C. E. COLEGROVE.

FRICTION CLUTCH FOR SEWING MACHINES.

APPLICATION FILED JAN. 28, 1910.

990,033. Patented Apr. 18, 1911.

Fig. 1.

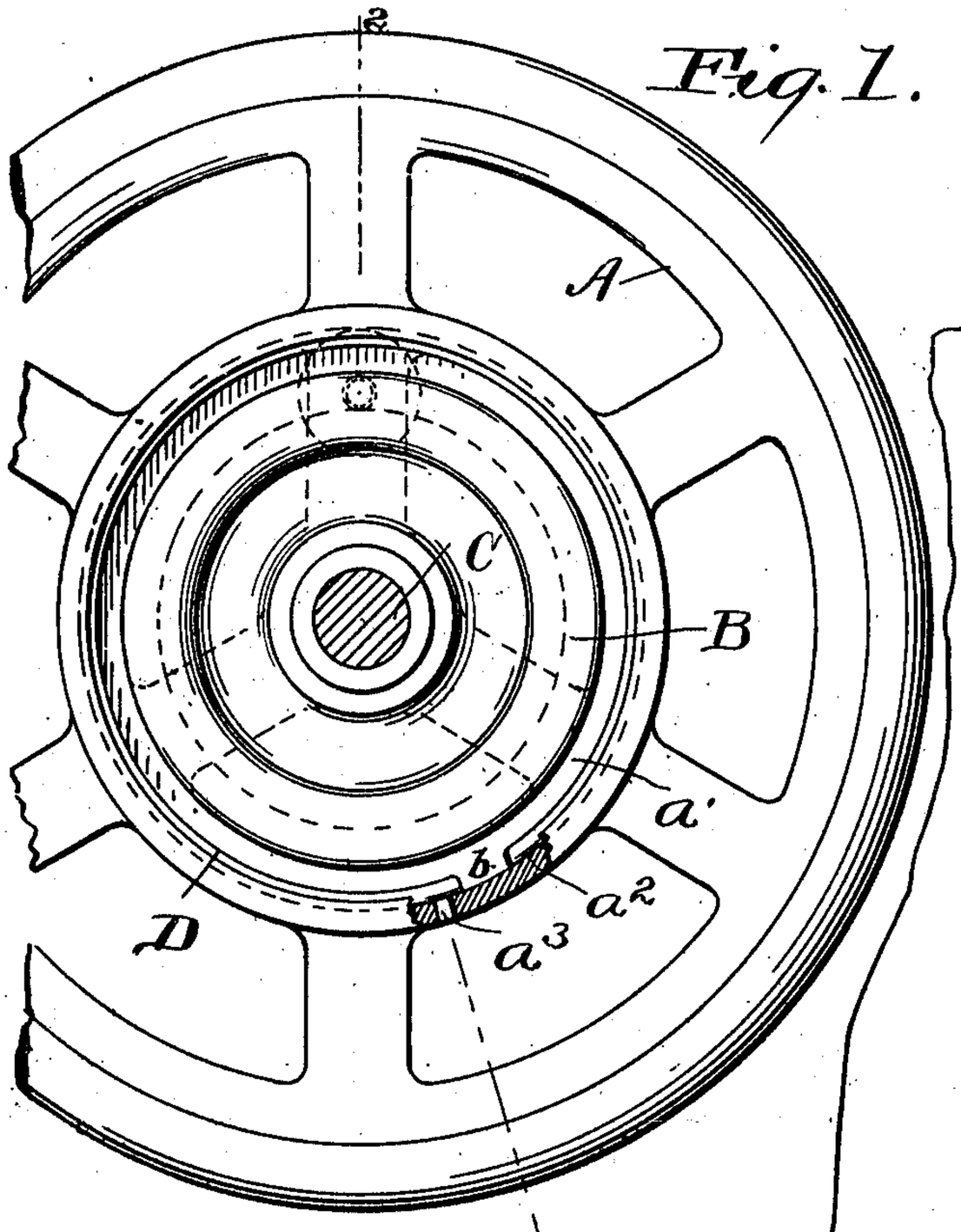


Fig. 2.

