

J. AYRAULT.  
READY ROOFING FABRIC.  
APPLICATION FILED DEC. 29, 1908.

925,263.

Patented June 15, 1909.

Fig. 1.

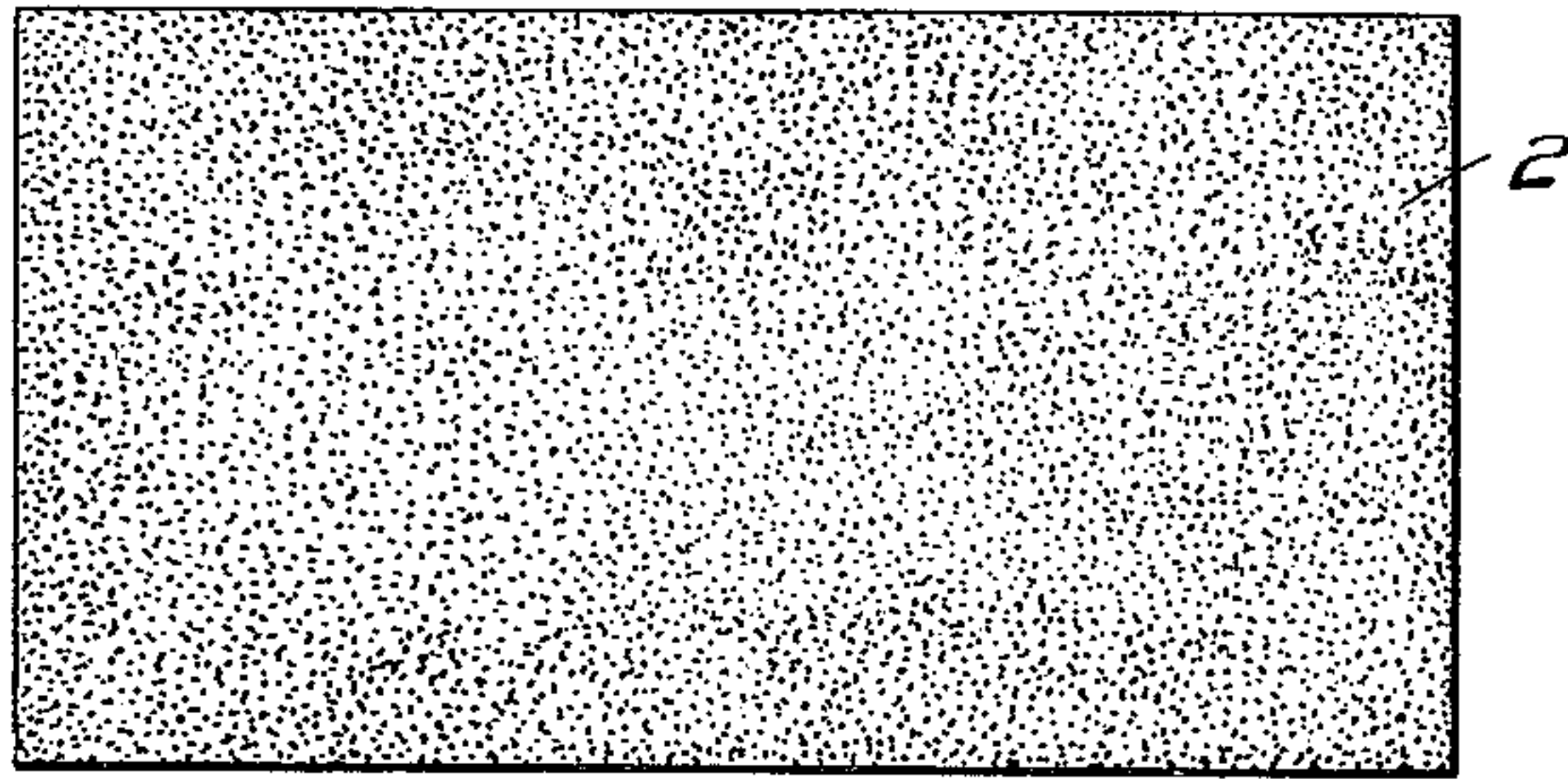


Fig. 2.

