

C. J. FERGUSON.
Mat.

No. 218,948.

Patented Aug. 26, 1879.

Fig. I

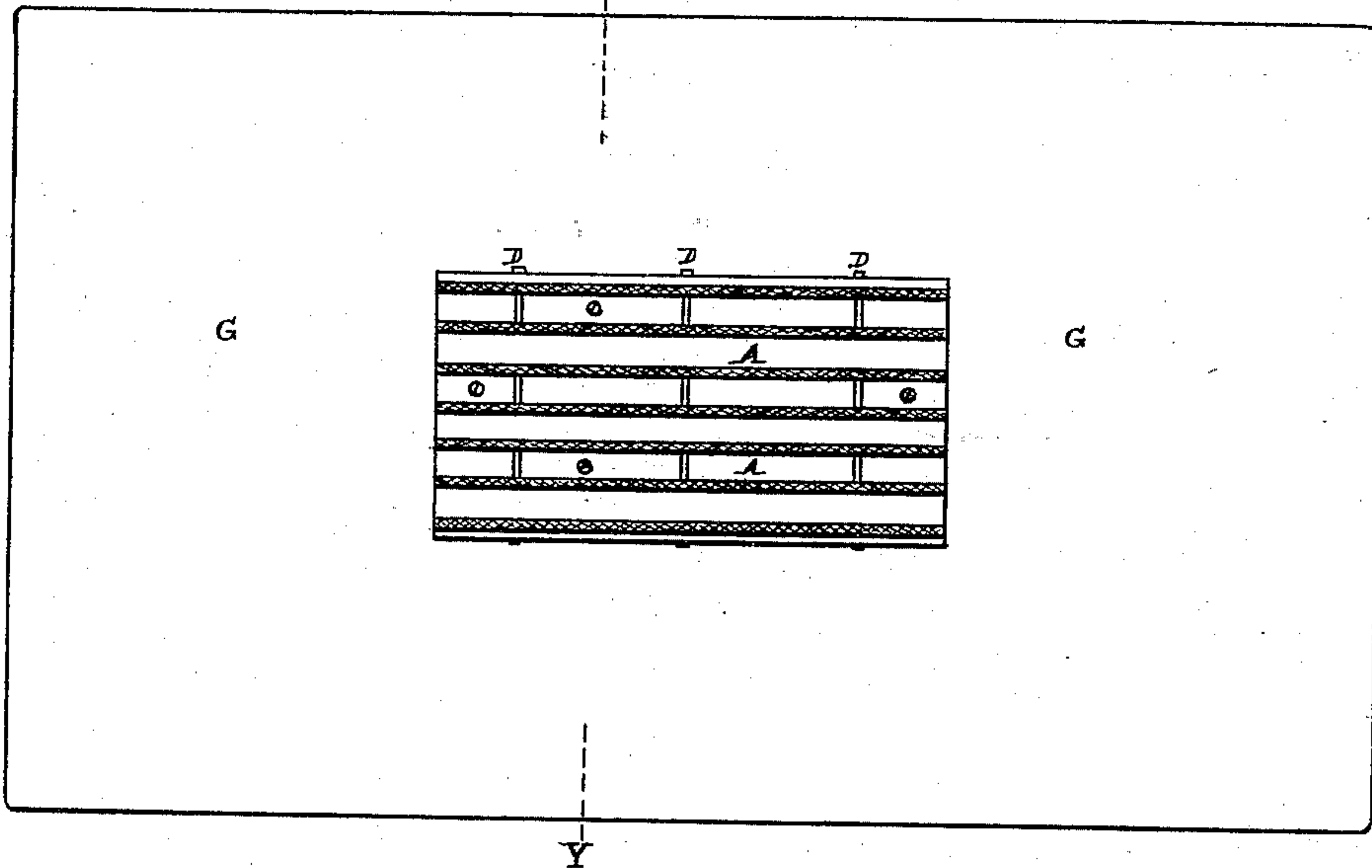
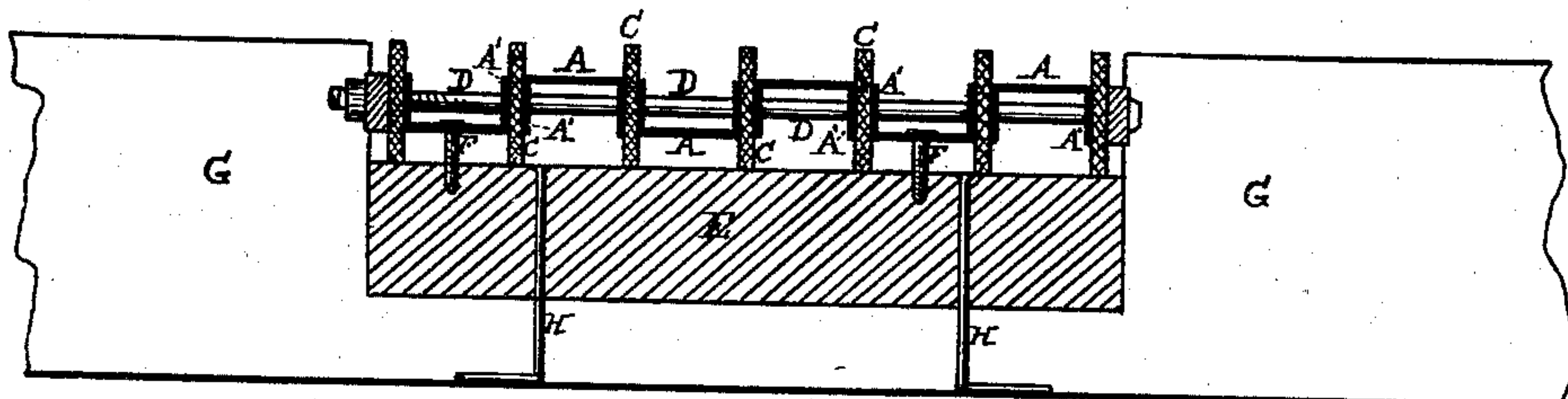


