

L. K. FULLER.  
Washers for Wood-Screws.

No. 156,699.

Patented Nov. 10, 1874.

Fig. 1.

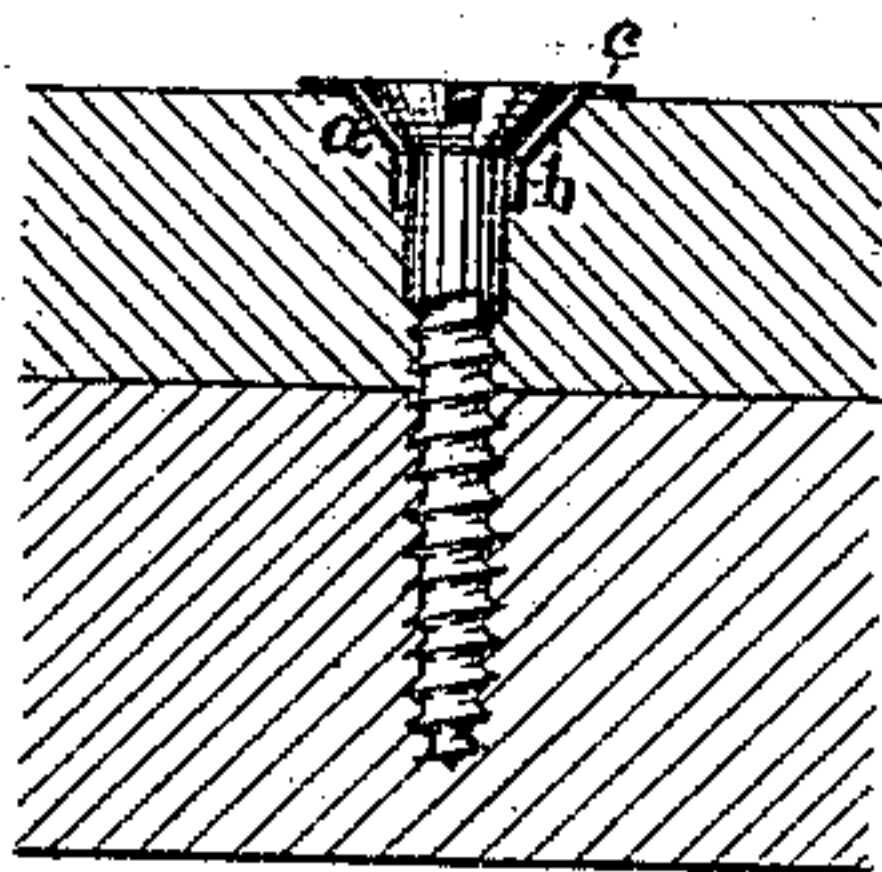


Fig. 2.

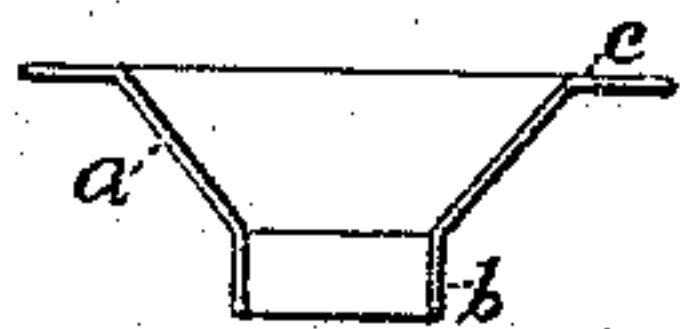


Fig. 3.

