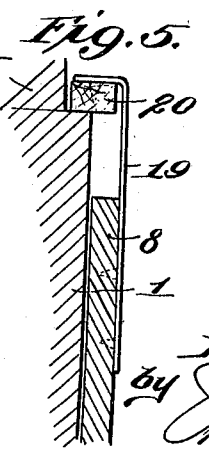
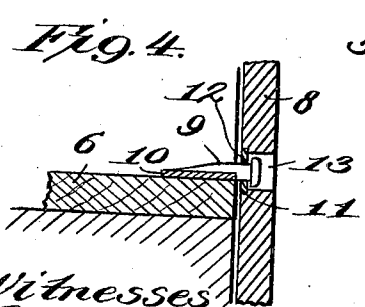
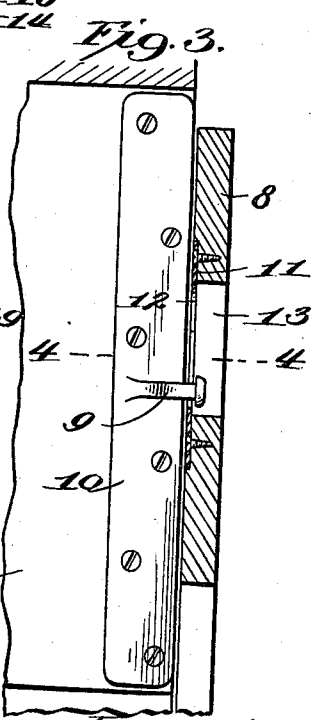
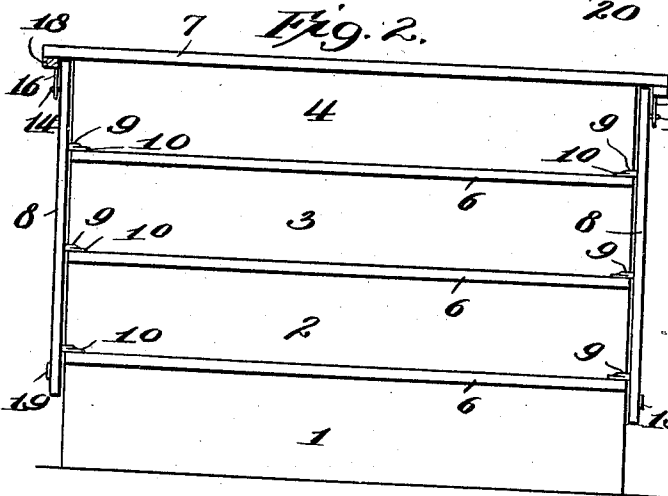
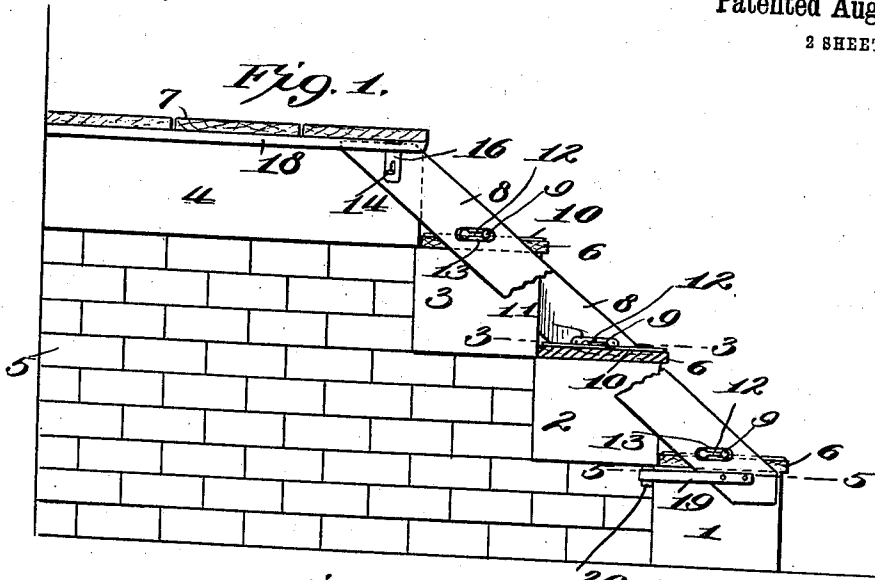


H. W. FLAGG.  
 PROTECTIVE COVERING FOR STEPS.  
 APPLICATION FILED NOV. 17, 1910.

1,002,142.

Patented Aug. 29, 1911.

2 SHEETS—SHEET 1.



Witnesses  
 C. H. Keller  
 Robert Conitt.