Fig. II



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN MATS.

Specification forming part of Letters Patent No. **218,948**, dated August 26, 1879; application filed
February 25, 1878.

To all whom it may concern:

Be it known that I, CHARLES J. FERGUSON, of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Mats and Foot-Scrapers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of my combined scraper and mat, and Fig. 2 a cross-sectional view taken on line X Y of Fig. 1.

Foot-scrapers are, to a greater or less extent, exposed to the weather, for they are frequently set out on door-steps and other open places, and when made of wood are liable to warp and fracture. The rough usage to which they are frequently subjected at the hands of servants also renders them liable to breakage.

It has been found, also, where a number of ridges are used upon which to scrape the feet, that where these ridges lie in, or about in, the same horizontal plane, the soles of the shoes alone are cleared of mud and dirt by the act of scraping, while a subsequent rubbing upon a soft mat is necessary to effectually remove the dirt from the sides of the shoe.

The object of the present invention is to produce a foot-scraper which will not be susceptible to easy fracture, will be free from liability to warp under the influence of alternate moisture and heat, which will have extra deep gutters between the ridges of upwardly-projecting material to receive the dirt, and thus prevent the scraper from being easily clogged with the same, and which will offer to the person using it the opportunity of scraping off caked mud and dirt, and also brush or wipe off what dirt may remain upon the shoe after the operation of scraping, or, if desired, at one and the same movement.

The invention, therefore, consists in connecting the scraper directly to the mat, and, preferably, in the middle thereof, so that the scraper will be surrounded by the material composing the mat.

The invention further consists in so constructing the scraper that it may be reversed, to present to the foot the strips of rubber or

gum that have not been worn, thereby utilizing both the edges of the strips without the necessity of removing them from the gutter bars or strips, and substituting new ones.

The invention further consists in the general construction of the several parts of the scraper, as will be hereinafter described, and subsequently pointed out in the claims.

