

(No Model.)

G. H. JANTZ.

ATTACHING DRUMS AND SLEEVES TO SHAFTS:

No. 501,228.

Patented July 11, 1893.

FIG. 1.

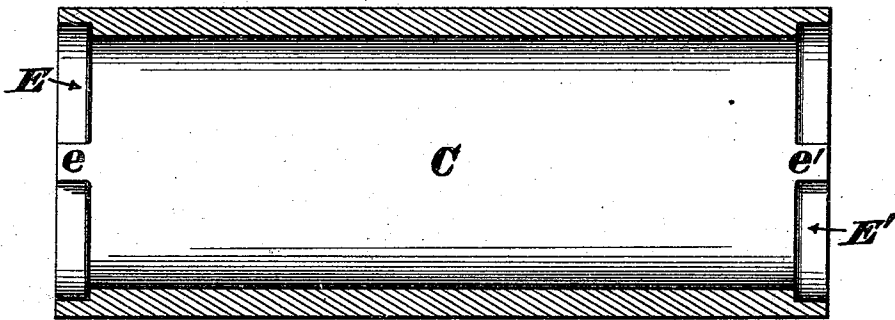


FIG. 2.



FIG. 3.

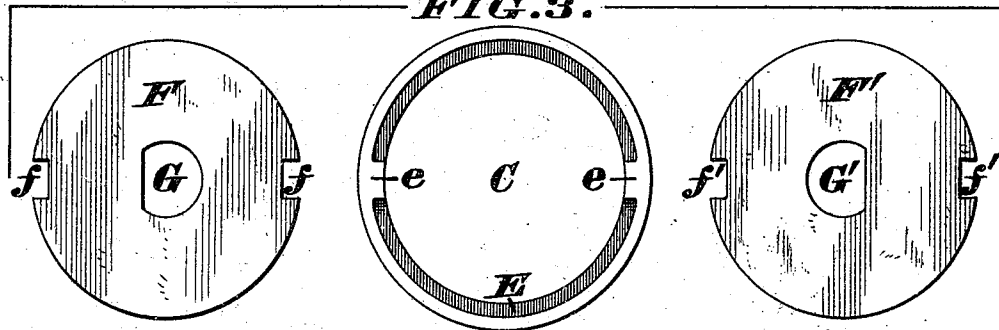


FIG. 4.

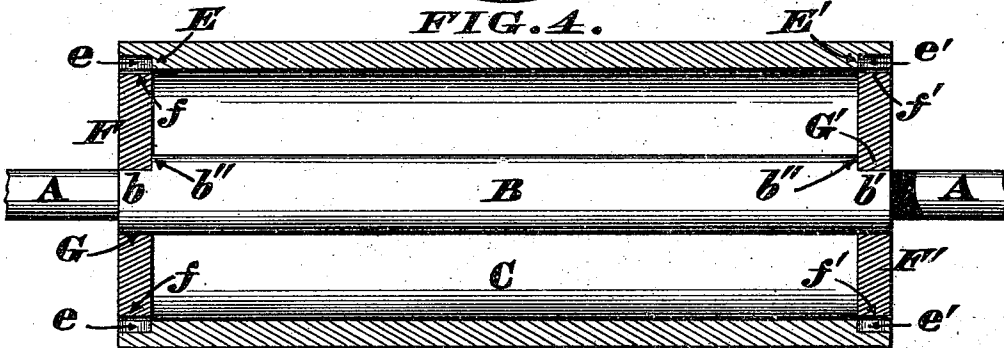
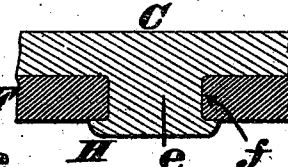
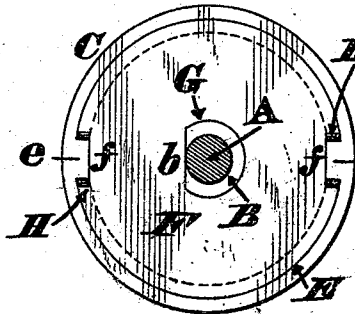
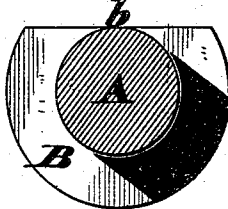


FIG. 6.

