(No Model.)

L. R. FAUGHT.

SHAFT COUPLING.

No. 260,468. Patented July 4, 1882.

FIG. 1.

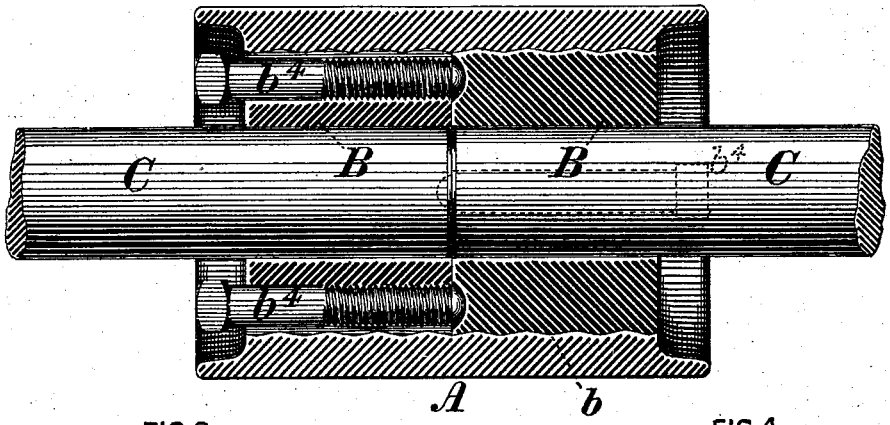


FIG. 3.

FIG. 4.

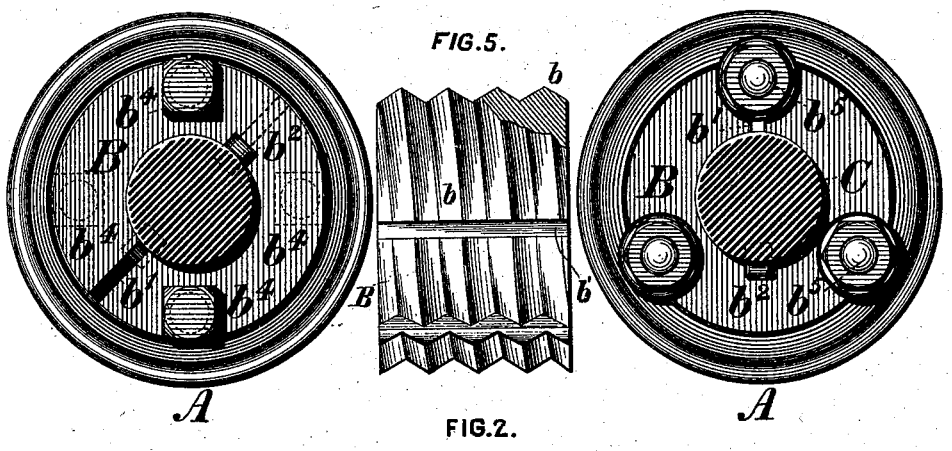
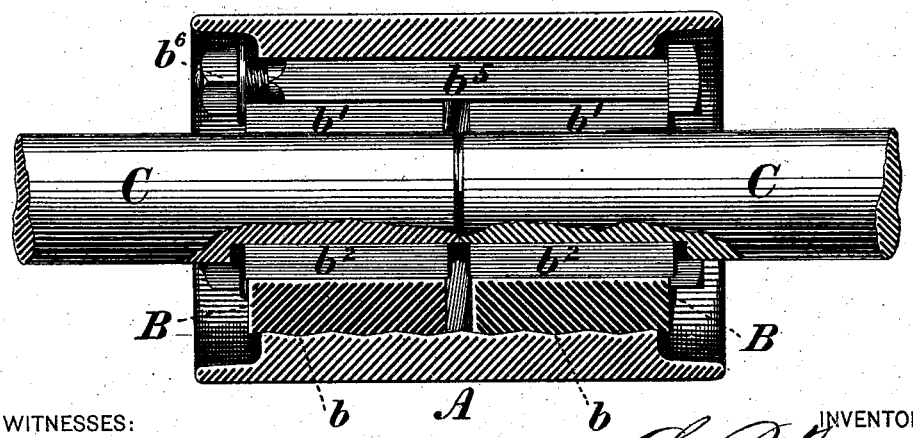


FIG. 2.



WITNESSES:

Geo. B. Collier

Geo. T. Kelly.

INVENTOR

L. R. Faught,

by Collier & Bell,

Attys.

UNITED STATES PATENT OFFICE.

LUTHER R. FAUGHT, OF PHILADELPHIA, PENNSYLVANIA.

SHAFT-COUPLING.

SPECIFICATION forming part of Letters Patent No. 260,468, dated July 4, 1882.

