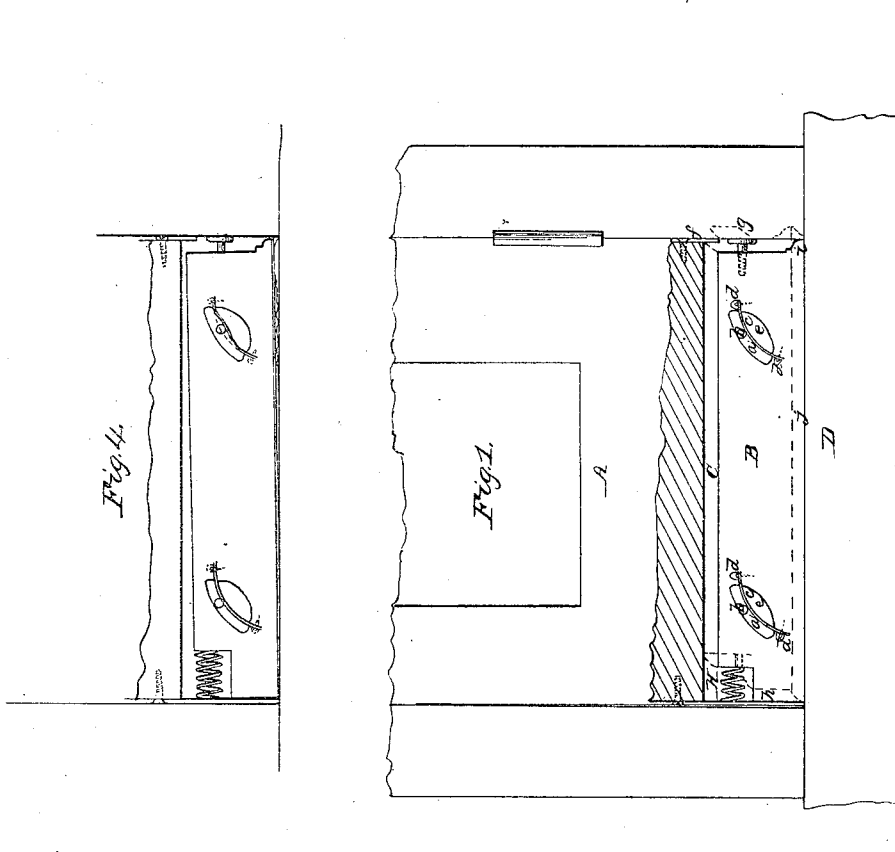
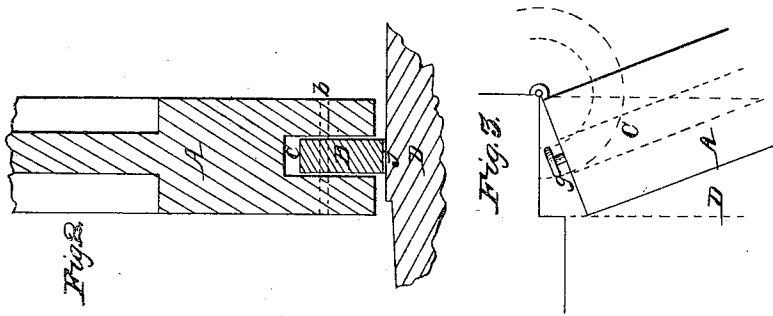


J. Tinney.
Weather Strip.

Nº 19,217.

Patented Jan. 26, 1868.



UNITED STATES PATENT OFFICE.

JOSEPH TINNEY, OF WESTFIELD, NEW YORK.

WEATHER-STRIP FOR DOORS.

Specification of Letters Patent No. 19,217, dated January 26, 1858.

To all whom it may concern:

Be it known that I, JOSEPH TINNEY, of Westfield, in the county of Chautauqua and State of New York, have invented a new and Improved Weather-Strip for Doors, French Windows, &c.; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon.

Similar letters refer to like parts in each of the figures.

