

(No Model.)

J. MOTT.
METALLIC SHINGLE.

No. 297,530.

Patented Apr. 22, 1884.

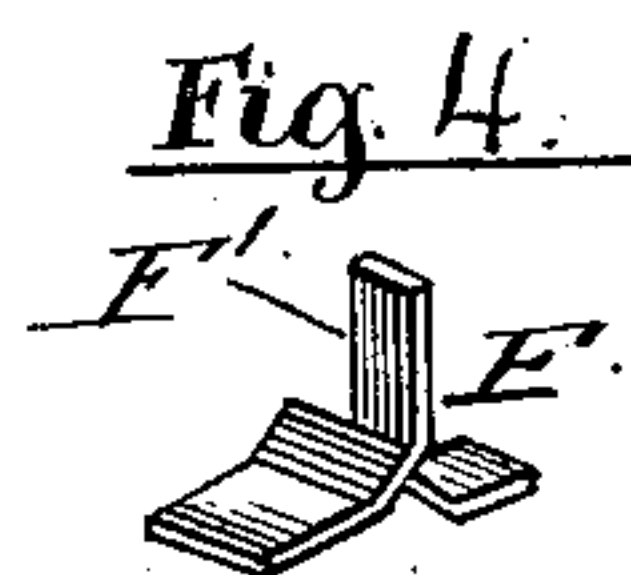