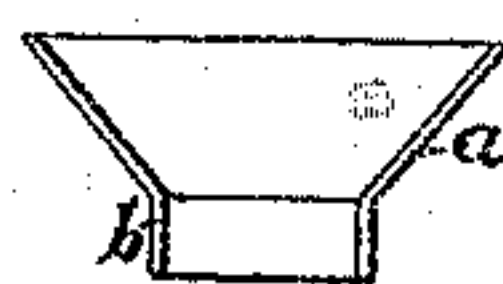
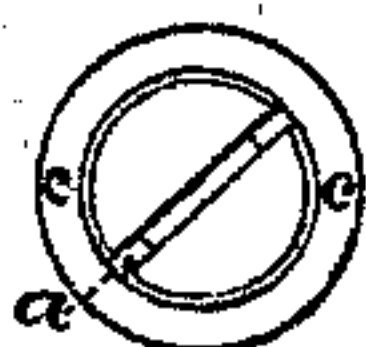


Fig. 4.



Witnesses:

William E. Bullock,  
Chas. M. Higgins.

Inventor:

Levi K. Fuller,  
Per Burke & Fraser,  
Attorneys.

# UNITED STATES PATENT OFFICE.

LEVI K. FULLER, OF BRATTLEBOROUGH, VERMONT.

## IMPROVEMENT IN WASHERS FOR WOOD-SCREWS.

Specification forming part of Letters Patent No. 156,699, dated November 10, 1874; application filed July 21, 1874.

*To all whom it may concern:*

Be it known that I, LEVI K. FULLER, of Brattleborough, Windham county, Vermont, have invented an Improved Washer for Wood-Screws, of which the following is a specification:

The object of my invention is to produce a washer for flat-headed or countersunk wood-screws, to rest between the conical screw-head and the surface of the wood, and retain the screw-head on a level with the surface of the wood, and secure certain other advantages hereinafter set forth; and it consists of a washer having a conical or funnel shaped body, with a tubular shank projecting from its lower and smaller end, and also, preferably, with a flat rim projecting from its upper or larger end.

In the accompanying drawings, Figure 1 is a vertical section of my improved washer, represented as in use. Figs. 2 and 3 are vertical sections of the same detached, and Fig. 4 is a plan view of Fig. 1.

In cabinet-joinery and other fine wood-work, when flat-headed wood-screws are used, they have to be countersunk, and the wood around the head is apt to be left ragged from torn fibers after the insertion of the screw; and if it has to be removed several times in fitting, the hole becomes torn and enlarged by the screw-driver, causing the screw-head to sink below the surface, and present a bad appearance; and not unfrequently the structure of the wood is so soft as not to admit of tightening the screw sufficiently to make a good joint. It is the object of my improvement to obviate these disadvantages, as well as facilitate the insertion or removal of the screws, and enable them to be driven home without splitting or displacing the fibers, securing a neater finish and appearance to the work, and enabling the parts to be more firmly tightened. To this end it consists of a conical washer, *a*, preferably struck up from thin sheet metal, and formed

with a bevel to correspond with the under side of the screw-head, and with a short tubular shank, *b*, projecting from its lower and smaller end, and also preferably with a flat marginal rim, *c*, on its upper edge. The conical portion of the washer rests between the beveled portion of the screw-head, and the surface of the countersunk hole protects the wood from injury, and retains the screw-head on a level with the surface of the wood. The tubular shank projects into the screw-hole, surrounds the shank of the screw, and guides it into the hole; and as it becomes wedged in the hole it retains the washer in place, allowing of the removal of the screw without removing or displacing the washer; and it also protects the hole from enlargement or contraction. The flat rim rests on the face of the wood, and conceals any irregularities caused in countersinking the hole for the screw-head, and offers greater resistance to the strain of the screw in tightening, while it produces a neater appearance.

I prefer, in some cases, however, to dispense with the rim, as shown in Fig. 3, which form is sufficient for ordinary wood-work, while the rimmed washer is best adapted for highly-finished work or soft woods, and may be made more ornamental in appearance by constructing it of a metal different in color from that of the screw.

I claim as my invention—

A washer for countersunk wood-screws, consisting of a truncated conical shell, *a*, and tubular shank *b*, with or without the flat rim *c*, substantially as herein set forth.

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

LEVI K. FULLER.

Witnesses:

L. W. HAWLEY,  
JULIUS J. ESTEY.