No. 753,950. PATENTED MAR. 8, 1904.

G. C. WYLAND.

METAL FASTENING DEVICE.

APPLICATION FILED NOV. 14, 1903.

NO MODEL.

Fig. 1.

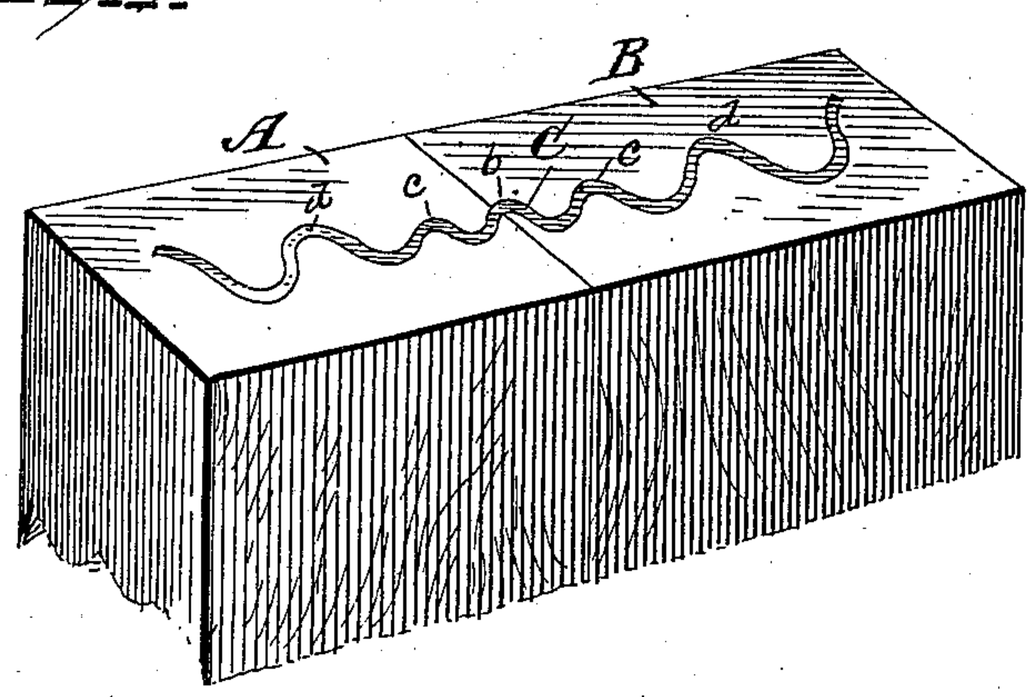


Fig. 2.

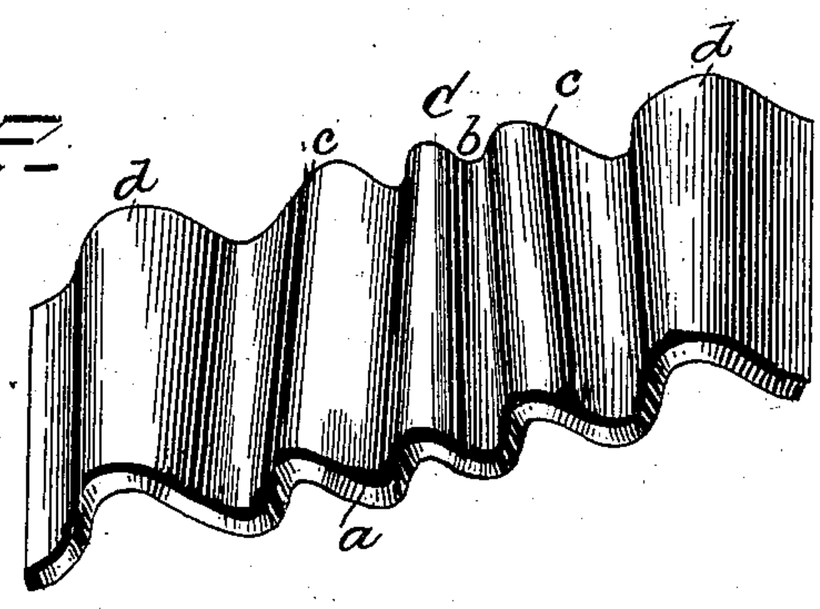
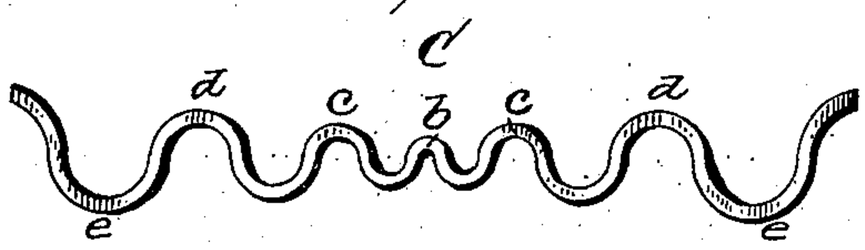


Fig. 3.