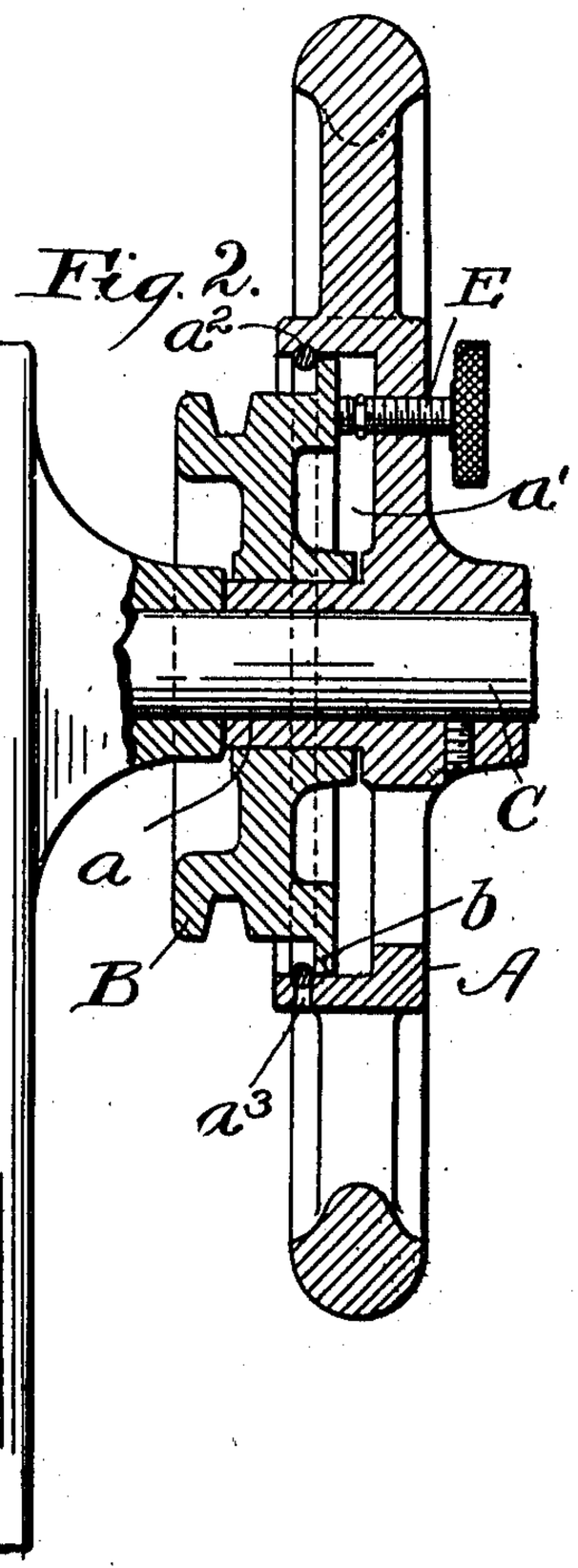


Fig. 3.