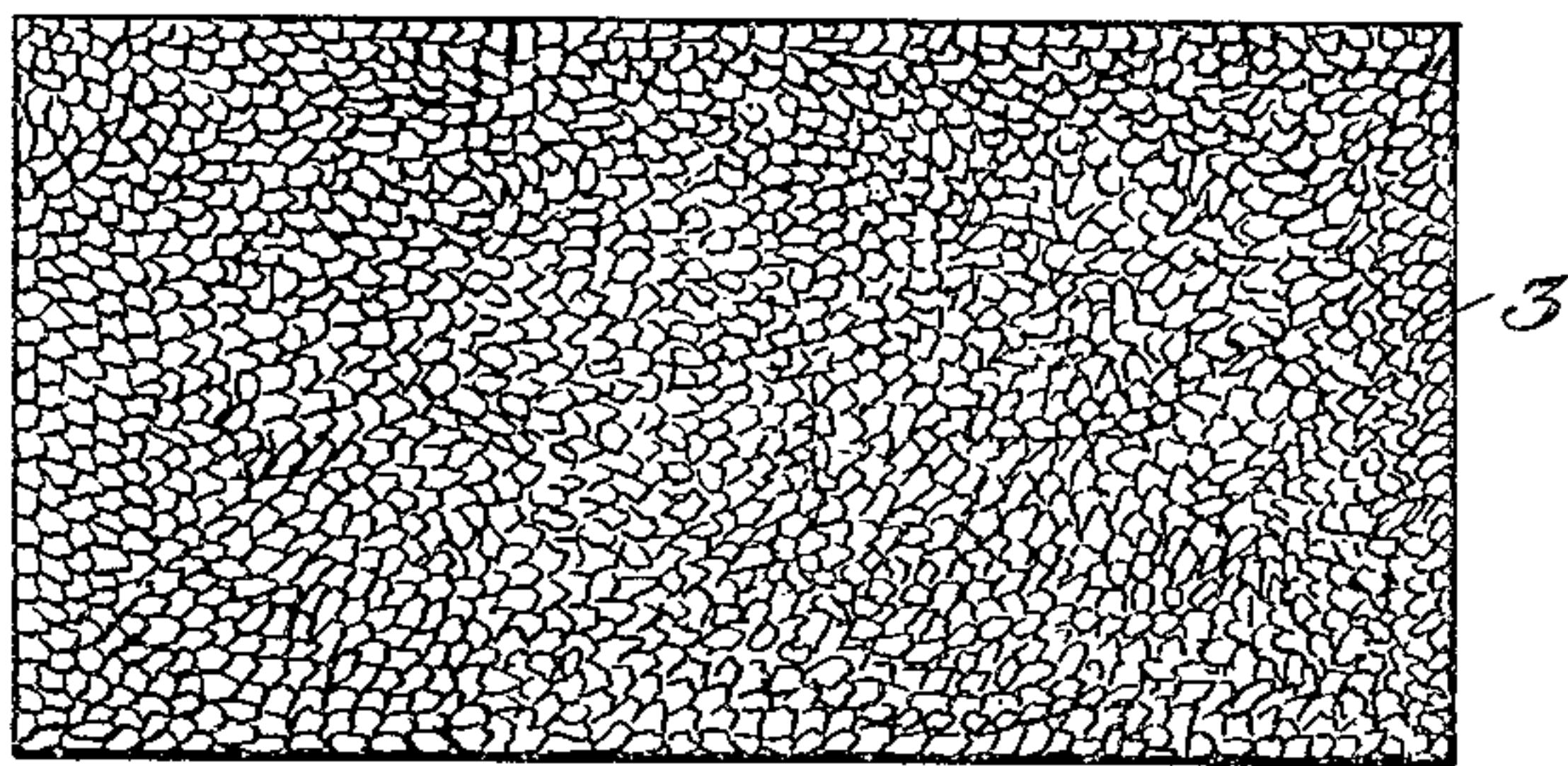


Fig. 3.

