

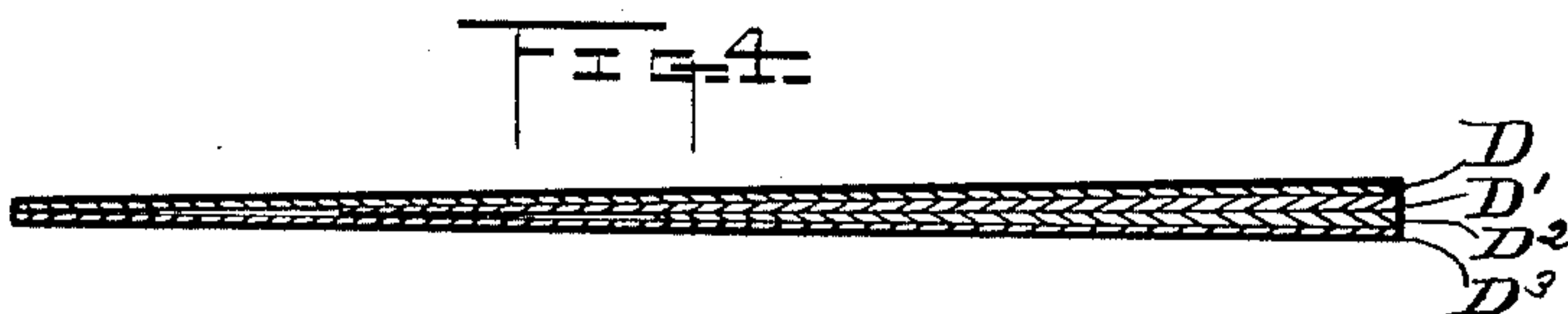