Figure 1 represents the lower part of a door and strip, a portion of the door being removed to show the operation of the strip. Fig. 2 is a vertical section of the same.

The door, A, has a groove, C, plowed in its lower edge, which may be one half or five eighths of an inch or thereabout in width, or more, in cases where the door is very thick; and about three inches in depth. In this groove a strip of wood, B, of a length corresponding to the groove is loosely fitted. Two curved slots, *a a* are provided in the strip, one near each end, having an oblique direction, which receive pins, *b b*, passing through the door. The under side of these slots is formed of thin and flexible strips of metal, *c*, as steel, sheet iron, brass or any similar material having sufficient lightness and pliability. The ends of these springs are inserted in small grooves in the wood, such as the kerf of a fine saw, and are secured by a small pin at *d d* against becoming displaced by use. The wood is removed underneath them so as to allow them play as shown at *e*. A recess is cut in the strip at H and a spiral spring inserted which presses against the ends of the strip. When the door is open the force of the spring throws the strip back, until it is arrested by the stop, *f*. The strip rests wholly on the pins *b b* and the curvature of the slots *a, a*, causes it to rise in a corresponding curve and assume the position indicated by the dotted outline, when the door is opened. The lower edge is then equal with the bottom of the door so as not to interfere with its swinging. A set screw *g*, having a broad flat head, is inserted in the end opposite to the spring H. As the door shuts the set-screw strikes the jamb just before closing and forces the strip forward and at the

same time downward until it strikes the sill, D. The springs *c c* form the lower curved bearings against the pins, *b b*, and, by their elasticity, allow the strip to adapt itself to the surface of the sill or threshold of the door. It often occurs that the sill is higher at one end than at the other—or that the door settles somewhat at the side opposite the hinges, as it frequently does by its own weight;—in such cases the ability of the strip to yield the pins, and thereby adapt itself to an opening which is wide at one end and narrow at the other, is a most important requisite. Obstructions, such as dirt, gravel, &c., are liable to intervene between the door and sill at all times, and especially in winter when snow and ice accumulate so as to present a most formidable barrier to the use of an unyielding strip. At such times the strip must conform in a measure to the irregularities accidentally presented, or fail to answer its useful purpose at a season when most needed; while the still greater objection of wedging fast the door or utter destruction of the weaker parts when used, is obviated by the flexibility. The springs act independently of each other, therefore one end may be obstructed and the other still reach the sill as shown at F Fig. 4. The springs are durably applied being curved, and receiving the strain on the convex side, the force is exerted in an endwise thrust—which, being received by the wood, they are not liable to wear loose in their bearings. The set screw *g* is readily adjustable and by its projection beyond the end of the strip, determines the distance which the strip descends. Thus, in fitting the strip if the crevice is wider the screw has only to be set a little farther out. It is designed to have this end of the strip rest just even with the edge of the door when open—or a plate may be put in which covers the groove as is done at the other end (*h*) leaving a slot in which the screw, *g*, may work, with the head outside. In order to have the strip fill the crevice for the entire length of the door, a slight projection is made at the lower edge, *z*. The under side of the strip *j* may be covered with felt india rubber, cloth or other elastic material to produce a better joint.

The construction is simple, cheap and durable, and may be applied to any door in use and is equally applicable to French win-

dows and to doors which slide as well as those which swing, which renders it peculiarly well adapted to the cabin doors of vessels as a water-tight strip.

5 I am aware that weather strips have been constructed with diagonal slots taking pins in the door in such a manner that an end-wise motion given by shutting the door causes the strip to press against the sill or casing, but such I do not claim; nor do I
10 claim the employment of springs differently arranged and otherwise combined, for giv-

ing a yielding or elastic pressure to weather strips; but

What I claim as my invention, is—

15

The employment of curved slots in weather strips, with upwardly curved or convex, springs or bearings on the lower sides thereof, substantially in the manner and for the purposes specified.

JOSEPH TINNEY.

Witnesses:

WILLIAM SEXTON,
A. L. WELLS.