WITNESSES:

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No. 753,950. Patented March 8, 1904.

UNITED STATES PATENT OFFICE.

GEORGE CHAMBERS WYLAND, OF WILLIAMSPORT, PENNSYLVANIA.

METAL FASTENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 753,950, dated March 8, 1904.

Application filed November 14, 1903. Serial No. 181,201. (No model.)

To all whom it may concern:

Be it known that I, GEORGE CHAMBERS WYLAND, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Metal Fastening Devices; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has relation to that class of metal fastening devices comprising a rectangular or other form of metal plate having a plurality of vertical or transverse corrugations therein and are generally used for strengthening or fastening together wood joints by driving the fastening device into the wood and for other purposes to which a fastening of this character may be found useful.

Previous to my invention it was common to provide a series or plurality of corrugations throughout the length of the fastenting device which were of uniform size, either fine or coarse corrugations, to adapt the fastening to different uses, such as coarse or fine work.

A fastening device with fine corrugations alone will not successfully hold in soft wood on account of the insufficient hold of the corrugations in the fibers of the wood, and a coarse corrugation alone cannot be successfully driven into the wood, in view of the width of the grain covered by the fastener, the fibers doubling over or the fastening turning while being driven.

The objections to a fastening device having its corrugations uniform in size, as above set forth, are entirely overcome by combining in one and the same fastening device both a fine and a coarse corrugation, thereby securing the advantages without the necessity of a special form of fastening device for each kind of work, and thus adapting the device for use on fine or coarse work with success and without injury to the wood.

The invention consists of a metal fastening device constructed substantially as shown in the drawings and hereinafter described and claimed.

Figure 1 of the drawings is a perspective view showing a joint formed by my improved fastening device; Fig. 2, a perspective view of the fastening device; Fig. 3, an edge view of the fastening device, showing an increased number of corrugations.

In the accompanying drawings, A B represent two pieces of wood, and C my improved metal fastening device, forming the joint thereof, said device being preferably formed with one of its edges sharp or reduced in thickness, as shown at *a*, to better facilitate driving the device into the wood. The corrugations of the fastening device increase in depth and width from the center thereof in a direction outward toward the ends—as, for instance, taking the central corrugation *b* as the center, the corrugation *c* upon each side thereof will increase in size, as will also the corrugations *d* over the preceding corrugations—and in Fig. 3 an additional corrugation, *e*, is shown at each end, as I do not wish to be understood as limiting my invention to any specified number of corrugations or the size of the fastening device or the kind of metal from which it is manufactured, this being left entirely to the manufacturer. In the reduced size of the corrugations from the outer ends of the fastening device to its center the stiffer and stronger the device will be at its center in proportion to the fineness of the corrugations, these graduated corrugations enabling the device to withstand the twisting and bending strain when driven into the wood and after it is in the wood, and the coarser the corrugations at the end of the device the greater will be the holding qualities thereof, and the corrugations being of increased width and depth, increasing in size from its center outward, enables the device to be driven with much better effect, and the corrugations diverging instead of parallel will leave a wedge-shape center, as shown in Fig. 2 of the drawings.

A fastening device constructed as herein described is equally applicable to fine or coarse work without the necessity of requiring a

specially-constructed fastening device for fine work and another fastening device especially adapted for coarse work.

The finer of the corrugations in my improved fastening device will come at the intersection of the wood joint, and consequently greater will be the resistance to withstand the strain of stretching or of bending, such as a fastening device would be subjected to at the meeting ends of the joint, and the increased coarseness of the corrugations would increase its holding power in the wood, and with these two features of the invention embodied in a single fastening device a much firmer joint would be the result when used to fasten two pieces of wood together, as in boxes, crates, &c.

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

1. A metal fastening device having a plurality of graduated corrugations, substantially as and for the purpose set forth.

2. A metal fastening device having a plurality of corrugations which increase in size from its center in a direction toward its ends, substantially as and for the purpose specified.

3. A metal fastening device having a plurality of corrugations increasing in depth and width in a direction from its center toward its ends, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE CHAMBERS WYLAND.

Witnesses:

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B. S. RAKESTRAW.