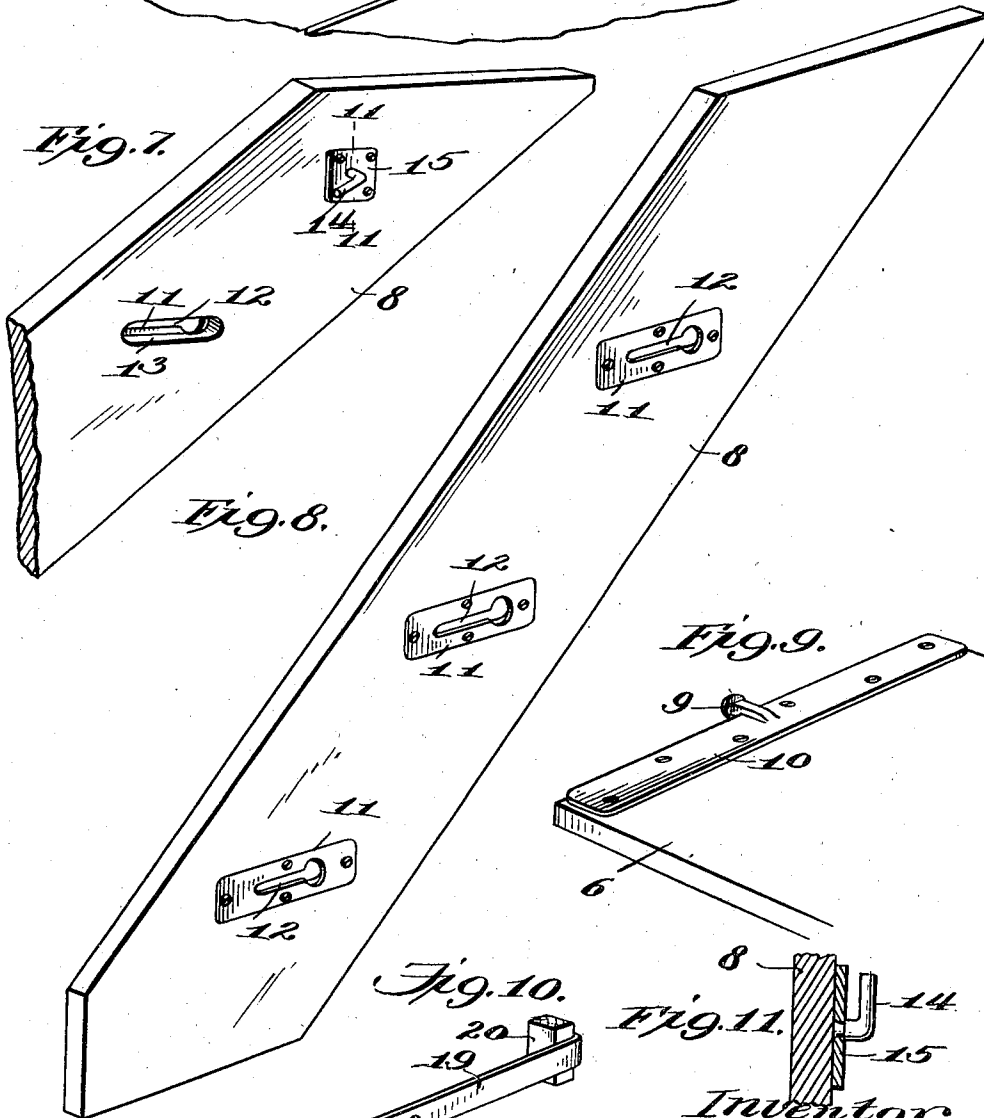
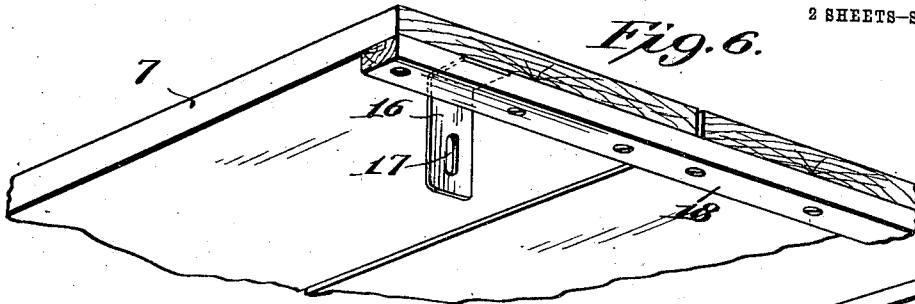
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2 SHEETS—SHEET 2.