Application filed May 11, 1882. (No model.)

To all whom it may concern:

Be it known that I, LUTHER R. FAUGHT, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Shaft-Couplings, of which improvements the following is a specification.

My invention relates to clamp or compression couplings; and its object is to provide improved means for compressing the flexible sleeves upon the sections of shafting to be connected, retaining them firmly in position in operation, and admitting of their ready detachment and removal, as required.

To this end my improvements consist in the combination of two flexible sleeves having helical wedges upon their peripheries, a rigid inclosing shell recessed helically to engage the wedges of the sleeves, and longitudinal clamping screws or bolts by which end-pressure is applied to the sleeves, as hereinafter more fully set forth.

In the accompanying drawings, Figures 1 and 2 are longitudinal central sections through shaft-couplings embodying different forms, respectively, of my invention; Figs. 3 and 4, end views, in elevation, of the couplings shown in Figs. 1 and 2, respectively; and Fig. 5, a side view, partly in section, of one of the clamping-sleeves shown in Figs. 1 and 2.

To carry out my invention I provide a cylindrical inclosing case or shell, A, having an inclined-sided recess extending helically over the surface of its central cylindrical bore or opening, the section of said recess being such as to admit of engagement with the wedges *b*, to be presently described. Two laterally-flexible sleeves, B B, bored out centrally to a diameter admitting of their easy adjustment upon the sections C C of shafting which are to be connected, are fitted upon said sections adjacent to their ends, and are held firmly as against circumferential movement about the axes of the sections by keys b^2 entering keyways formed in the sections and sleeves.

Each of the sleeves B is longitudinally divided by a slot, b', extending from its central bore to its periphery on one side of its axis, the sleeves being thereby rendered capable of yielding to compressive force, and under the influence thereof firmly clamping themselves to the shaft-sections, and of springing outwardly to their normal form upon the release of such applied compression. A wedge, rib, or projection, *b*, the sides of which are inclined at an angle (preferably acute) to the axis of the sleeves B, is formed helically upon the periphery of each of them, said wedges, in order that the greatest practicable amount of frictional surface may be obtained, constituting screw-threads, which extend continuously over the periphery of the sleeves and engage with the correspondingly-formed recess of the outer shell, A.

So far as described, the construction of the coupling accords with that for which I have made application for Letters Patent of the United States under date of March 31, 1882, serial No. 56,944; but my present invention embodies different means for effecting the compression of the sleeves upon the shaft-sections, which means I shall proceed to describe.

Referring to Figs. 1 and 3, the sleeves are compressed by pressure acting upon their inner or adjacent ends, such pressure being exerted by set-screws b^4, which are arranged longitudinally in pairs in the sleeves, the set-screws of each pair engaging female threads in one sleeve and entering shallow recesses in the inner end of the other sleeve.

In the adjustment and locking of the coupling the sleeves, shell, shaft-keys, and shafts are assembled and the sleeves screwed together until their inner faces abut. The two sleeves are then compressed against the outer shell and upon the sections of shafting on which they are fitted by the end-pressure induced upon them by screwing up the set-screws of the two sleeves to their bearings against the recesses in the ends thereof, the engagement of the set-screws and recesses serving, further, to prevent the slackening of the sleeves by unscrewing from their positions in the shell. As an alternative construction, set-screws bearing directly upon the ends of the sleeves, without entering depressions or recesses therein, may be employed when the direction of motion is not such as to slacken the sleeves.

In the instance shown in Figs. 2 and 4 the

sleeves do not abut at their inner ends, and the compression by which they are locked upon the shaft-sections is induced by pressure applied at their outer ends, and tending to draw them together longitudinally, instead of, as in the former case, to separate them. Such application of pressure is effected by means of bolts b^5, fitting freely in longitudinal recesses adjacent to the peripheries of the sleeves B, and provided with nuts b^6, which may be screwed to a bearing against the outer end of one of the sleeves, while the heads of the bolts bear against the outer end of the other sleeve. As in the former instance, rotation of the shaft-sections independently of the sleeves is prevented by shaft-keys b^2.

I am aware that tapering clamping-sleeves compressed by jam-nuts or by bolts and nuts have been heretofore known, and such therefore I disclaim.

I claim as my invention and desire to secure by Letters Patent—

The combination, substantially as set forth, of two flexible cylindrical sleeves, each having a helical wedge upon its periphery, a rigid shell or case recessed helically to engage the wedges of the sleeves, and longitudinal clamping screws or bolts adapted to inwardly compress the sleeves by transmitting end-pressure thereto.

L. R. FAUGHT.

Witnesses:
J. SNOWDEN BELL,
WALTER S. GIBSON.