In the accompanying drawings, A represents the longitudinal strips of sheet metal, of iron, brass, zinc, steel, or malleable iron; and A' are flanges extending longitudinally along the edges of said strips, forming part of the same, and, together with the strips A, forming what are called "gutter bars" or "strips." Strips C, of rubber or gum, are held between and sustained by the opposite faces of contiguous flanges of each two neighboring strips A. The strips C extend a short distance beyond the outer edges of the flanges A', and a metallic rod, D, passes transversely through the whole series of flanges A' and strips C, each end of the rod terminating in a thread and nut, as shown, for tightening the whole together; or it may be a long screw-bolt. E is a wooden base, to which the strips A are secured by means of screws F; and G is the mat, representing the ordinary cocoa matting, the length of the pile being represented by the distance from the lower edge of the wooden base E to the top of the mat. The part between the bottom of the wooden base and the bottom of the mat represents the body or base of the mat, and to this body is secured the wooden base by means of rods H, the heads of which hold down the wooden base, and the bodies of which pass through the same and through the body of the mat, and are clinched beneath by turning their lower projecting ends upon the lower face of the mat, as shown in Fig. 2.

In practice I place the rods D about four or five inches apart to one-inch-wide strips A, as shown in Fig. 1. I face the gutter-strips up and down alternately, so that the upper or exposed face of my scraper is an exact duplicate of the lower face, whereby, when the edges of the rubber strips C of the upper face become worn off, the scraper can be turned other face up by loosening the screws F and screwing

the scraper down in like manner as before in its new position.

Though I have described the strips C as being of rubber, yet any other suitable material may be used therefor. Rubber, through its softness and elasticity, is generally preferred to iron and other compositions. When rubber is used care should be exercised to make the projection of the strips beyond the flanges A' so short as not to leave it liable to be bent over and cut upon the upper edges of the flanges. To avoid this the rubber may be made of comparatively stiff sheets, or thick enough not to bend.

The scraper which I show is reversible; but if it is not desired to have it so the gutter-strips may be in cross-section U-shaped, which will insure greater ease in cleaning the scraper of dirt, which may be done by throwing the mat and scraper forcibly down face first. The gutter-strips, being of malleable metal, (in contradistinction to a crystalline or cast metal,) will not fracture under such circumstances.

The gutter-strips, consisting of the strips A and flanges A', may be either rolled, or they may be struck up on a die. If cast, the metal should afterward be made malleable to prevent fracture in cleaning.

The wooden base E may, if desired, be dispensed with and a metallic one substituted, or one of cork may be used; or the scraper may be secured directly to the body of the mat by the rods H, which, if substituted for the screws F, may pass through any intermediate packing E, and then through the body of the mat, as shown; or if the pile of them at G is so short as not to project to any material distance above the upper edges of the rubber strips C when the scraper is set in the middle of the mat, which portion should be plain or bare of pile, the scraper may be so secured directly to the body of the mat.

As the scraper is completely or entirely surrounded by the pile or material composing the mat, a person using it may pass his foot over

and upon the scraper, thus cleansing it of its most decided impurities, and into the soft pile of the mat, further clearing or freeing it from any further impurities remaining.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The mat, substantially as herein described, having a scraper surrounded by the pile or material composing said mat, substantially as and for the purpose set forth.

2. The combination of a scraper formed of a series of longitudinal strips and an ordinary door-mat body surrounding said scraper, substantially as and for the purpose specified.

3. The combination, with an ordinary door-mat, of a reversible foot-scraper, substantially as and for the purpose set forth.

4. The metallic strips A, formed with or having flanges A', and the rubber strips C, said strips held by and between the adjacent flanges A', substantially as and for the purpose described.

5. The metallic strips A, with flanges A', said strips being faced alternately upright and inverted, as shown, and the rubber strips C, sustained by and held between the flanges A', substantially as and for the purpose specified.

6. The combination of the mat and the metallic strips A, with flanges A', and the rubber strips C, held between the flanges and the rod or rods D, passing laterally through the same, substantially as and for the purpose set forth.

7. The combination, with a scraper formed of a series of rubber strips, C, projecting upward above and secured to strips A by the flanges A', of a surrounding mat-body, G, as shown, to form a combined scraper and mat, substantially as and for the purpose set forth.

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Witnesses:

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