Witnesses:  
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*Robert Connett.*

Inventor  
 Horatio W. Flagg  
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*Att'y.*

# UNITED STATES PATENT OFFICE.

HORATIO W. FLAGG, OF BALTIMORE, MARYLAND.

## PROTECTIVE COVERING FOR STEPS.

1,002,142.

Specification of Letters Patent. Patented Aug. 29, 1911.

Application filed November 17, 1910. Serial No. 592,884.

To all whom it may concern:

Be it known that I, HORATIO W. FLAGG, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented new and useful Improvements in Protective Coverings for Steps, of which the following is a specification.

The present invention is an improvement in protective coverings for steps.

It comprehends, broadly, a covering which may be applied to a flight of stone or metal steps, preferably the former, during winter weather, to insure a safe and firm footing, the component parts of the covering being detachably connected together, to facilitate the setting up and removal of said covering.

A structural embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of a flight of steps equipped with the improved covering, the latter being shown partly in section; Fig. 2 is a front elevation of Fig. 1; Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 1; Fig. 4 is a transverse vertical section taken on the line 4—4 of Fig. 3; Fig. 5 is a horizontal section taken on the line 5—5 of Fig. 1; Fig. 6 is a fragmental perspective view of the top member of the covering; Figs. 7 and 8 are perspective views of the side members showing their outer and inner sides; Figs. 9 and 10 are perspective views, respectively, of one of the tread members, and the fastening device located on one end of each side member; and Fig. 11 is a fragmental detail section taken on the line 11—11 of Fig. 7, and showing the fastening device on the upper end of each side member.

In said drawings, 1, 2 and 3 indicate the steps proper, 4 the extended top step or landing, and 5 the brick support or foundation of the flight of stone steps to which the covering is shown as applied, the latter consisting essentially of a series of treads 6 and a top member or floor 7 connected together by the opposite side members 8. The treads 6 and the floor 7 rest squarely upon and cover the upper faces of the steps proper and the landing, and project slightly beyond the front edges of the same, as shown in Figs. 1 and 2. The sides 8 are

preferably formed by flat rails. These rails are connected at one end with the floor of the covering and they may also be connected at the other end with the steps proper, preferably the lowermost step 1, as hereinafter described.

The treads 6 are designed for separable connection at their opposite ends to the adjacent rails, and the connections between the latter and the floor and lowermost step are likewise of a separable nature, thereby enabling the component parts of the covering to be readily put together and subsequently detached from each other, as the occasion arises. To effect this connection of the treads to said rails, each of the former is provided at opposite ends with laterally projecting bolts 9, which, in the construction illustrated, are formed with enlarged heads and square stems. These bolts are preferably formed integral with and centrally of the thin metal brace plates 10 secured to the upper face of the treads, the plates being located at the opposite end edges of said treads and being substantially coextensive in length therewith. Said bolts co-act with a series of metal plates 11 secured to the inner faces of the rails and formed with key-hole slots 12 whose enlarged portions or mouths are directed toward the lower longitudinal edges of the rails. (See Figs. 7 and 8). The width of the body portions of the slots is substantially equal to the thickness of the bolts, so that the latter are prevented from turning therein, as will be understood. The adjacent faces of the rails are recessed, as at 13, directly back of each plate, into which recesses the bolt heads project.

The connection between the floor and the rails is preferably effected by means of hook-like keepers 14 swiveled to plates 15 fastened to the inner faces of said rails adjacent the upper ends thereof, these keepers being designed for co-action with depending plates 16 which are secured to the adjacent side edges of the floor and are slotted longitudinally, as at 17. The floor projects at its side edges a slight distance beyond the adjacent edges of the landing 5 and is braced at such points by suitable strips 18 arranged against its under face, as shown in Fig. 6. The plates 16, above mentioned, are shown in the

present instance as L-shaped, their horizontal upper arms being disposed between the braces and the floor face.

To connect the rails to the lowermost step, they are provided at their lower ends with rearwardly projecting metal straps 19 carrying blocks or heads 20 at their inner ends. These straps are secured to the outer faces of the rails and, when the covering is in place, extend across the end faces of said step, as shown in Figs. 1 and 5, their blocks engaging behind the projecting portions of the rear faces of the step.