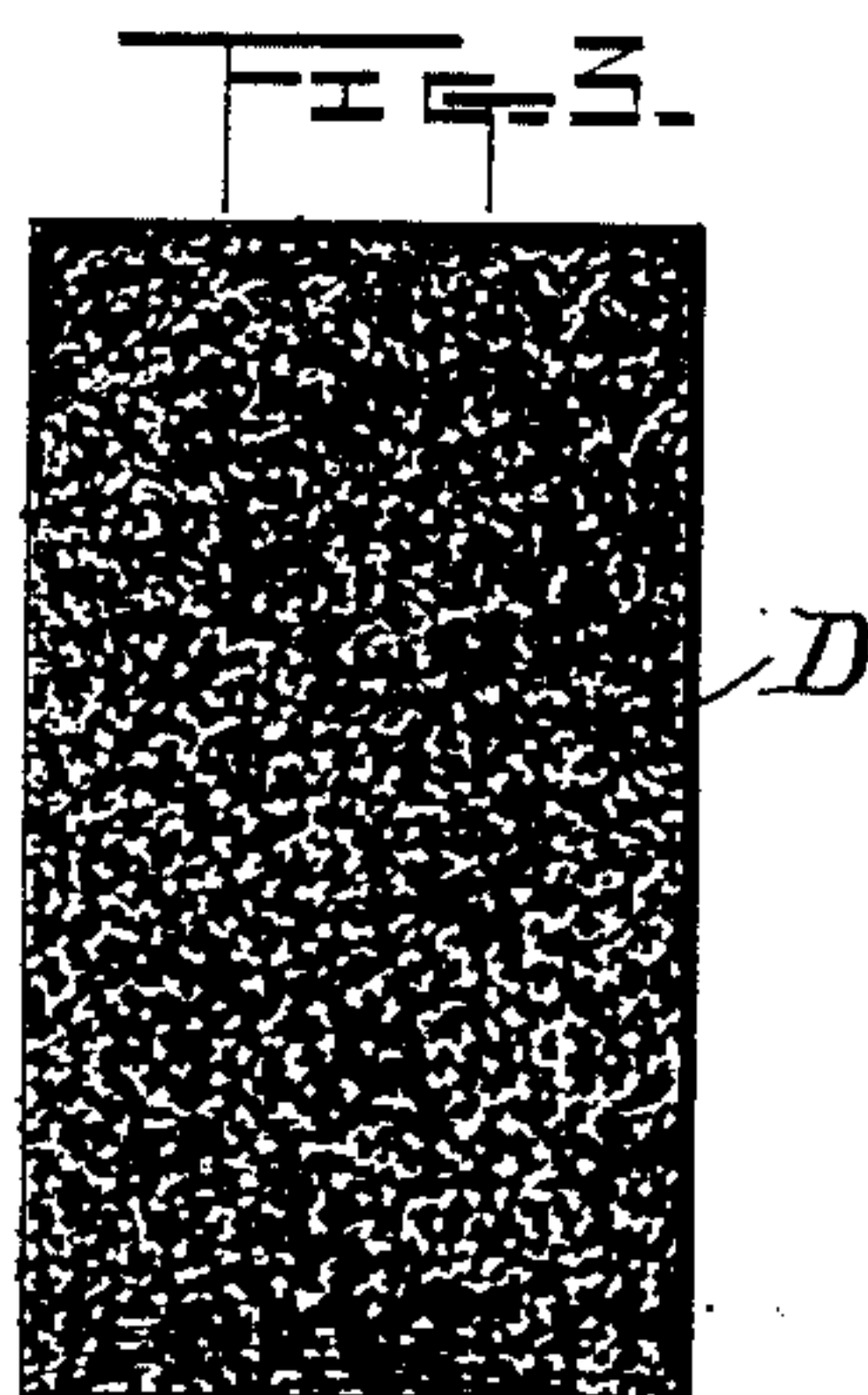
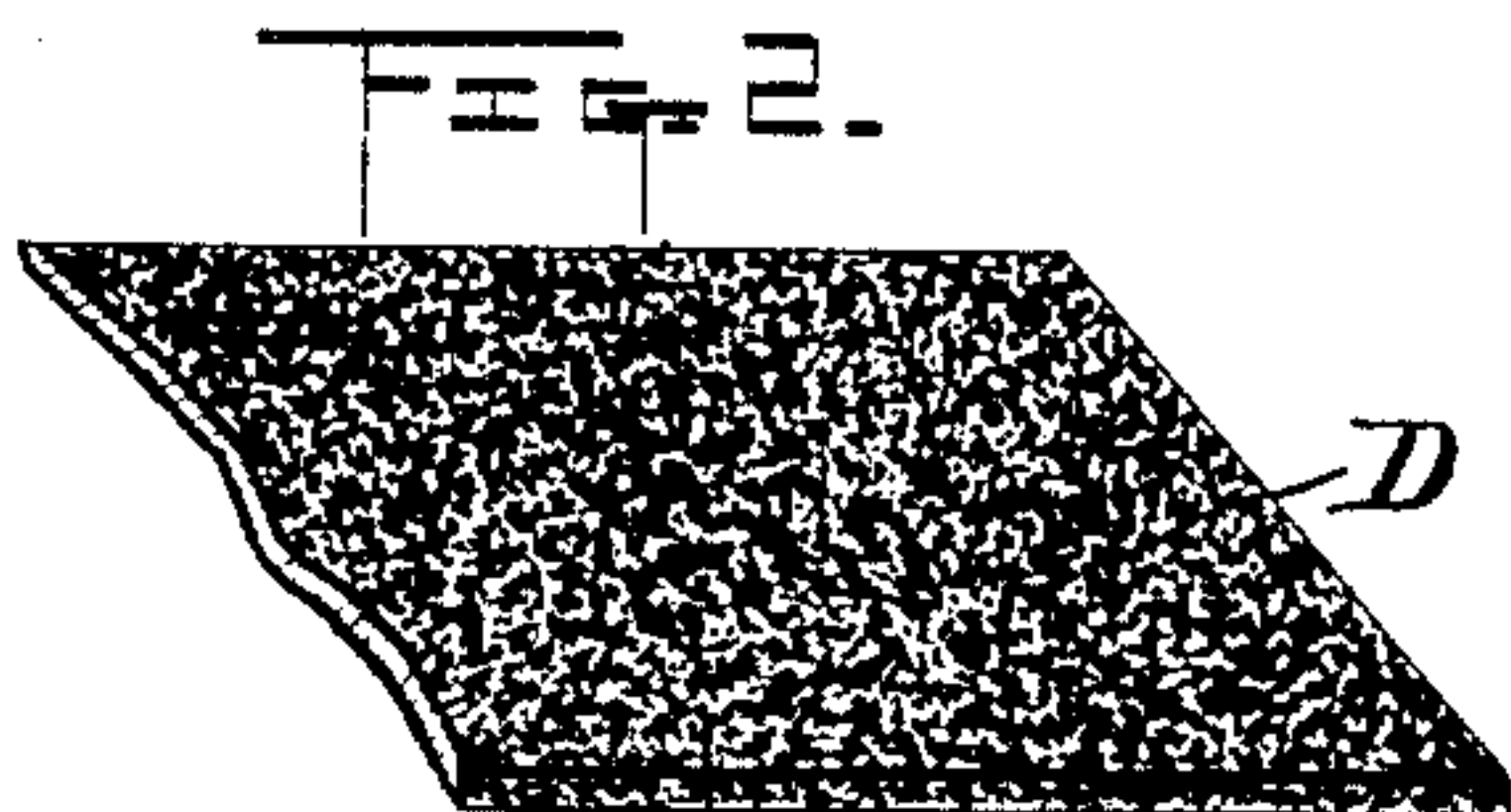
