(Model.)

W. A. JORDAN.

NUT WASHER.

No. 299,987. Patented June 10, 1884.

Fig 1.

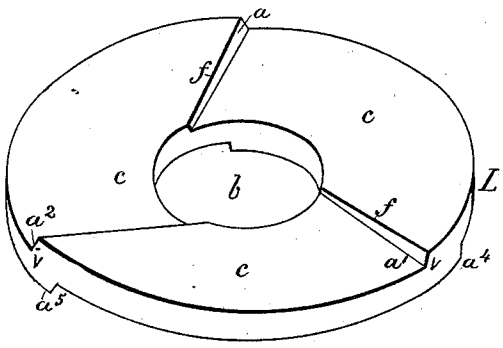


Fig 2.

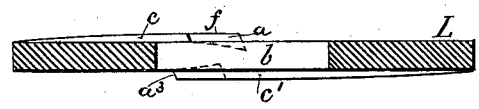


Fig 3.

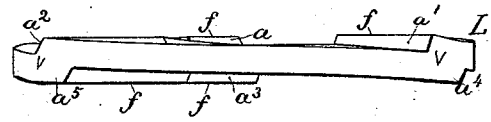


Fig 4.

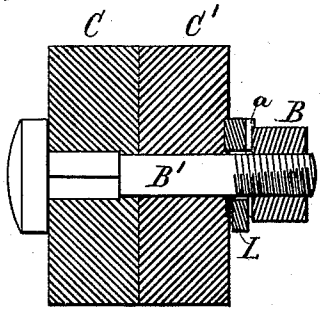


Fig 6

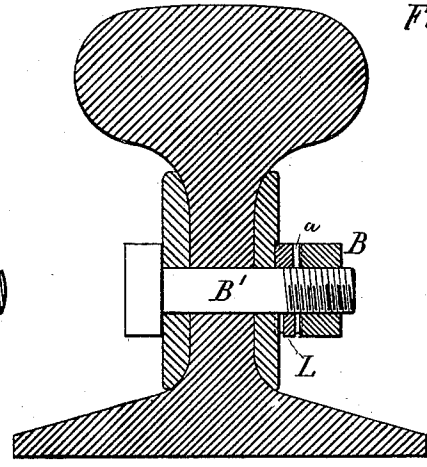
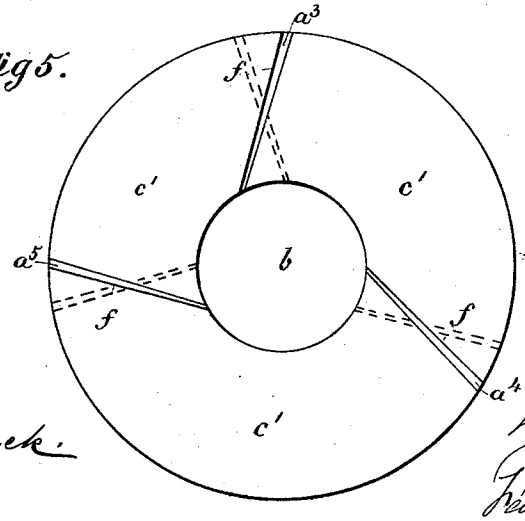


Fig 5.



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by his Attys

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UNITED STATES PATENT OFFICE.

WILLIAM A. JORDAN, OF NEW ORLEANS, LOUISIANA.

NUT-WASHER.

SPECIFICATION forming part of Letters Patent No. 299,987, dated June 10, 1884.

Application filed February 18, 1884. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM A. JORDAN, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Nut-Washer, of which the following, in connection with the annexed drawings and letters of reference thereon, is a specification.

The object of my invention is the production of a simple but effective nut-washer, whereby screw-nuts are prevented from being casually unscrewed from bolts to which they have been applied; and this object I attain by a nut-washer constructed in the manner represented in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved nut-washer. Fig. 2 is a central vertical section in the line *x x* of Fig. 1; Fig. 3, an edge view showing catches on each face side of the nut-washer; Fig. 4, a sectional view showing the application of the nut-washer in connection with a bolt and nut for the purpose of fastening together two or more pieces or plates of metal, or two or more pieces of wood and metal; and Fig. 5, an enlarged plan view showing the opposite side of the nut-washer from that shown in Fig. 1, and with its catches constructed on a line which, if extended, would pass to one side of the center of the bolt-hole *b*, thus giving a forward pitch or "rake" to the catches, whereby their "bite" against one of the pieces being bolted together, in order to oppose the unscrewing of the nut, will be more effective than would be the case were the catches formed on a line which would pass through the center of the bolt-hole. Fig. 6 shows my improved washer applied to the fish-plates of a railroad-rail.

