

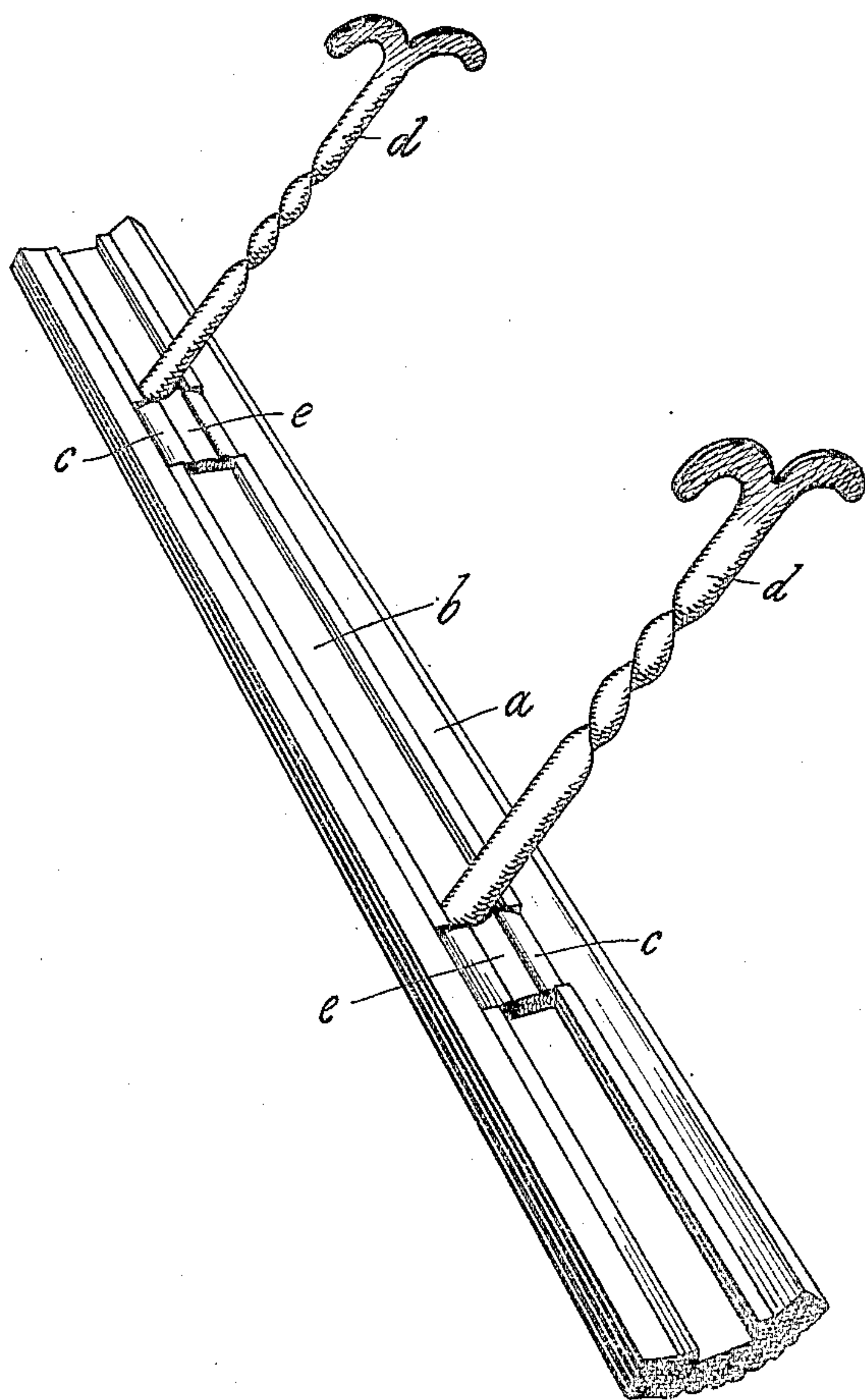
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M. RUPKE.

PROTECTING RAIL FOR BUILDING STRUCTURES, STAIRS, CORNERS,
AND THE LIKE.

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Witnesses.
Wm. Gillman Jr.
H. E. Fausmann.

Inventor
by *Max Rupke*
Joseph Freeman Watson
Attorneys

UNITED STATES PATENT OFFICE.

MAX RUPKE, OF OHLIGS, GERMANY.

PROTECTING-RAIL FOR BUILDING STRUCTURES, STAIRS, CORNERS, AND THE LIKE.

No. 813,326.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed April 12, 1905. Serial No. 255,252.

To all whom it may concern:

Be it known that I, MAX RUPKE, merchant, a subject of the King of Prussia, German Emperor, residing at Ohligs, Rhenish Prussia, Kingdom of Prussia, German Empire, have invented a certain new and useful Protecting-Rail for Building Structures, Stairs, Corners, and the Like, of which the following is a specification.

