No. 721,510. PATENTED FEB. 24, 1903.

S. W. FUNK.

REMOVABLE THRESHOLD OR DOOR SILL AND STORM PROTECTOR.

APPLICATION FILED OCT. 27, 1902.

NO MODEL.

Fig I.

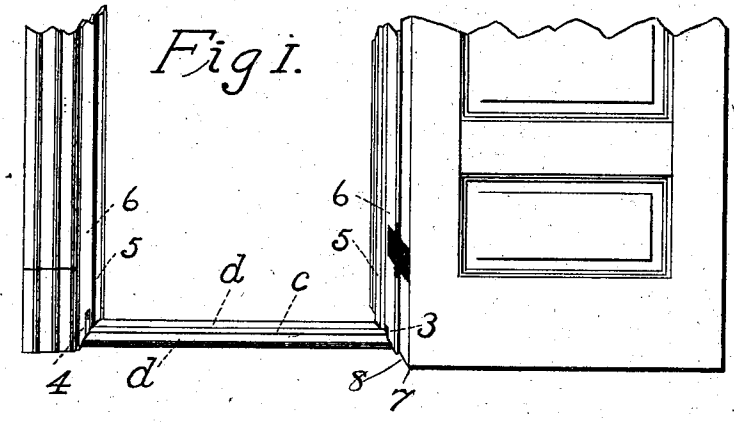


Fig II.

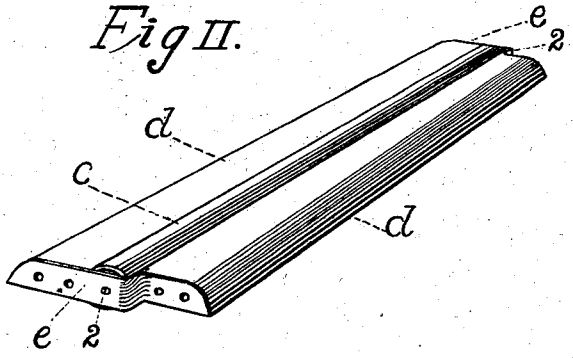


Fig. 5.

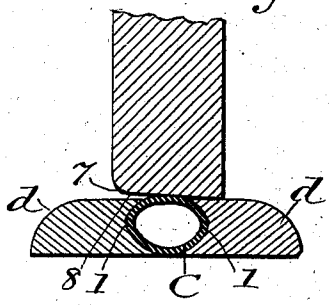
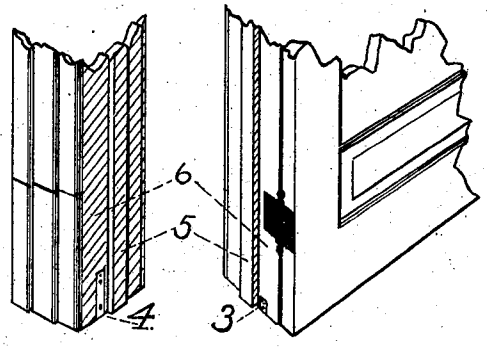
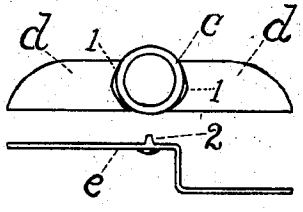


Fig III.

Fig IV.





Witnesses.

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SAMUEL W. FUNK, OF SANTA ANA, CALIFORNIA.

REMOVABLE THRESHOLD OR DOOR-SILL AND STORM-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 721,510, dated February 24, 1903.

Application filed October 27, 1902. Serial No. 128,870. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL W. FUNK, a citizen of the United States, residing at Santa Ana, in the county of Orange and State of California, have invented a new and useful Removable Threshold or Door-Sill and Storm-Protector, of which the following is a specification.

The objects of my invention are, first, to provide a threshold or door-sill that will prevent water, air, or wind and snow from passing from the outside doors of a house to the inside and also to prevent cold air from circulating from room to room under the inside doors. Since warm air ascends and cold air descends, there is a constant circulation of cold air passing under the doors from the cold rooms and from the open air into the warmer rooms. This cold air and storm passing under the doors into the common living-rooms is not only very unpleasant, but it is unhealthful, especially to the female sex, since it has a tendency to keep the feet and lower limbs cold. I have also demonstrated that by using my invention, which makes the passage under the door perfectly air and water tight, much less fuel is needed to keep a room comfortable. The temperature is kept more even from the bottom to the top of a room. In a few minutes the temperature at the bottom of the room becomes several degrees warmer after using this combination threshold. It is quite common in cold weather to use clothes, &c., at the bottom of doors to prevent storm and cold air from passing; but this is inconvenient and inefficient.