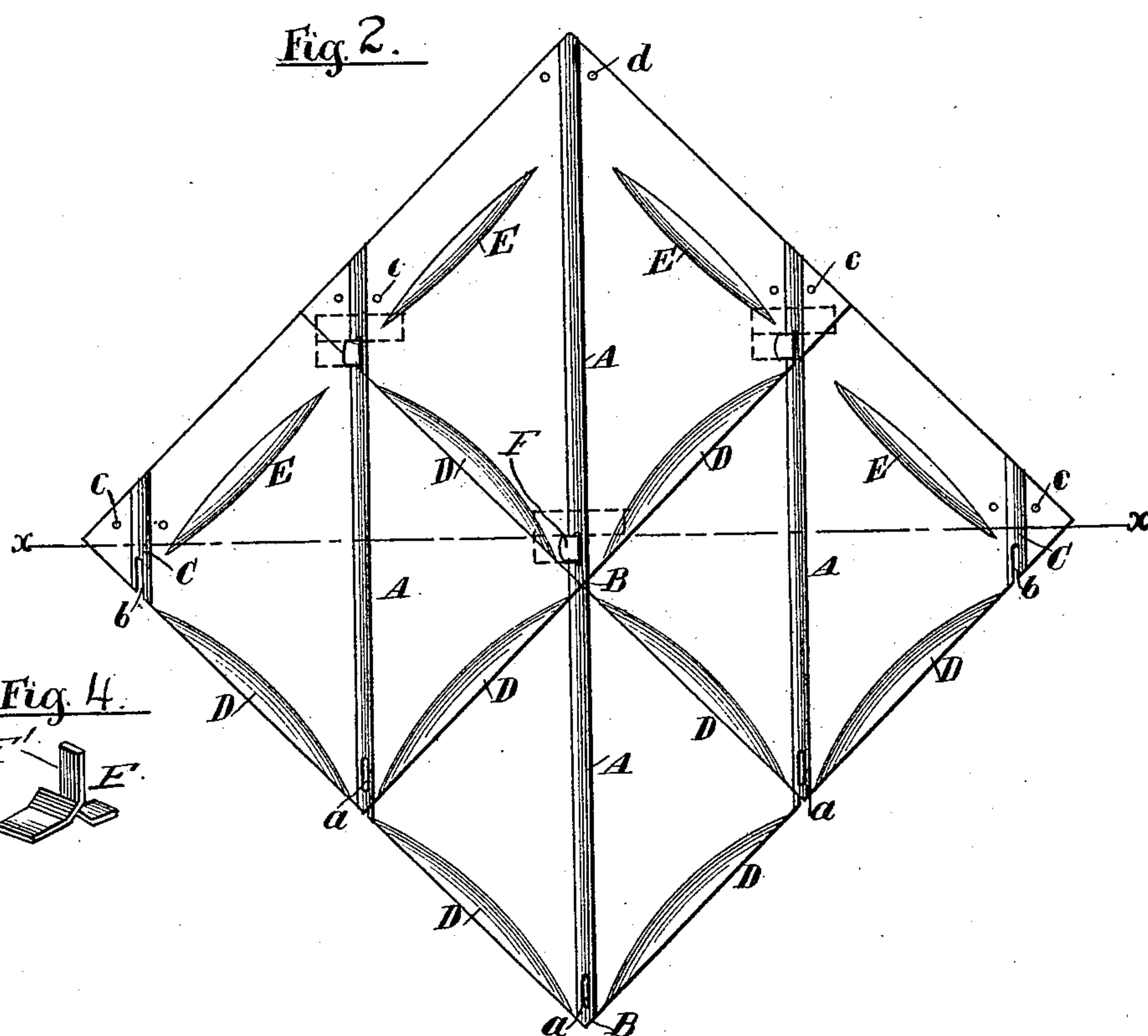
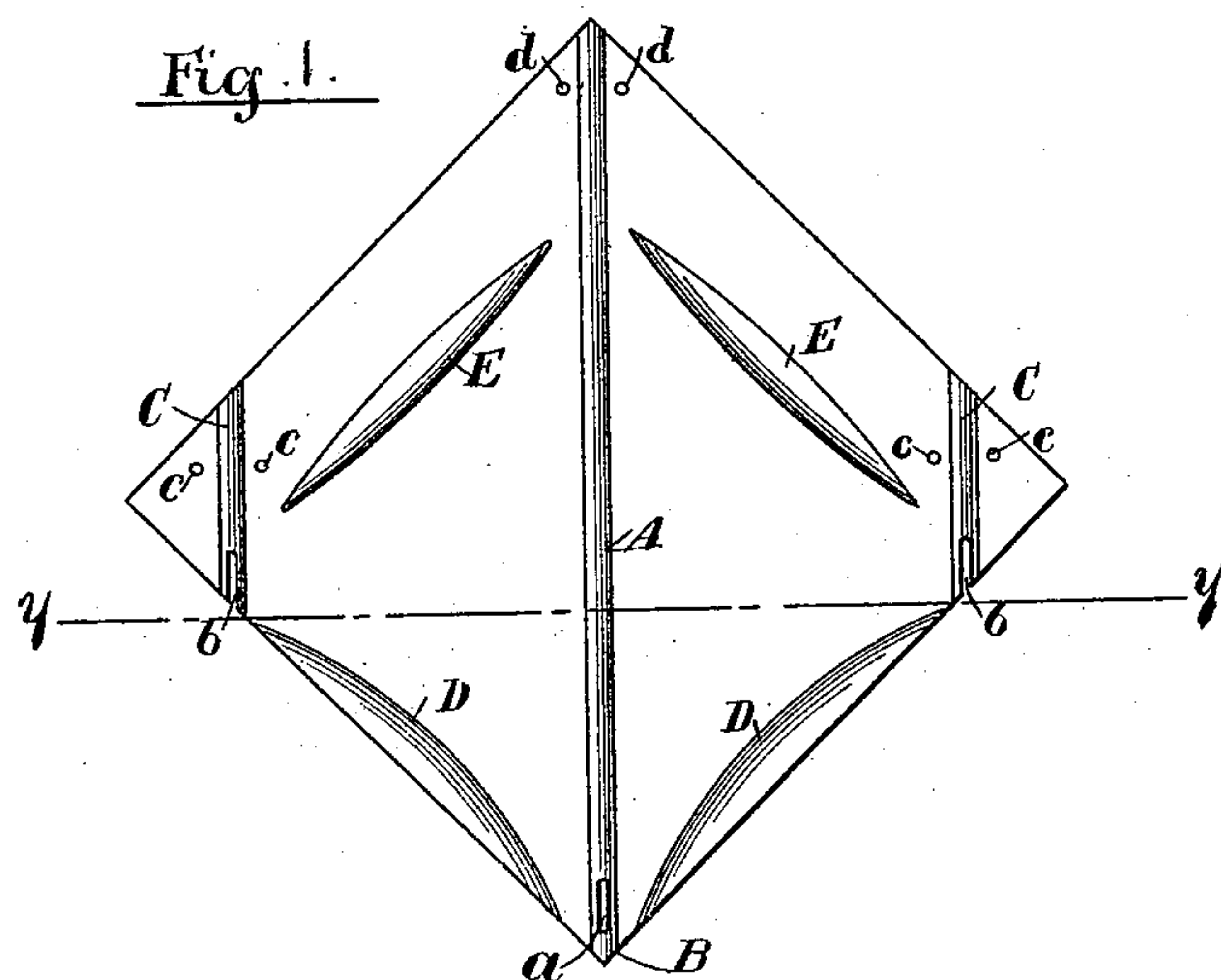