The subject of this invention refers to a protecting-rail for such structures and parts of buildings which are exposed to injury by hitting against them by blows and the like—thus, for instance, for the edges of the steps of stairs, corners of walls, corners of windows, and the like. Such protecting-rails as heretofore constructed were connected to the parts of buildings made from concrete, beton, or stone in such a manner that stone-screws, arranged at certain distances from each other, were connected to the rail by suitable screw-threads or by riveting, the screws being then inserted into the beton, concrete, or stone. This way of fastening presents, however, the inconvenience that the protecting-rails could not be made of better workmanship—that is to say, they could not be made enameled, coated with nickel, or in a similar manner—inasmuch as where the riveting was of superior quality the durability of the exterior coating was interfered with on account of the head of the rivet or of the screw soon becoming loose in consequence of the use of the parts. Besides, the transportation and shipping of the ready rail is attended with difficulties on account of the stone-screws being rigidly connected to the said protecting-rail. These drawbacks have already been remedied to some extent by providing the protecting-rail upon its lower surface with a dovetail-shaped groove, into which the fastening-irons are introduced. This manner of fastening presents, however, the inconvenience that the dovetail-shaped groove is made continuous and that every fastening-iron has to be moved from the starting-point of the groove as far as to the point where it is intended to situate the said iron. Furthermore, only certain metals can be used for the manufacture of the said protecting-rails.

The subject-matter of this invention is a protecting-rail in which the longitudinally-extending groove possesses such sectional shape at its inner part that the fastening-irons can be introduced into the same from above. At different points of the said groove

it is made narrower by pressing projections into the side parts of the groove, so as to secure the fastening-irons rigidly to the protecting-rail. The fastening-irons may be introduced into these narrower parts. By this kind of fastening the construction is not only considerably simplified, but also the transportation and shipment and the utilization of the rails at the spot is greatly facilitated. With this construction it is only necessary to provide the rail with a rectangular groove, the groove being made narrower at the places intended for the introduction of the fastening-irons and in such a manner that the fastening-irons, which are of half-round or conical shape at their upper sides and the upper ends of which are rectangularly curved, can be introduced into the narrower parts and may be fastened thereto by a few blows of the hammer. By this means it becomes also possible to employ harder metals for the manufacture of the protecting-rail, such as steel and iron, which is not possible where a continuous dovetail-shaped groove is made use of, inasmuch as such grooves can only be fitted to soft materials.

The drawing shows a form of construction of the rail, by way of example, in perspective view.

The protecting-rail *a*, which in case of its being used for stairs is manufactured chiefly from steel and for other uses from iron, is provided with a rectangular longitudinal slot *b*. At certain distances constrictions *c* are provided at the edges of the groove by pressing the material together in such a manner that the groove acquires an approximately dovetail-shaped section at those places. The fastening-irons *d* are formed from bars split open at one end, so as to assume fork shape or provided with similar retaining means, while the other ends of the bars are bent at right angle. The end *e*, which is bent over at right angle, has the exact width of the longitudinal groove provided in the protecting-rail, so that the curved end may be introduced into the groove of the rail at any non-constricted part of the same directly from above. The curved end of the fastening-iron *d* is provided at its lower side with a smooth surface, which when in position will rest upon the bottom of the groove. The upper side is half-round or is conically shaped, so that when the curved part is introduced into the constricted or narrower parts of the groove, the upper side will be

partly inclosed by the edges, and in this manner the irons are securely retained.

It is obvious that the configuration of the protecting-rail employed may be varied in accordance with the purpose for which it is intended to be used. The rail is preferably provided during its manufacture with a larger number of constricted parts or compressed pieces than the number of the fastening-irons intended to be made use of, so as to allow of introducing any suitable number of fastening-irons and of selecting any point desired for the fastening. Furthermore, it is possible to vary the shape of the constricted or narrower part, which is produced in the form of construction shown here, by way of example, by compressing the edges at both sides of the fastening parts, the variation being, for instance, effected by providing a larger number of very short compressed parts or by providing compressions at one side only.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In an article for the purposes described, the combination of a strip having formed in one face a longitudinally-extending groove, the side walls of which are bent inwardly at a plurality of opposite points intermediate of the ends of the groove to vary the form and dimensions of the groove at said points, and a fastening member having at one end a laterally-projecting section adapted to freely enter and move in the body of the groove and to fit closely in either of the contracted portions of said groove, substantially as set forth.

2. In an article for the purposes described, the combination of a strip provided in one

face with a longitudinally-extending groove having alternately-arranged sections of different cross-sectional form, and a fastening member having one end adapted to freely enter and move in alternate sections of said groove and to fit closely in the intermediate sections of the groove, substantially as set forth.

3. In an article for the purposes described, the combination of a strip having a groove extending throughout the length of one face, the side walls of said groove being bent inwardly at a plurality of opposite points to vary the form and dimensions of the groove at said points, and fastening members each adapted to fit closely within the contracted portions of said groove and to move freely in the other sections thereof, substantially as set forth.

4. In an article for the purposes described, the combination of a strip having a groove extending throughout the length of one face, the side walls of which are bent inwardly at an intermediate point in the length of said walls, and a fastening member having at one end a laterally-projecting section adapted to freely enter and move in the body of the groove and to fit closely in the contracted portion formed by the inward bending of the side walls of said groove, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

MAX RUPKE.

Witnesses:

OTTO SCHMITZ,
GUSTAV T. VOLL.