The covering may be set up in the following manner: The floor and treads are first disposed upon the landing and steps proper, with their rear edges flush against the faces of the adjacent risers, after which the two rails are placed against the end edges of the treads in position for the bolts 9 to enter the mouths of the corresponding key-hole slots, thus effecting the initial connection of the rails to the treads, as will be apparent. The rails are then moved bodily rearward, whereupon the bolt heads will move forward in the recesses 13 and the square stems of the bolts will enter and move along the body portions of the slots, completing the attachment of the rails and treads. The metal plates 16 are forced slightly outward during the bodily rearward movement of the rails, so as to permit the swinging keepers 14, which have been previously turned into vertical position, to enter the slots 17 and thus connect the upper ends of the rails to the floor, the keepers being subsequently moved into horizontal position to prevent their accidental disengagement from said slots. Finally, the straps 19 are secured to the rails, with their blocks engaging behind the projecting ends of the lowermost step. The above operations may be readily accomplished, as will be obvious, and the removal of the covering may also be effected with equal readiness after the several parts have been disconnected.

It will be observed that the metal braces 10 are secured to the upper faces of the treads, and that the slotted plates 11 are located above the upper faces of the steps proper; by reason of this arrangement, both the braces and the plates are entirely out of contact with the steps, and disfigurement of the latter by rust stains is, therefore, prevented, such arrangement also enabling the treads and rails to be painted without causing marking of the steps. For the same reason, the plates 16 occupy a position against the outer faces of the rails, while the straps 19 are disposed out of contact with the end faces of the lowermost step. The floor of the covering may advantageously be composed of a series of separate boards or panels, as shown, which are connected together by the brace strips 18, said strips also

serving to prevent warping of the floor. The plates 10 on which the bolts 9 are formed likewise prevent warping of the treads.

Further description of the invention and its advantages is considered unnecessary in view of the foregoing.

I claim as my invention:

1. A take-down protective covering for a flight of steps comprising a pair of spaced rails extending continuously across the opposite end face of all of the steps; a series of treads located between said rails and detachably connected to the same at opposite ends; a floor to which the upper ends of said rails are detachably connected; and a pair of rearwardly projecting retaining devices carried by said covering at opposite sides thereof adapted to extend across and beyond the end faces of one of said steps for engagement with the rear face of that step.

2. As a new article of manufacture, a protective covering for a flight of steps comprising a series of treads adapted to rest upon the upper faces of the steps; a floor adapted to rest upon the upper face of the landing step; and a pair of spaced rails to which the opposite end edges of said treads and floor are connected, said rails being provided with rearwardly projecting retaining devices adapted to extend across and beyond the end faces of one of the steps and to engage the rear face of that step.

3. In a protective covering for steps, a pair of spaced rails; a series of treads located between said rails and connected to the same at opposite ends; and rearwardly-projecting retaining devices carried by said rails and adapted to extend across and beyond the end faces of one of said steps for engagement with the rear face of that step.

4. In a protective covering for steps, a pair of spaced rails; a series of treads located between said rails and connected to the same at opposite ends; and retaining devices carried by said rails, said devices comprising, each, a rearwardly projecting strap and a retaining member connected to said strap and adapted to engage the rear face of that step.

5. In a protective covering for steps, a pair of spaced rails provided at their upper ends with movable keepers; a floor located above and in juxtaposition to said rail ends and provided with members arranged for engagement by said keepers; and a series of treads disposed below said floor and between said rails, and connected at their opposite ends to the latter.

6. In a protective covering for steps, a pair of spaced rails provided at their upper ends with movable keepers; a floor located above and in juxtaposition to said rail ends and provided with depending members extending across the outer faces of said rails

and adapted to be engaged by said keepers; and a series of treads disposed below said floor and between said rails, and connected at their opposite ends to the latter.

5 7. In a protective covering for steps, a pair of spaced rails provided at their upper ends with movable keepers; a floor located above and in juxtaposition to said rail ends and provided with depending members having slots formed therein, said slots being arranged to receive said keepers; and a series of treads disposed below said floor and between said rails, and connected at their opposite ends to the latter.

10 8. In a protective covering for steps, a pair of spaced rails provided at their upper ends with keepers; a floor located above and in juxtaposition to said rail ends and provided with depending members removably engaged by said keepers; a series of treads located between said rails and connected to

the same at opposite ends; and detachable connections between said rails and one of the steps.

9. In a take-down protective covering for 25 steps, the combination of a pair of spaced rails; a series of treads located between said rails and detachably connected to the same at opposite ends; and a pair of rearwardly-projecting retaining devices carried by said 30 covering at opposite sides thereof adapted to extend across and beyond the end faces of one of said steps for engagement with the rear face of that step.

In testimony whereof I have hereunto set 35 my hand in presence of two subscribing witnesses.

HORATIO W. FLAGG.

Witnesses:

RODERICK D. COE,  
THOMAS G. HULL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."