

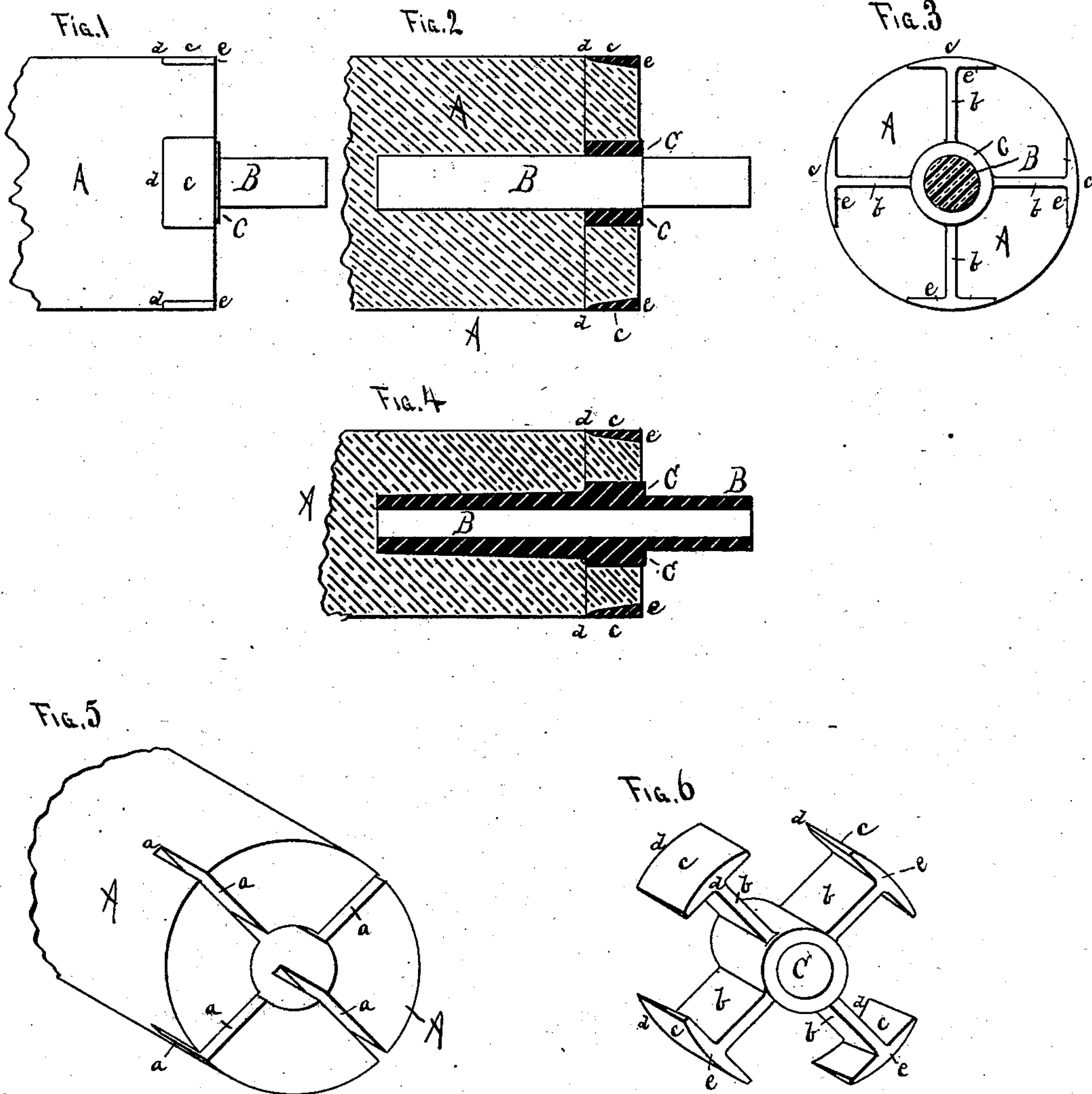
(No Model.)

J. L. OWENS.

COMBINED FERRULE AND GUDGEON FOR WOODEN ROLLERS.

No. 255,188.

Patented Mar. 21, 1882.



WITNESSES.  
Alfred A. Hall  
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# UNITED STATES PATENT OFFICE.

JOHN LLOYD OWENS, OF MINNEAPOLIS, MINNESOTA.

## COMBINED FERRULE AND GUDGEON FOR WOODEN ROLLERS.

SPECIFICATION forming part of Letters Patent No. 255,183, dated March 21, 1882.

Application filed December 27, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN LLOYD OWENS, a citizen of the United States, and a resident of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Combined Ferrule and Gudgeon for Wooden Rollers, of which the following is a specification.

This invention relates to attachments upon the ends of wooden rolls or drums to prevent their being split by the journals or gudgeons; and it consists in a central hub through which the rod or shaft forming the journal or gudgeon is driven into the wood or formed in one piece therewith, and provided with branching arms or webs having T-heads adapted to in-clasp a portion of the circumference of the drum, as hereinafter set forth. I attain these objects by the use of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an outside view of the side of one end of a drum or roller. Fig. 2 is a sectional view, and Fig. 3 is an end view, of the same, showing the manner of constructing the ferrule when the gudgeon is formed separately; and Fig. 4 is a sectional view, showing the construction when the ferrule and gudgeon are cast in one piece. Fig. 5 is a perspective view of one end of a drum or roller, showing the manner of forming it for the reception of the ferrule. Fig. 6 is a perspective view of one of the ferrules detached.

A is the wooden roller or drum, having a hole bored in its end for the reception of the gudgeon B, and with grooves or channels *a* branching from the central hole to the circumference of the drum, as shown in Fig. 5. The upper portion of the hole for the gudgeon B is enlarged to receive a collar, C, which fits closely around the gudgeon, and is provided with a number of arms or webs, *b*, corresponding to

the channels *a* branching outward from it, as shown. Across the ends of the arms *b* are T-heads *c*, with their lower edges, *d*, and thicker upper edges, *e*, thus making the T-heads wedge-shaped. The central collar, C, and arms *b* will also be slightly wedge-shaped and somewhat larger than the channels *a* and the hole for the collar, so that when the ferrule and arms, as shown in Fig. 6, are driven into the end of the drum the collar and arms will fit the wood tightly, while the wedge-shaped T-heads *c* will compress the wood beneath them from the outside and firmly clamp the drum, and hold the ferrule in place and support the wood and prevent its being split. The T-heads *c* will conform on the outside to the surface of the drum, so that no projections occur when the ferrule is in place. By this means a large amount of the surface of the wood is in contact with the metal, so that the holding power of the ferrule is greatly increased, while the whole strain outward is upon the collar C and not upon the drum. The gudgeon may be formed separately, or in one piece with the central collar and T-arms, as shown in Fig. 4, and the gudgeon may be made hollow, as in Fig. 4, or solid, as in Figs. 1, 2, and 3.

The invention is especially applicable to the elevator drums or rollers of grain-harvesters.

What I claim as new is—

The central collar, C, arms *b*, T-heads *c*, and gudgeon B, separately or in one piece therewith, in combination with a wooden roller, A, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN LLOYD OWENS.

Witnesses:

C. N. WOODWARD,  
LOUIS FEESER, Sr.