

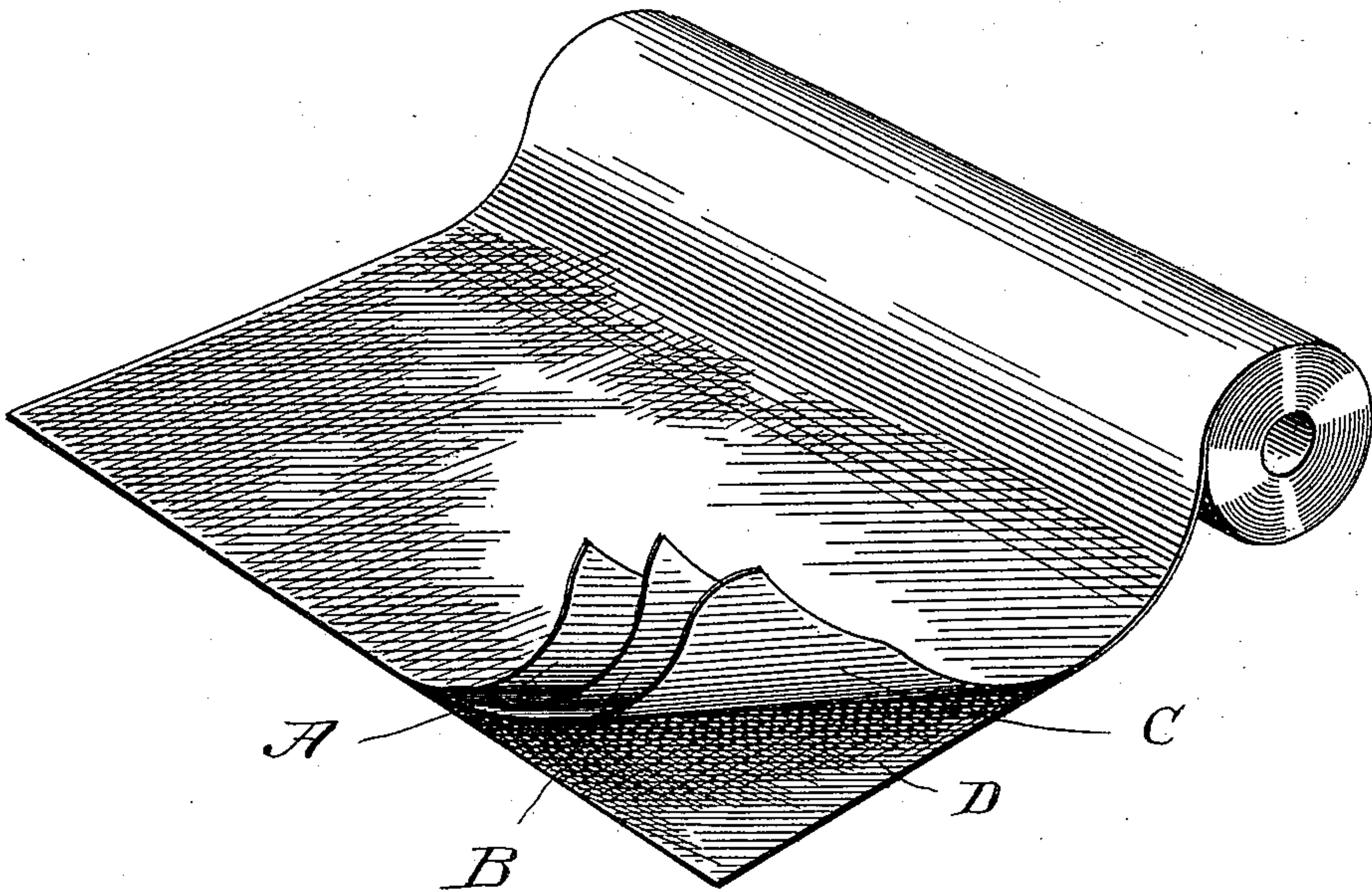
No. 690,526.

Patented Jan. 7, 1902.

F. S. MILLER.
ROOFING MATERIAL.

(Application filed Jan. 23, 1899. Renewed Dec. 2, 1901.)

(No Model.)



WITNESSES:

Ernest H. Hark
H. W. Humphrey

INVENTOR

Fredene S. Miller
BY *A. P. Harkness*
ATTORNEY

UNITED STATES PATENT OFFICE.

FREDERIC S. MILLER, OF BROOKLYN, NEW YORK; WILLIAM B. DAVENPORT, EXECUTOR OF SAID MILLER, DECEASED, ASSIGNOR TO H. W. JOHNS MANUFACTURING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

ROOFING MATERIAL.

SPECIFICATION forming part of Letters Patent No. 690,526, dated January 7, 1902.

Application filed January 23, 1899. Renewed December 2, 1901. Serial No. 84,469. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC S. MILLER, a citizen of the United States of America, and a resident of the borough of Brooklyn, city
5 of New York, State of New York; have invented certain new and useful Improvements in Roofing Materials, of which the following is a specification.

My invention relates to roofing materials;
15 and it consists of a new compound roofing which may be shipped in rolls ready to apply to the roof by tacking or otherwise attaching the same.

The preferred form of my invention is illustrated in the accompanying drawing, which
25 shows a perspective view of a roll of the roofing partly unrolled and with a corner of the same partly torn open to show the various layers.

D represents the backing of the roofing, which is composed of some pure mineral felt, preferably asbestos or asbestos paper or mill-board.

C is a foundation of the roofing, composed
35 of some strong woven textile fabric, preferably canvas.

B is a layer of mineral fabric, preferably asbestos, as before specified, saturated with some acid-proof and waterproof compound,
40 such as asphaltum or other liquid hydrocarbon.

A is a surfacing sheet made of the same material as is employed for the backing layer D.

Between the various layers is spread some
45 acid-proof and waterproof adhesive compound, preferably the asphaltum above specified, though other liquid hydrocarbon or simi-

lar material could be used. The parts being superimposed, as shown in the drawing, and the films of the adhesive compound distributed between them, the roofing is run through
50 a set of rollers or other mechanism for firmly compressing them together, thus hermetically sealing the canvas foundation between the mineral layers. The result is a flexible
55 incombustible waterproof roofing material which can be rolled up without sticking together and which can be readily unrolled and adjusted to any form of roof and tacked or cemented thereto. When in position, the whole
60 roof may be painted, if desired, and the asbestos-felt surface will take any kind of paint or other surfacing preparation.

The advantages of the invention reside in its lightness, flexibility, durability, and fire-
65 proof qualities.

Having therefore described my invention, what I claim as new, and desire to protect by Letters Patent, is—

A roofing composed of a foundation of
70 woven textile fabric, a layer of asbestos felt saturated with a liquid hydrocarbon placed upon the said foundation, a backing of unsaturated asbestos paper and a top surface of
75 unsaturated asbestos paper, together with layers of adhesive waterproof and acid-proof compounds between the adjacent surfaces of the four layers of material.

Signed by me at New York city this 28th day of December, 1898.

FREDERIC S. MILLER.

Witnesses:

WM. C. WHITE,
R. H. MARTIN.