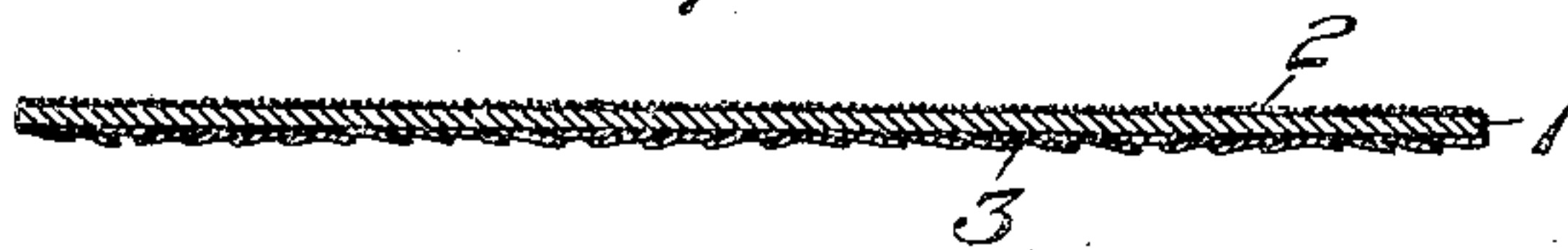


Fig. 4.

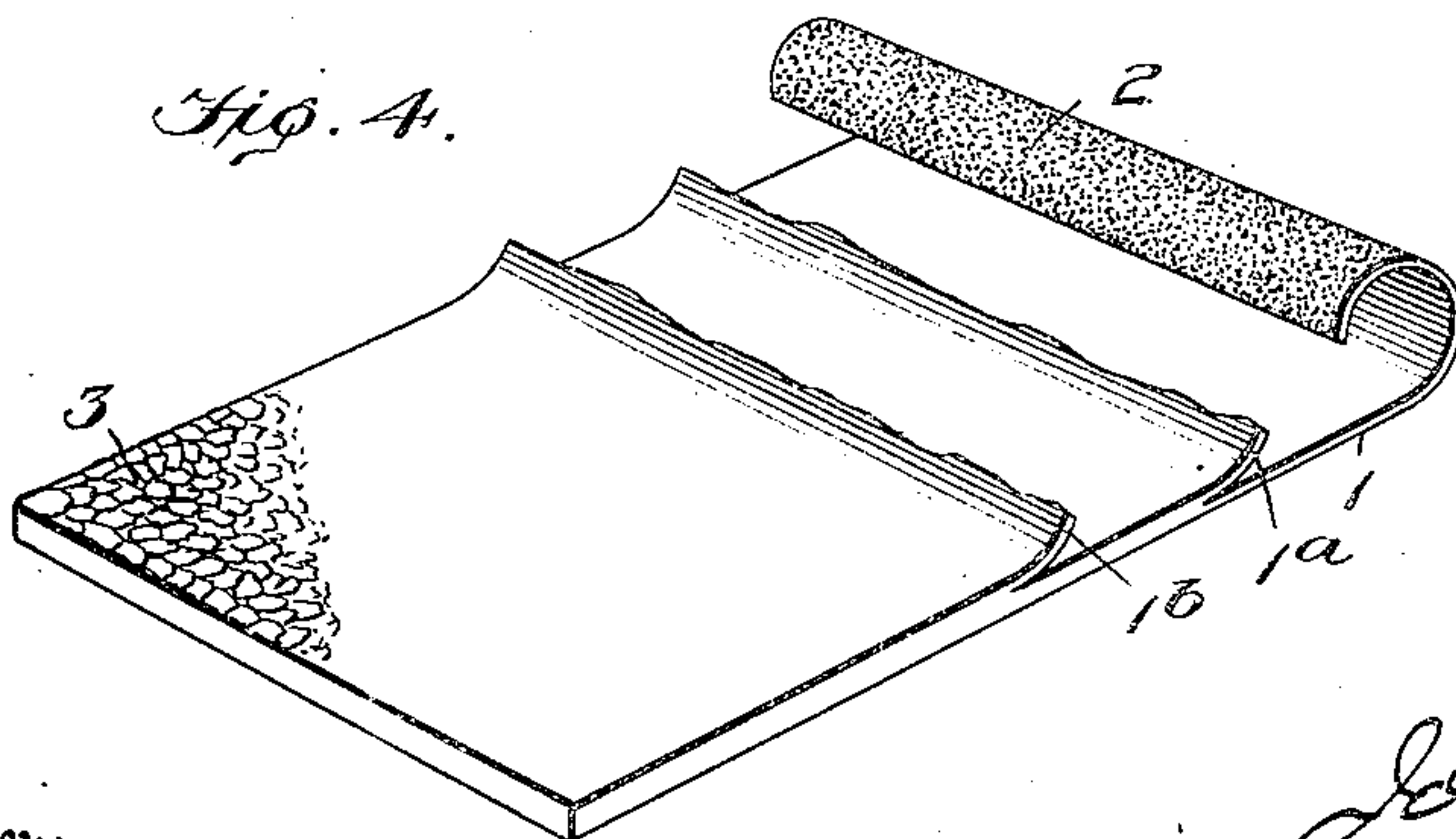
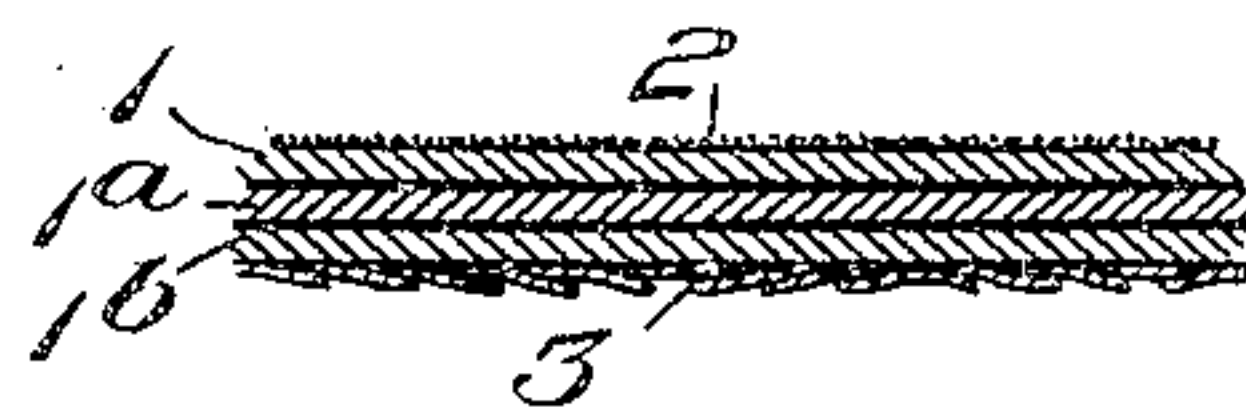