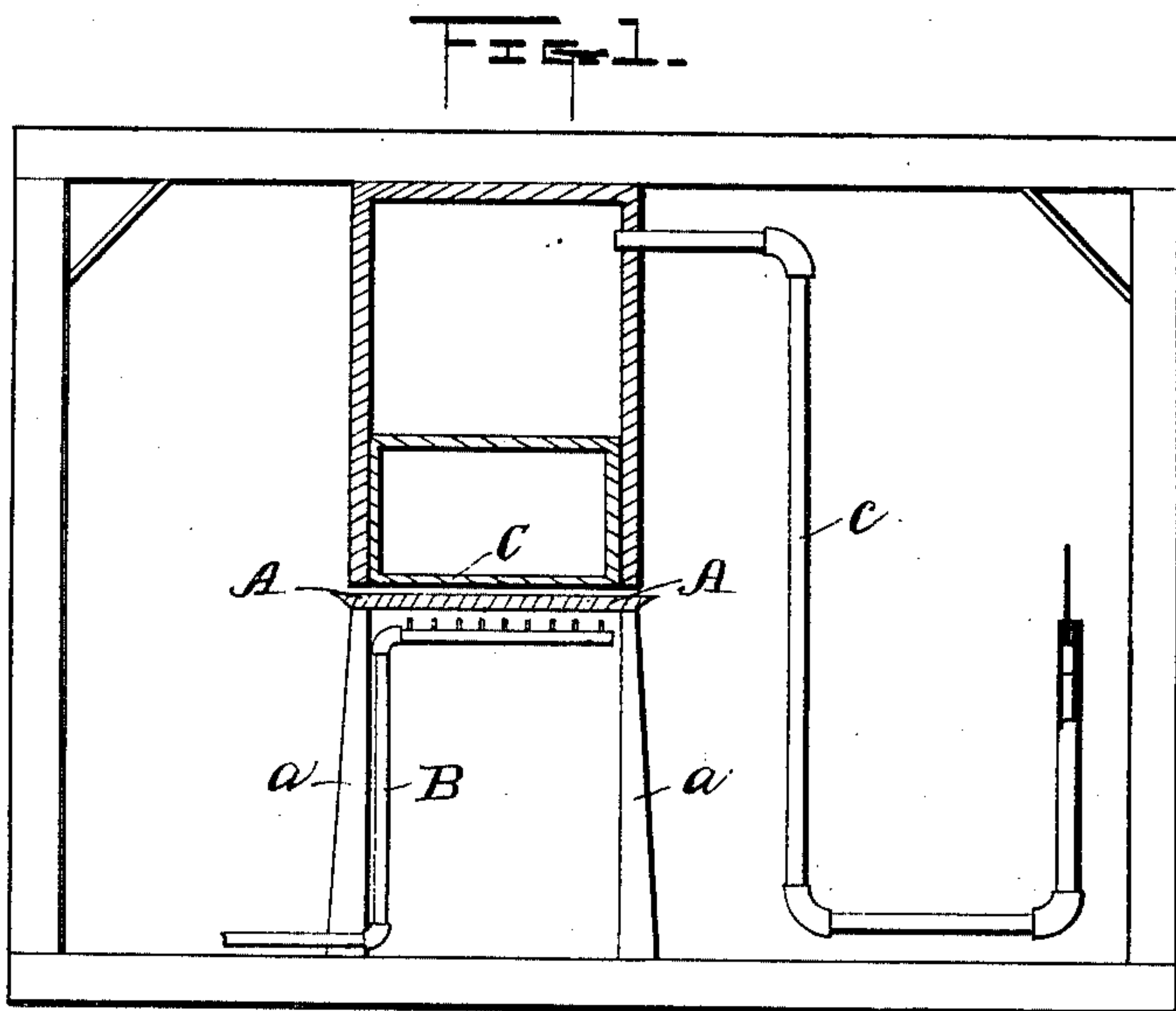
(No Model.)