My improved nut-washer, as shown at L in the figures, is made in disk form, of a single plate or piece of metal, the same being composed of the best quality of steel, which in the process of construction is cast in a mold, after a pattern constructed in the likeness of Figs. 1 and 5. As shown in Fig. 1, the nut-washer L is made with three inclined planes, *c*, between the points *a* to *a'*, *a'* to a^2, and a^2 to *a*, somewhat in the likeness of segments of a screw-thread; and these planes terminate at their highest points in biting or cutting edges *f*, and so as to form sloping catches, as *a*, *a'*, and a^2, said catches being sloped or inclined, as clearly shown at *a* and *a'* in the figures, and for a purpose hereinafter stated, while on the opposite side of the nut-washer (shown in Fig. 5) are like catches, designated as a^3 a^4 a^5, with like intermediate inclined planes, *c'*. As before stated, Fig. 1 shows one face or side of the nut-washer and Fig. 5 the other, the catches *a a'* a^2 being on one side of nut-washer, as seen in Fig. 1, and with reversely-arranged but like-constructed catches a^3 a^4 a^5 on the other side, as seen in Figs. 3 and 5, so that it is immaterial which side or face of the nut-washer is made to adjoin the nut B in the act of use signified in Figs. 4 and 6. In other words, if the nut-washer, when in use, shall have been placed upon the bolt B', with the face or side adjoining the nut B, which is shown in Fig. 1, then the catches *a a'* a^2 (shown in Fig. 3) become the resisting-catches to any movement of the nut B in a direction to unscrew said nut from the bolt B'; and in case the nut-washer in the act of use shall have been placed upon the bolt B' with its face or side adjoining the nut B, which is shown in Fig. 5, then the catches a^3 a^4 a^5 become the resisting-catches to any reverse movement of the nut B after having been screwed up, as shown in Figs. 4 and 6.

Fig. 4 shows two pieces, either of wood or metal, or one of wood and one of metal, (designated by C C',) bolted together, and with my nut-washer L applied between C' and the nut B; and as the nut-washer is provided on each face with three catches equally spaced apart they thus afford a level and true bearing against C', and without liability to slip when pressure is brought against it in the act of screwing up the nut B. In Fig. 4, for example, we will suppose C' to be either of wood or iron, and the nut B to have been fully screwed up against the face of the nut-washer. (Shown in perspective in Fig. 1.) This act forces more or less of all the catches a^3 a^4 a^5 into the iron or wood C', as the case may be, and as in part indicated in Fig. 4, and the said nut B during such act will also seat itself in a position forward of one of said catches; and thus if, for any cause, casual force should be applied to the nut tending to unscrew it, the nut would strike against one of said catches, and the force being continued would cause the catches a^3, a^4, and a^5 to seat themselves still deeper into C', and with a drawing cut or impact, ow-

ing to the pitch or rake given to said catches, as hereinbefore described, and thus positively prevent casual turning of the nut-washer upon the bolt B′, and consequently the unscrewing of the nut B. It is designed, however, that in case it becomes absolutely necessary to unscrew the nut B and take apart the pieces C and C′, the same can be done by applying a powerful leverage force upon the nut B, sufficient to cause the nut B to glide backward over the washer, this being permitted by reason of the said inclination or sloping of the edges of the catches. It will be seen that the catches taper from the circumference of the disk L to the bolt-hole *b*, and thus offer the least resistance at and near the bolt-hole and the greatest at and near the periphery of the disk.

By reference to Figs. 1 and 3 it will be clearly seen that the washer L is so constructed as to have the catches *a a′ a²* on one working-face overlap the catches a^3 a^4 a^5 on the opposite working-face, thereby preserving the full thickness of the metal composing the washer at the overlapping points *v*, and that by such construction the full strength and thickness of the metal at all points are preserved.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The nut-washer L, constructed with inclines *c* and catches *a a′ a²* on one face side, and with reversely-set but like inclines *c′* and catches a^3 a^4 a^5 on the opposite face side, substantially as described.

2. The nut-washer L, provided with reversely-set but like-constructed catches on both of its face sides, made with a tapered and beveled or sloping edge, and with a forward pitch or rake, substantially as and for the purpose described.

3. The nut-washer L, provided with catches, as *a a′ a²*, and inclines *c* on one of its face sides, and with reversely-set but like-constructed catches, as a^3 a^4 a^5, and inclines *c′* on its opposite face side, in combination with the nut B and bolt B′, substantially as and for the purpose described.

WILLIAM A. JORDAN.

Witnesses:
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CHAS. D. WADD.