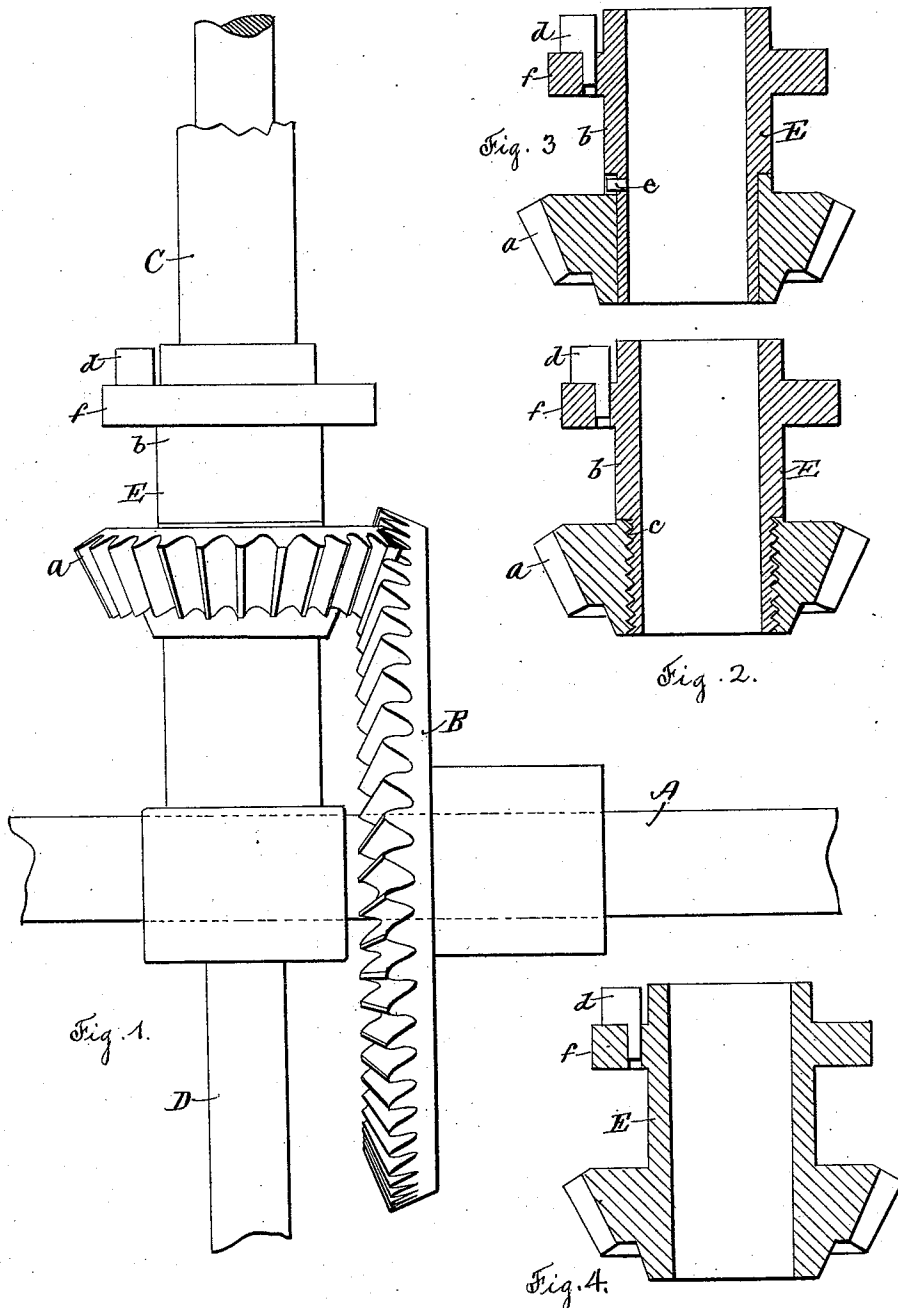


(No Model.)

J. J. SCHOLFIELD.
COTTON SPEEDER GEAR.

No. 466,263.

Patented Dec. 29, 1891.



Witnesses
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JOSEPH J. SCHOLFIELD, OF PROVIDENCE, RHODE ISLAND.

COTTON-SPEEDER GEAR.

SPECIFICATION forming part of Letters Patent No. 466,263, dated December 29, 1891.

Application filed July 17, 1891. Serial No. 399,867. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. SCHOLFIELD, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Cotton-Speeder Gears, of which the following is a specification.

Heretofore the "bobbin-gear" which engages with the skew-bevel driving-gear in cotton-speeder frames has universally been made with an elongated hub, in order to give a sufficient length of bearing upon the bolster, to admit of being driven at the great rate of speed required, the said hub being commonly provided with a radial flange at its upper end and with a clutch-pin for driving the superposed bobbin. In the manufacture of these gears it has been the custom to anneal the castings in order to prevent the scale from dulling the tools required for properly finishing the surface, and also to prevent the too rapid wear of the teeth of the engaging skew-bevel gear secured upon the driving-shaft. The softened teeth of the bobbin-gear are thus rendered liable to rapid wear, so that in a comparatively short time the said gear has to be removed and a new one substituted in its place; and it is the object of my invention to reduce the cost of making such substitution; and to that end my invention consists in the detachable combination of a bobbin-gear and a bobbin-supporting sleeve, and in the employment of a screw-thread for effecting the detachable connection of the same, whereby the bobbin-supporting sleeve may be detached from the worn-out gear and utilized by recombination with a new gear, thus effecting the required change of gears at a comparatively slight cost.

Figure 1 represents an elevation of the bobbin-gear and of the skew-bevel gear by which it is driven. Fig. 2 represents an axial section of a bobbin-gear and bobbin-supporting sleeve embodying my improvement. Fig. 3 is an axial section showing a modification. Fig. 4 represents an axial section of the bobbin-gear and sleeve as heretofore constructed in one piece.

In the accompanying drawings, A represents the driving-shaft; B, the skew-bevel gear upon the said shaft, and C, the bolster, which serves to support the said shaft A, and also the spindle D, the bobbin-supporting sleeve *b*, and the bobbin-gear *a*, the said sleeve *b* being preferably provided with a screw-thread *c*, which is adapted to enter the screw-threaded cavity of the gear *a*, and also provided with the flange *f* and clutch-pin *d*, engaging with the head of a bobbin, which is to be placed loosely upon the bolster C above the bobbin-sleeve; and with this construction of my invention, upon the wearing out of the teeth of the bobbin-gear *a*, the bobbin-supporting sleeve *b* may be readily detached from the worn-out gear and then utilized by recombination with a new gear, thus saving the expense of making a new sleeve portion.

A modification of my invention is shown in Fig. 3, in which the bobbin-gear *a* is fitted to pass over the end of the bobbin-supporting sleeve *b*, and is secured thereto by means of the steady-pin *e*, so that the rotary movement of the gear will be imparted to the sleeve, but the attachment of the parts by means of a screw-thread is preferred.

Other modifications may be adopted without departing from the spirit of my invention, the example given being deemed a sufficient exemplification of the principle involved.

I claim as my invention—

1. In combination, a bobbin-gear and the bobbin-supporting sleeve detachably secured to said gear, substantially as described.

2. In combination, a bobbin-gear provided with an attaching screw-thread and the bobbin-supporting sleeve detachably secured to said gear by the thread of the screw, substantially as described.

JOSEPH J. SCHOLFIELD.

Witnesses:

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