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN MOTT, OF NEW YORK, N. Y.

METALLIC SHINGLE.

SPECIFICATION forming part of Letters Patent No. 297,530, dated April 22, 1884.

Application filed October 24, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN MOTT, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Metallic Shingles, of which the following is a full, clear, and exact description.

The object of this invention is to produce diamond-shaped sheet-metal shingles for roofing purposes, which can be formed of square pieces of metal of such construction that the shingles of one course will overlap upon and cover the nail-holes in the course next below, and the points of each shingle will be held down firmly, and so on throughout the extent of the roof.

Heretofore it has been found impracticable to use square metal shingles for roofing purposes of a construction adapted to be laid to form a diamond-shaped roofing with no exposed nail-holes, and without perpendicular joints, for the reason that the points of the shingles would spring out of place, thereby leaving an opening for water to enter between the courses. By my invention I am enabled to form diamond-shaped shingles out of square pieces of sheet metal adapted to be laid with a uniform lap without perpendicular joints, and with the nail-holes in the shingles of one course covered by the shingles in the course next above, and the points rigidly held down and precluded from springing out of place, whereby I economize in the quantity of material used both in manufacturing the shingles and in covering a given area of surface, for the reason that a square shingle can be cut to better advantage, and can be laid to form an operative roofing with less lap than a shingle of oblong or other form.

To enable others skilled in the art to make and use my invention, I will now describe it by reference to the accompanying drawings, in which—

Figure 1 is a plan view of one shingle embodying my improvements. Fig. 2 is a plan view of four shingles in position as applied to a roof. Fig. 3 is a cross-section taken on the line *x x*, Fig. 2; and Fig. 4 is a detail of an attaching-clasp for securing the points of the shingles in place.

Each shingle is provided with a central lon-

gitudinal hollow rib, *A*, in the lower end of which, and just above the point *B* of the shingle, is formed a longitudinal slit, *a*.

C C designate hollow ribs parallel to each other and to the rib *A*, which extend across the shingle near the corners. The lower end of each of these ribs *C* is provided with a longitudinal slot, *b*. Between each rib *C* and the rib *A* the metal at the lower inclined edges of the shingle is stamped up to form a hollow rib, *D*; and *E* designates a slightly smaller rib stamped in the body of the shingle on each side of the rib *A*, and extending across the shingle in a line parallel with the upper inclined edges. On each side of the ribs *C*, near their upper ends, are nail-holes *c*, and on each side of the rib *A*, near the upper end of the shingle, are nail-holes *d*. To secure the adjoining corners of two shingles in the same course and the point of the overlapping shingle in the course next above in place, I prefer to employ an attaching-clasp of the construction shown by Fig. 4 of the drawings, which clasp forms the subject-matter of an application for Letters Patent filed by me on the 22d day of September, 1883, and designated as number 107,099, although any clasp suitable for this purpose may be employed. The method of laying these shingles is as follows, viz: Commencing at the eaves-course, I employ "shorts" or half-shingles, which consist of shingles with the lower ends cut off at the line *y y*, Fig. 1. These half-shingles are laid at the eaves in a single course, the ribs *C* of two adjoining shingles overlapping one upon the other, so that the slots *b* are brought in a direct line with each other. The attaching-clasp *F* is then inserted under the overlapping adjoining edges of the shingles, and its lip *F'* projects upwardly through the slots *b*. These half-shingles are then nailed to the roof at *d d*. The first course of full-sized shingles are then laid, the points *B* being placed so that the rib *A* will overlap upon the ribs *C* of two adjoining shingles in the course next below, and the slit *a* is brought in line with the slots *b* of the shingles in the lower course, the ribs *C* of each course as the shingles are laid overlapping, so as to bring the slots *b* of adjoining shingles in line with each other, as stated. The lip *F'* of the clasp is then drawn up through the slit *a*, and bent over onto the

shingle, thus closing the slit, binding three shingles together, and holding the point B of the overlapping shingle firmly in place. The attaching-clasps are inserted in place, as each course is laid, in the same manner as described in reference to the first course, excepting that in the second and succeeding courses the body of the clasp rests upon the underlying shingle, as shown by the section Fig. 3. The ribs D of the shingles of each course receive the ribs E in the two underlying shingles which the point B rests upon. These ribs D E stiffen the shingle, improve its appearance, and prevent water from being driven upward between the courses. Each succeeding course of shingles is laid in the same manner as just described in reference to the first course of full-sized shingles, the nail-holes *c* of the shingles in the upper course fitting over the nail-holes *d* in the shingles of the lower course, and the points of the overlapping shingles covering both sets of nail-holes.

The ribs A C D E, in addition to the objects stated, also serve to provide for contraction and expansion of the metal. If it is desired to make the shingles present an architectural appearance when laid, any suitable raised design may be stamped in the body of the shingle.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A metallic roofing-shingle, substantially

such as described, provided at its lower end, and just above the point, with a longitudinal slit, *a*, and at its parallel corners with longitudinal slots *b b*, as and for the purposes set forth. 35

2. Metallic shingles of substantially the construction described, having a longitudinal slit in the points and longitudinal slots in the opposite corners, in combination with an attaching-clasp having a body adapted to fit under the underlying shingles in the course next below, and an upwardly-projecting lip adapted to pass through said longitudinal slots and slit, and be bent over onto the overlapping shingle, as and for the purposes set forth. 40 45

3. Metallic shingles each having a rib, A, provided with a longitudinal slit, *a*, ribs C C parallel to each other and to the rib A, and each provided with a longitudinal slot, *b*, at their lower ends, and ribs D E, whereby diamond-shaped shingles may be formed out of square pieces of sheet metal, and are adapted when combined with attaching-clasps to form a roofing, as set forth. 50 55

In testimony whereof I have hereunto set my hand.

JOHN MOTT.

Witnesses:

ARTHUR C. WEBB,
ERNEST C. WEBB.