length and are made of sheet metal, as usual. The apron 2 of each gutter section is placed upon the roof boards, as indicated in Fig. 2, while the back is turned up from the outer edge of the apron, as shown at 3, so as to rise over the edge of the roof and incline slightly outwardly therefrom, the upper edge of the back being turned inwardly and doubled upon itself to provide a bead 4. As the bead 4 is turned inwardly it will aid in preventing the water flowing over the edge of the back when the gutter is applied to a steep roof, or in the event of a heavy flow, and, moreover, the back will present a smooth outer face so that the finished gutter will present a slightly appearance. It will also be readily noted that as the fold of the back upon the apron and

the fold of the bead upon the back are in the same general direction the gutter may be formed more expeditiously and more cheaply than gutters of the usual construction.

In the form of the invention illustrated in Figs. 1, 2 and 3, the meeting ends of adjacent gutter sections are provided with inwardly turned lips 5 on their under sides, which are adapted to engage corresponding lips 6 on the edges of a connector 7 so that the gutter sections will be held in their proper relative positions without the use of solder or similar connecting mediums which are liable to become loose under the contraction and expansion of the metal. The connector 7 has its outer end turned upwardly, as shown at 8, and the edges of this upturned portion are provided with inwardly extending lips 9 corresponding with the lips of the main portion of the connector, as shown clearly in Fig. 3. A filling or packing 10 of any water-proof fabric is placed upon the connector and held thereon by the said lips 6 and 9 so that leakage through the joint will be prevented. The meeting edges of the backs of the gutter sections are constructed to overlap, as shown at 11 in Fig. 1, and to attain this result one of the gutter sections is provided with a tongue 12 projecting beyond its edge so as to overlap the meeting edge of the back of the adjacent gutter section.

In assembling the parts, the gutter sections are secured directly to the roof-boards in the usual manner and the connectors 7 are nailed directly to the roof-boards immediately below the meeting ends of the gutter sections. The said ends of the sections are then engaged with the connector, as just described, after which the lips or retaining cleats are hammered down flat so that a smooth surface for the flow of the water will be presented. When the gutter sections are brought into position above the connector the ends of the backs will overlap, as shown in Fig. 1, and a bolt 13 is then inserted through the said overlapping portions and the upstanding portion 8 of the connector so as to firmly secure all the parts together. The upstanding portion 8 of the connector will reinforce the back at the joint, as clearly shown in Fig. 2, so that separation of the parts will not take place and the shape of the gutter will remain constant.

In Fig. 4 we have shown an application of the invention in which the main portion of the connector 7 is dispensed with. In this form of the invention the gutter sections 14 are directly engaged with each other at their meeting ends by forming upon one of the sections an upturned bead or cleat 15 which is engaged by a corresponding downturned lip, bead or cleat 16 on the adjacent section, and the water-proof fabric or packing 17 is secured directly upon the lower section so that when the said lips are interengaged the fabric will extend throughout the joint. The backs of the gutter sections will overlap in this form of the invention and a short brace, indicated at 18 in Fig. 4, may be placed against the outer faces of the backs and secured by a bolt 19 inserted through the overlapping portions of the backs and the said brace.

In Fig. 5 is shown a form of the invention in which the beads or lips upon the meeting ends of the gutter sections are dispensed with. In this form the gutter sections 20 have flat edges which will overlap with the water-proof fabric or fiber 21 between them, and the fastening nails 22 are driven directly through the said overlapping ends into the roof-boards. A bolt 23 is inserted through the backs of the gutter sections so as to secure the same together, and the backing 21 is extended between the overlapping portions of the backs, as shown and as will be readily understood.

In Fig. 6 we have shown a downspout or pipe 24 which is composed of sections having their meeting ends overlapped or telescoped together, and around said meeting ends or joint is placed a clamping ring or band 25 having the packing 26 secured to its inner surface in any desired manner so as to prevent leakage through the joint.

It will be readily noted from the foregoing description taken in connection with the accompanying drawings that we have provided a very simple construction whereby gutter sections may be readily assembled and placed in position upon a roof and, when in place, will have a slightly appearance. The packing between the parts of the joints will be held in place positively so that

it cannot be lost and leakage through the joints will be prevented. Inasmuch as the gutter may be readily assembled and is placed directly upon the roof instead of being hung below the eaves, the use of highly skilled labor is not necessary in equipping a building with our improved gutter.

Having thus described our invention, what we claim as new is:

1. The combination of gutter sections having their meeting ends in contact, backs rising from the outer edges of the sections and overlapping at their meeting ends, a connecting member secured to the overlapping ends of the backs on the outer face thereof, and a fabric packing extending along the entire joint formed by the meeting edges of the gutter sections and the overlapping ends of the backs.

2. The combination of roof gutter sections having down-turned lips at their meeting ends, backs rising from the outer edges of the gutter sections and adapted to overlap at their meeting ends, and a connecting member provided with lips adapted to engage the lips on the gutter sections and having an upstanding portion adapted to be secured to the overlapping ends of the said backs.

3. The combination of roof gutter sections having down-turned lips at their meeting ends, backs rising from the outer edges of the said sections and adapted to overlap at their meeting ends, a connecting member having an upstanding portion and provided throughout its side edges with lips, the lips upon the main portion of said connecting member being arranged to engage the lips on the gutter sections and the upstanding portion of the said member being arranged to rest against the outer sides of the backs, and a packing held upon the said connecting member by the lips thereon.

In testimony whereof we affix our signatures in presence of two witnesses.

OSCAR PETERSON. [L. s.]
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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."