

(No Model.)

G. W. ZEIGLER.

CLAMPING PLATE FOR TIMBER STRUCTURES.

No. 409,547.

Patented Aug. 20, 1889.

Fig. 1.

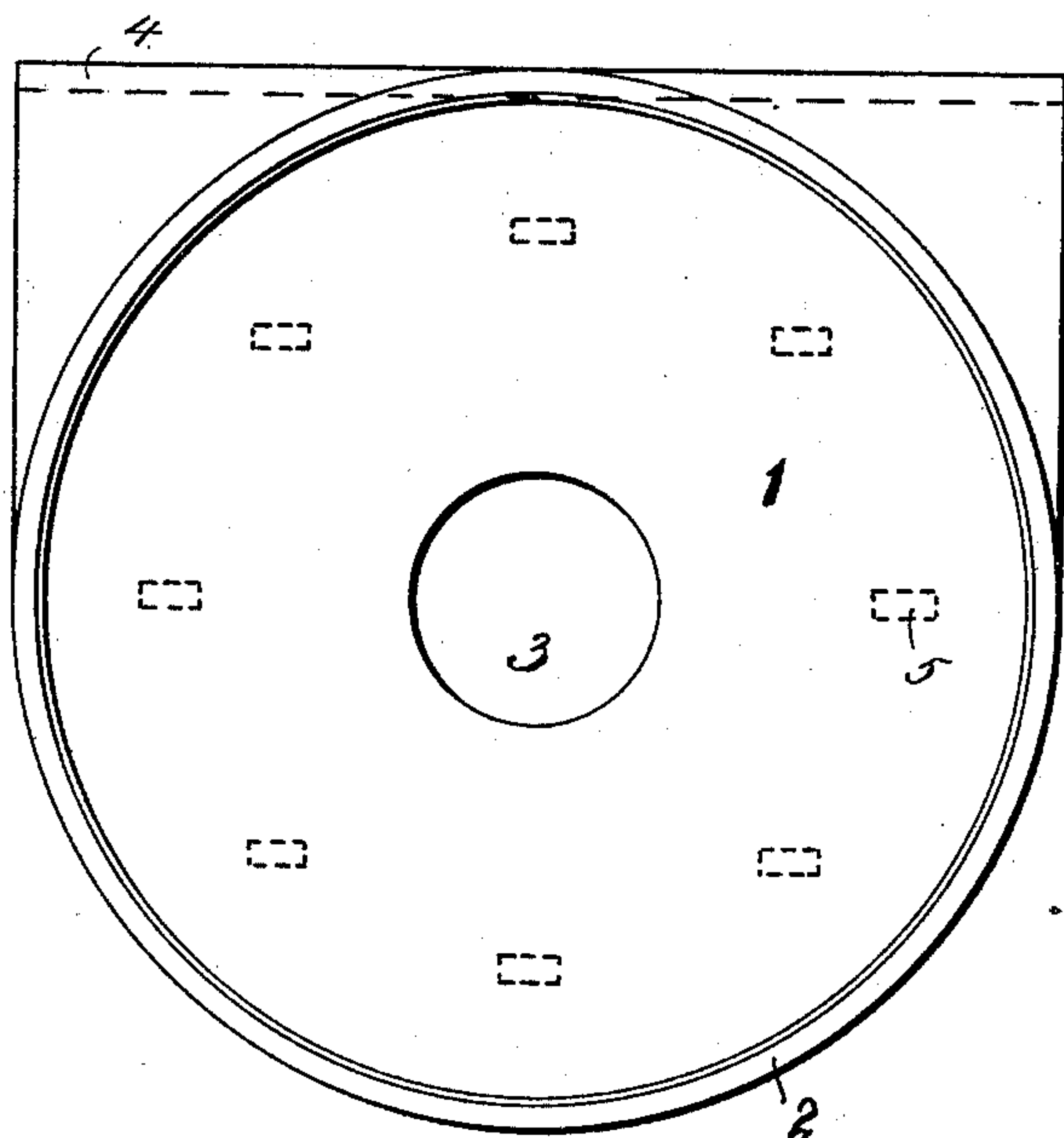
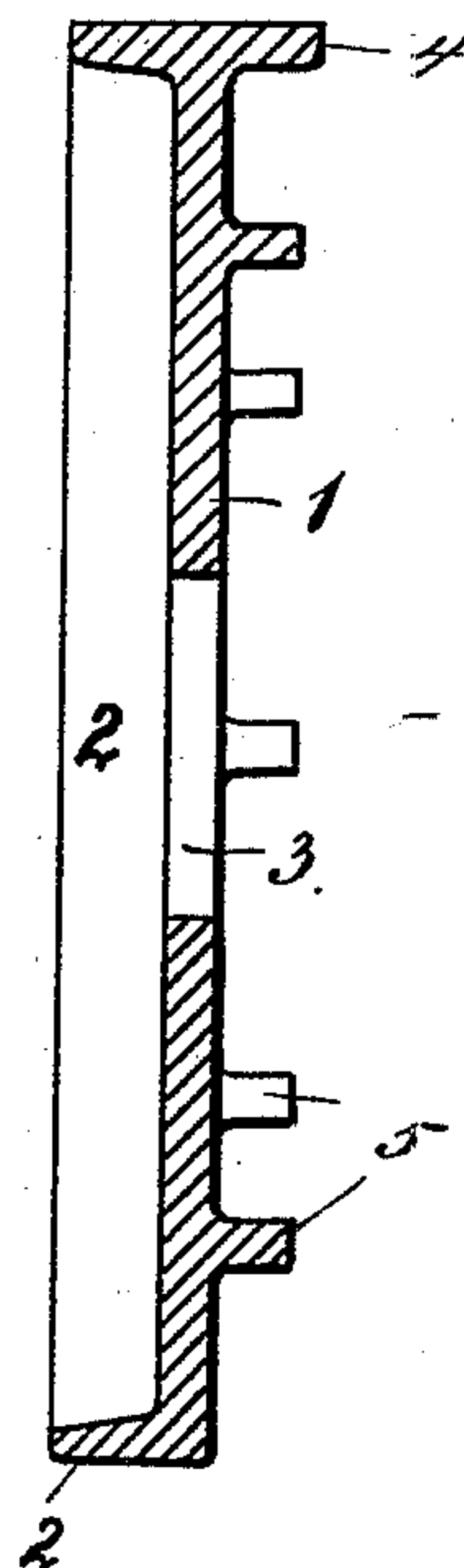