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN AYRAULT, OF TONAWANDA, NEW YORK.

## READY-ROOFING FABRIC.

No. 925,263.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed December 29, 1908. Serial No. 489,749.

*To all whom it may concern:*

Be it known that I, JOHN AYRAULT, a citizen of the United States, residing at Tonawanda, in the county of Erie and State of New York, have invented certain new and useful Improvements in Ready-Roofing Fabrics; 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 the production of that class of roofing material, commonly termed ready roofing, wherein a suitable fabric, such for instance as a felt, is saturated with bituminous or equivalent waterproofing substance and subsequently top dressed with crushed and screened quartz, fine sand or the like to produce a weather-proof upper surface. It has been the practice heretofore in the manufacture of this class of roofing fabric to produce a multiple ply fabric by passing several sheets of felt through a kettle or tank of the heated bituminous waterproofing material so as to saturate the felts and give to the same an upper or outer layer of the bituminous matter in which the top dressing of grit or sand is embedded, and an intermediate layer of the bituminous matter whereby the several felts are cemented together, and to apply to the saturated under felt as it comes from the tank or kettle a dry bottom felt. The foregoing method has been the common practice even in two ply roofing, the first or upper felt being passed through the tank or kettle and saturated and the second or bottom felt being added dry as the first felt left the tank or kettle, and this final or dry bottom felt has been found necessary to protect the fabric against puncture from gravel, &c. In the manufacture of this class of ready roofing fabrics, attempts have been made, for economy sake, to dispense with the under or dry felt and to substitute therefor a bottom dressing or coating of crushed and screened quartz, fine sand, pulverized soapstone, plumbago, or the like. The exterior coatings of crushed and screened quartz, sand, plumbago, &c., have for their several objects the prevention of the cracking, melting and running of the bituminous coatings, of the upper or weather surface, the prevention of adhesion of the fabric when rolled for transportation, and the protection of the under surface of the fabric when applied from fire, or from fumes