S. E. TROTT.

PAPER PRESSED SHINGLE.

No. 394,033.

Patented Dec. 4, 1888.



Witnesses.

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UNITED STATES PATENT OFFICE.

STINSON E. TROTT, OF KANSAS CITY, MISSOURI.

PAPER PRESSED SHINGLE.

SPECIFICATION forming part of Letters Patent No. 394,033, dated December 4, 1888.

Application filed April 2, 1888. Serial No. 269,318. (No model.)

To all whom it may concern:

Be it known that I, STINSON E. TROTT, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Paper Pressed Shingles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in paper pressed shingles.

The object is to provide a shingle which shall be impervious to moisture, very durable, and which will retain its place without warping when exposed to the weather.

A further object is to provide a shingle of the above character which may be furnished at a very low cost.

With these ends in view my invention consists in certain features of construction and combination of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents one form of press which I find it convenient to employ in the construction of my improved shingle. Fig. 2 represents piece of shingle of uniform thickness. Fig. 3 represents a plan view of my improved shingle, and Fig. 4 represents an enlarged longitudinal transverse section of the same.

The material which composes the shingle consists of straw-board or other cheap fibrous substance thoroughly coated with a mixture of rubber, asphaltum, and sulphur, the three ingredients of the mixture being melted together and introduced in such proportions as may be found expedient to produce the best results. Coal-tar might also be used as a coating. The surfaces of the straw-board or other fibrous material after having been saturated with the liquid mixture named are covered with a layer of fine sand, which, because of the adhesiveness of the liquid mixture, is retained in position on the surfaces of the shingle until the same is submitted to pressure. After treating the shingle as above indicated, it is submitted to strong hydraulic or other pressure between surfaces one or both of which are heated to such a degree as to car-

bonize the material to render it compact and hard, but not to such a degree as to destroy the fiber of the board. This pressure to which the board is submitted will cause the sand-dressing to become thoroughly incorporated with the carbonized material which covers the surface of the board, so that it will not be liable to be washed away by heavy rains. The sand-dressing is particularly valuable as a preventive against warping or curling of the exposed boards or shingles, an objection which has heretofore prevailed, and to render it fire-proof.

In the accompanying drawings I have represented a simple form of press consisting of the bed-plate A suitably supported upon standards a, and heated to the proper degree by means of a series of gas-jets or other direct heat issuing from nipples arranged in a group or series on the supply-pipe B, located beneath the bed-plate. The movable platen C of the press is supported to slide toward and away from the bed-plate A, and is actuated in the present instance by hydraulic pressure, the liquid being admitted into the cylinder above the movable platen through the pipe c, which leads to a suitable force-pump or other device for forcing the liquid into the cylinder.

The piece of shingle of uniform thickness is represented by the letter D, and in the form herein shown it consists of a single thickness only of the straw-board or other fibrous material saturated with the mixture, as hereinbefore set forth, and pressed and carbonized. In a shingle, however, where it is desired that there should be a taper in the thickness from the butt to the top I find it expedient to form the piece of shingle four-ply, (represented by the letters D D' D² D³.) In a shingle fourteen inches long, for example, this four-ply would extend for a distance of seven inches, or thereabout, from the butt, then the next three and one-half inches would be made three-ply, one of the layers, D², being omitted, and the balance of the shingle or the last three and one-half inches at the top would be made two-ply, the layer D' being omitted. The several plies are first united by mucilage or other common adhesive. As thus constructed, the blank is saturated with the solution, dressed with sand, and submitted to a

strong pressure and the carbonizing process, which reduces the whole into a hard, compact, and practically indestructible shingle having the taper of a sawed shingle and capable of being applied to the roof in the same manner as the ordinary shingle.

It is obvious that the number of layers or ply employed in the construction of either the shingle of uniform thickness or the shingle with its tapered form is a matter of judgment and may be changed to suit the requirements of any particular case.

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

1. The herein-described covering material, consisting, essentially, of a fibrous base saturated with a mixture of rubber, asphaltum, and sulphur, having a surface dressing of sand, the said saturated and dressed material being pressed into shape and carbonized, substantially as set forth.

2. A pressed shingle composed of a fibrous base treated with rubber, asphaltum, and sulphur and carbonized, substantially as set forth.

3. A pressed shingle having a greater number of layers of fibrous material at its butt than at its top, substantially as set forth.

4. A pressed shingle having a greater number of layers of fibrous material at its butt than at its top, the said fibrous material being treated with rubber, asphaltum, and sulphur and carbonized, substantially as set forth.

5. A pressed shingle consisting of a fibrous base tapered from the butt toward the top, the said base being treated with rubber, asphaltum, sulphur, and sand, substantially as set forth.

6. A pressed shingle composed of a fibrous base treated with rubber, asphaltum, sulphur, and sand and carbonized, substantially as set forth.

7. As an article of manufacture, a paper shingle having a greater number of layers of paper at its butt than at its top.

In testimony whereof I have affixed my signature in presence of two witnesses.

STINSON E. TROTT.

Witnesses:

BESSIE E. YOUNG,
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