The second object of my invention is to provide a threshold or door-sill, neat in appearance, that can be removed easily and instantly for convenience in sweeping and scrubbing floors, which is accomplished in my invention. This threshold can be removed instantly by pressing with the fingers on a spring attached to the side of the door casing or jamb and pick the combination threshold from its place, and it can be replaced without touching the said spring by placing the metal pin at one end of said threshold into its respective fixture and simply press the opposite end downward until the other metal pin enters the other fixture, which is an opening at the bottom end of the spring, as shown in the drawings. This is a great convenience to a house in sweeping and scrubbing. It is very inconvenient to sweep and scrub over about one inch stationary threshold. This threshold can, if desired, be removed during the summer season from all inside doors, and thus be a saving on the wear of said threshold and also be more convenient to have no threshold to the inside doors when not needed.

The accompanying drawings illustrate my invention.

Figure I is a perspective view of a door-frame and the threshold attached to the fixtures 3 and 4, fastened to the sides of the door-casings 6 6, with the door standing open. Fig. II is a perspective view of the threshold disconnected from its place, showing rubber tubing or elastic *c*, held in place by two pieces of material *d d*, and plates *e e* for holding material *d d* together. Fig. III is an end view of said threshold with one of connecting-plates *e e* removed. Fig. IV is a disconnected perspective view of casings 6 6, showing fixtures 3 and 4. Fig. V is a view of a door with one edge of the bottom slightly rounded and the bottom slightly beveled.

1 1 represent the inner sides of material *d d*, carved in an oval or V shape, so as to hold rubber tubing *c* in place, also to allow rubber or elastic to give and spread horizontally as much as is necessary when pressed upon by the bottom of the door. The bottom edge 7 of the door, which first comes in contact with tubing *c*, may be slightly rounded and the bottom 8 beveled sufficiently to allow a gradual pressure upon elastic *c* when closing the door, as shown in Fig. V. The outer edges of material *d d* are rounded at the top. The plates *e e* are made so as to suitably come in contact with the door-stops 5 5 and casings 6 6, as seen in Fig. I. The metal pins 2 2, riveted to plates *e e* about opposite the center of the ends of rubber tubing *c*, project about one-eighth of an inch, so as to enter suitable openings in fixtures 3 and 4, fastened to the door-casings 6 6, thus holding said threshold firmly in place. Fixture 3 is a simple piece of sheet metal about one-half by one inch containing a round opening, so as to snugly fit one of pins 2 2, the plate being countersunk and nailed to the casing. Fixture 4 can be made of spring-brass about one-half by three inches, contain-

ing a round opening at the lower end to also snugly fit one of pins 2 2 and nailed at its top end to the casing, a groove being cut into the casing the depth of the thickness of the spring at the top and about one-fourth of an inch deep at the bottom end of the spring, the depth decreasing to within about one-half inch of the top of said spring, so that spring 4 when fastened to the casing is flush at its top with said casing and projecting slightly at the bottom. The depth of the groove allows spring 4 to be pressed in sufficiently for one of pins 2 2 to enter the opening at bottom of said spring by pressing downward on the said threshold. Also the depth of said groove allows the spring or fixture 4 to be pressed back by the finger sufficiently to disconnect, and thus the threshold can be removed. To put the threshold in place, one of pins 2 2 is placed into fixture 3, and the opposite end of the threshold is pressed downward, the shoulder part of plate *e* following the door-stop until the other pin 2 2 enters fixture 4. One of the pieces of material *d d* is made shorter, so as to fit between the door-stops 5 5, and the other piece longer, so as to fit between the casings 6 6, and plates *e e* made with an offset to fit ends of material *d d*. The rubber tubing or elastic *c* projects about one thirty-second of an inch below and about three-sixteenths of an inch above material *d d*.

The tubing or elastic *c* can be common rubber hose or tubing, if desired. However, the smoother and more elastic the tubing the less pressure is required by the bottom edge of the door to make a close air-tight fit. The tubing *c* can easily be removed and another replaced without removing plates *e e* from ends of material *d d*, if it should need replacing before material *d d* is worn out.

When the floor is not smooth and where there are cracks, the surface should be planed smooth and the cracks filled with putty or some other suitable material in line where rubber *c* is supposed to come in contact with the floor.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a removable threshold and storm-protector, the combination of rubber tubing or elastic being pressed in close contact with the floor and the bottom of the door by the closing of said door, and being held in place between two pieces of material fastened together by a suitable metal plate at each end of said material, and metal pins fastened to said metal plates, and projecting therefrom, for the purpose of entering suitable fixtures fastened to the door casings or jambs, thus holding said threshold firmly in place, as set forth and for the purpose specified.

2. In a removable threshold and storm-protector, the combination of rubber tubing or elastic held in place by material either made of wood or metal, and said elastic or tubing being pressed in close contact with the floor and the bottom edge of the door by the closing of said door, and at each end of said threshold a metal pin fastened and projecting sufficiently so as to enter suitable fixtures countersunk and fastened to the door casings or jambs, one of said fixtures being a spring with a suitable opening near the lower end to receive one of said metal pins, and a groove in the casing to allow the lower part of said spring-fixture to be pressed inward, so as to permit of easy attachment and removal of said combination-threshold and also to hold said threshold firmly in place, all substantially as set forth and for the purpose specified.

SAMUEL W. FUNK.

Witnesses:
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F. H. SMITH.