and gases likely to cause deterioration thereof. Fabrics of this character may be laid with either side exposed to the weather, and are supposed to be less liable to creep than fabrics wherein the under side is an unsanded surface. Experience has shown that such surfacing with grit, soapstone, &c., which is of a granular character, is not fully effective to protect the under side of the fabric from the corroding action of acid fumes, gases, &c., from within the building covered thereby. In the case of one ply or single felt fabric, the soft saturated felt is liable to be punctured by the larger particles of the surfacing material, as well as by the rough surfaces on which the roofing is laid, and soapstone, plumbago and the like substances being of a granular character afford no support to the felt or protection thereto from such punctures which will result in causing the roof to leak.

The object of my present invention is the production of a ready roofing fabric provided with an under surface of a scale-like character which shall so sheath the felt as to protect the same against puncture, or deterioration from corroding fumes or gases. To this end I apply to one surface of the roofing fabric, preferably the under surface, as it comes from the saturating tank, crushed or ground mica, whereby I obtain a fabric comprised of one or more plies of saturated felt, coated upon one surface with mica, and presenting a hard, glazed, practically puncture-proof surface adapted to resist corroding fumes or gases, and having opposite thereto a weather-proof surface, which may, if desired, be top dressed with crushed quartz, or like material—and such a roofing fabric embodies my invention.

In the drawing accompanying this specification, and chosen to illustrate the same, Figure 1 is a top view showing the sand covered or weather side of a roofing fabric embodying my invention. Fig. 2 is an under side view showing the mica-covered or puncture and corrosion-resisting side of a roofing fabric embodying my invention. Fig. 3 is an edge view of a single felt, or one ply roofing fabric embodying my invention. Fig. 4 is a perspective view of a multiple (three) ply roofing fabric embodying my invention, and Fig. 5 is an edge view of the multiple ply fabric shown in Fig. 4.

Like symbols refer to like parts wherever they occur.

I will now proceed to describe my inven-



tion more fully so that others skilled in the art to which it appertains may apply the same.

In the drawings, 1, 1<sup>a</sup>, 1<sup>b</sup> indicate the felts employed in manufacturing the ready roofing fabric, 2 indicates the usual or any approved top or weather surface coating of crushed and screened quartz, feldspar, or fine sand, and 3 the under or bottom surface of crushed or ground mica. Any micaceous matter such as muscovite, paragonite, biotite, &c., which has a basal cleavage, and which when crushed produces thin, tough laminae or scale, may be used for this non-corroding, fire and puncture-resisting covering.

The usual course of manufacturing such ready roofing fabrics may be followed, that is to say, felts in number equal to the plies required in the finished fabric, are passed through the hot bituminous matter in the saturating tank, said felts being preferably wool-felts, and said water-proofing matter being preferably asphaltum, and as they emerge from the saturating tank the upper surface of the fabric passes under a suitable supply of crushed and sized feldspar, or fine grit, which applies the top or weather surface coating, and over a suitable supply of crushed mica, which is taken up and adheres to the under side of the fabric giving thereto a scale-like coating to a greater or less degree. The fabric thus coated on both of its surfaces may, if desired, be passed between presser rolls on its way to the reels on which it is ultimately spooled for the market.

While the mica coating of the under sur-

face is of practical value as a non-corroding under surfacing for all ready roofing fabrics, whether single or multiple ply, it is of especial value for the single ply, as it effectively toughens and strengthens the fabric as a whole and guards against punctures either from gravel or rough planking, advantages heretofore only derived by the use of multiple felts, and at greatly increased cost of manufacture.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A roofing fabric comprised of felt saturated with a bituminous filler and having one of its surfaces substantially coated with mica scales.

2. A roofing fabric comprised of felt saturated with a water-proofing material and having mica scales upon one surface, and granular mineral matter upon the opposite surface.

3. A roofing fabric comprised of a single felt saturated with a waterproofing filler, and having mica scales upon one of its surfaces.

4. A roofing fabric comprised of a single felt saturated with a water-proofing filler, and having mica scales upon one of its surfaces, and granular mineral matter upon the other of its surfaces.

In testimony whereof I affix my signature, in presence of two subscribing witnesses.

JOHN AYRAULT.

Witnesses:

ODELL H. DEAN,  
A. J. CORDES.