Fig. 2.



WITNESSES:

Hans A. Heiler,
Van Wyck Budd

INVENTOR

George W. Zeigler
BY *Sheldon Wiegand*
ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE W. ZEIGLER, OF PHILADELPHIA, PENNSYLVANIA.

CLAMPING-PLATE FOR TIMBER STRUCTURES.

SPECIFICATION forming part of Letters Patent No. 409,547, dated August 20, 1889.

Application filed May 13, 1889. Serial No. 310,607. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. ZEIGLER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Washers for Clamped Frame-Works and Scaffolds; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof as to enable others skilled in the art to make and use the said invention.

This invention relates to the uniting of the parts of wooden frame-works to each other which, for purposes of packing, erection, and convenient adjustment, required to be pivotally connected by bolts, with the utilization of the greatest practicable strength of the timber; and to accomplish this end the invention consists in a flat washer having a central bolt-hole and a rim concentric therewith upon one side, adapted to fit a correspondingly-shaped groove in timber, and on the opposite side a straight flange adapted to rest against the end of the timber, and a series of projecting teeth or spurs adapted to indent the timber to which it is applied and prevent the slipping thereon.

The construction of this invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a front view of my invention, the parts of the reverse side being drawn in dotted lines; and Fig. 2 shows an edge or side view thereof.

The same reference-marks indicate like parts in both figures.

1 is a flat washer, rectangular in one half and the other semicircular, and concentric with the semicircular portion and bounding the edge thereof is a circular rim 2, projecting on the front side of the plate 1. In the center of this circular rim is a hole 3 through the plate 1, of sufficient size to pass the shaft of the screw-bolt intended to be used with it. Upon the reverse side of the plate 1, at the margin of the straight side, is a straight projecting flange 4, against which the end of a timber may rest. On the same or reverse side of the plate 1 are a number of projecting teeth or spurs 5, which, when pressed firmly against a surface of wood, indent it, so that the plate 1 cannot slip on the timber. These teeth, while useful, are not absolutely essential, and may be omitted when desired.

These washers may be made by casting or by stamping from ductile metal. The latter are preferable, as being lighter for the same strength, but require much more expensive preparations for their manufacture, especially in the large sizes. To use these washers, a hole of the proper size to pass the bolt is bored in the timber to be united at the point around which it is desired to make pivotal adjustments. Next a groove concentric with the hole is cut by a screwing-bit of such form and diameter as to fit the rim 2 on the washer 1. Next a hole of a size to fit easily around the bolt is bored in the other piece of timber at a distance from the end equal to the distance from the hole 3 in the washer 1 to the straight flange 4. Next the bolt is put through the last-mentioned piece of timber, the washer 1 is placed on the bolt with the reverse face against the timber, the rim 2 is laid in the annular groove in the other timber and the bolt passed through it, and the nut applied and screwed up. The spurs 5 sink into the wood, and, with the flange 4, hold one piece of timber, while the rim 2, engaging in the annular groove, holds the other, so that any force applied tending to slide or separate the timbers is laterally or lengthwise resisted by the washer and the only strain upon the bolt is in the direction of its axis.

Having described my invention and the application and use thereof, what I claim is—

1. A new and useful article of hardware manufacture adapted to be used in uniting timber frame-works, consisting of washer having a central aperture and a concentric rim formed upon one side thereof, and a projecting right-line flange upon the other side, both framed integrally with the washer, substantially as set forth.

2. A new and useful article of hardware manufacture, consisting of a washer having a central aperture and a concentric annular rim upon one side and a right-line flange and projecting spurs and points upon the opposite side, and adapted to unite pivotally-adjustable parts of timber frame-works, substantially as set forth.

GEORGE W. ZEIGLER.

Witnesses:

J. DANIEL EBY,
VAN WYCK BUDD.