FIG. 5.

FIG. 7.



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UNITED STATES PATENT OFFICE

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ATTACHING DRUMS AND SLEEVES TO SHAFTS.

SPECIFICATION forming part of Letters Patent No. 501,228, dated July 11, 1893.

Application filed April 29, 1893. Serial No. 472,343. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE H. JANTZ, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Attaching Drums and Sleeves to Shafts; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

My invention comprises a novel combination of devices that enables drums, sleeves and other similar cylindrical devices to be readily attached to a shaft, and without employing keys or set screws or other projecting appliances, the details of said combination being hereinafter fully described.

In the annexed drawings, Figure 1 is a longitudinal section of a drum constructed so as to be applied to a shaft with my connections. Fig. 2 is a side elevation of a shaft arranged to carry said drum. Fig. 3 is an elevation showing one end of the drum, and each of the heads to be fitted therein. Fig. 4 is a longitudinal section showing said drum attached to the aforesaid shaft. Fig. 5 is an end elevation of this attached drum and shaft, the latter being sectioned. Fig. 6 is an enlarged sectional-elevation of the segmental portion of the shaft that occupies a head. Fig. 7 is a detail view.

A represents a shaft, and B is an enlargement of the same, which enlargement may be integral with said shaft, or it may be immovably attached thereto by any suitable means. Furthermore, this enlargement is, practically, of the same length as the drum, or sleeve, or other cylindrical attachment C, to be mounted upon the shaft, the opposite ends of said cylinder being countersunk at E, E', and provided with inwardly-projecting tongues *e, e, e', e'*, that fit snugly within notches *f, f, f', f'*, of the disks or heads F, F'. G, G', are D-shaped openings in the center of these heads, to admit the similarly-shaped portions of the shaft, which segmental portions are formed by cutting away sufficient of the enlargement B to afford a pair of flat faces or bearings *b, b'*, which bearings are,

preferably, carried down to the shaft proper A, as seen in Fig. 6.

The cylinder C, is secured to the shaft A, in the following manner: Shaft A is inserted within cylinder C, and the ends of the latter are brought in line with the ends of enlargement B, after which act, the heads F, F', are slipped along said shaft and fitted within the respective countersinks E, E'. When these disks are fitted in place, the flat portion of opening G of disk F, is caused to bear against the flat face *b*, of the enlargement, the tongues *e, e*, of the cylinder being caused to enter the notches *f, f*, of said disk. The other disk F', is secured in a precisely similar manner, the flat portion of its opening G', being brought to bear against the flat face *b'*, of the enlargement, the tongues *e' e'*, of the cylinder being now engaged with the notches *f', f'*, of said disk. The edges of the various tongues are then upset against the outer surfaces of the disks, as seen at H, in Figs. 5 and 7, which simple operation is all that is necessary to secure the cylinder to the shaft. When thus secured, the shoulders *b'',* at the inner ends of the flat faces *b, b'*, prevent the disks or heads F, F', approaching each other, while the upset portions of the tongues prevent said disks shifting away or outwardly. Consequently, the cylinder is locked to the heads, and as the non-circular openings G, G', of the latter are fitted to the segmental portions *b, b'*, of the shaft, it is evident these two members A, C, must revolve in unison. It is also evident there can be no bodily separation of these members, except by the exertion of sufficient force to bend back the upset portions H, of the tongues. In some cases, a single notch can be made in each head, and the latter be secured in place by other means than the upsetting of the tongues,—as for example, by keys or bolts. Finally, it is immaterial what shape may be given to the exterior of cylinder C. Neither is it a matter of any consequence as to the duty performed by said cylinder, or its equivalent attachment.

I claim as my invention—

The combination, of shaft A, having an enlargement B, flat faces *b, b'*, and shoulders

b'', *b''*, the cylinder C, having countersunk ends E, E', provided with inwardly-projecting tongues *e*, *e'*, and the heads F, F', having notches *f*, *f'*, and openings G, G', that fit
5 around the segmental portions of said shaft and are secured in place, substantially as described and for the purpose stated.

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

GUSTAVE H. JANTZ.

Witnesses:

JAMES H. LAYMAN,
ALFRED M. DAVIS.