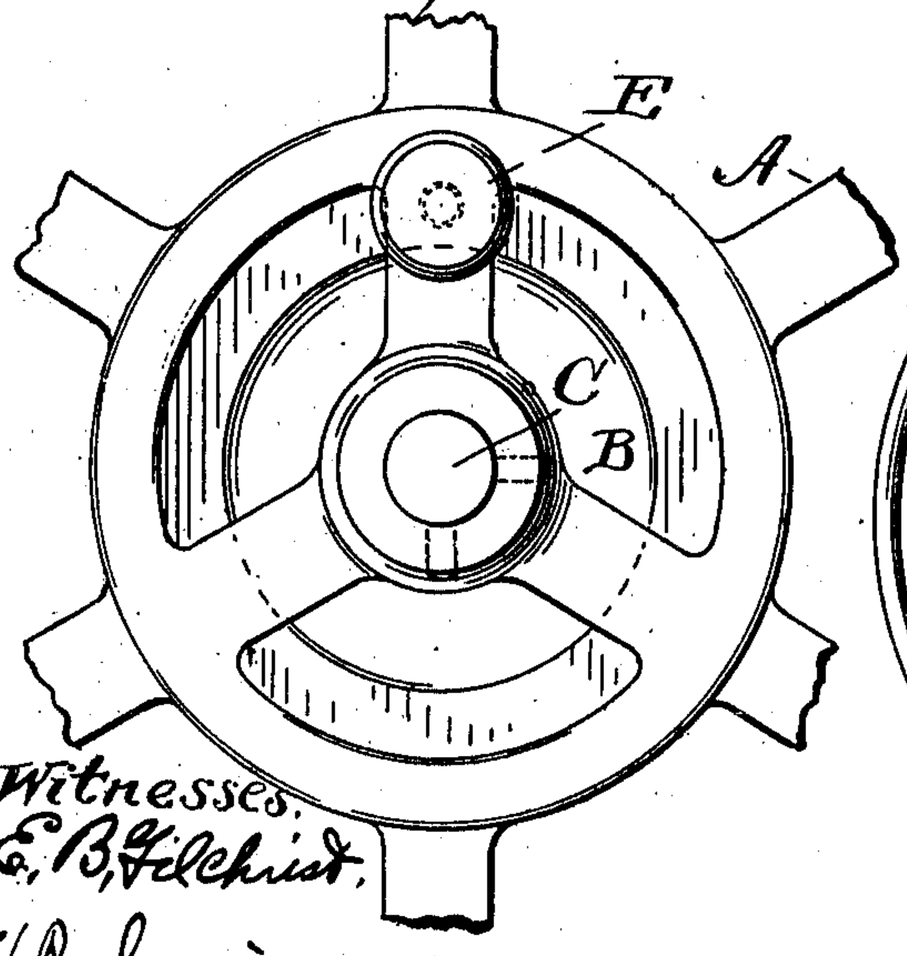
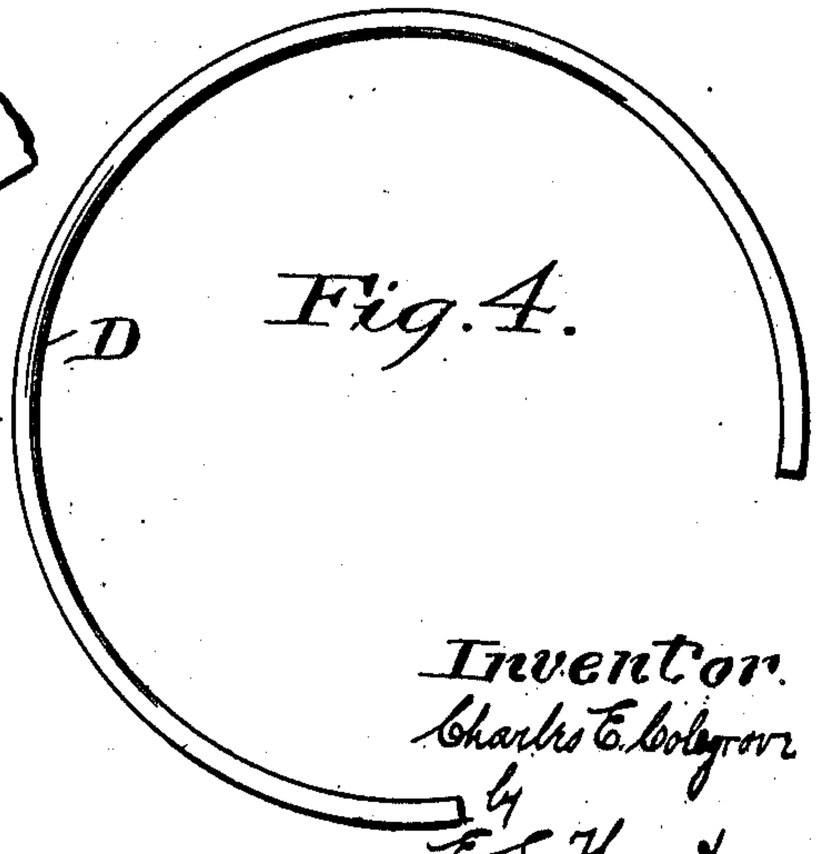


Fig. 4.



Witnesses:
E. B. Filchist.
H. R. Sullivan

Inventor.
Charles E. Colegrove
by
E. L. Thurston
attorney

UNITED STATES PATENT OFFICE.

CHARLES E. COLEGROVE, OF EAST CLEVELAND, OHIO, ASSIGNOR TO THE WHITE SEWING MACHINE COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

FRICTION-CLUTCH FOR SEWING-MACHINES.

990,033. Specification of Letters Patent. **Patented Apr. 18, 1911.**

Application filed January 28, 1910. Serial No. 540,481.

To all whom it may concern:

Be it known that I, CHARLES E. COLEGROVE, a citizen of the United States, residing at East Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Friction-Clutches for Sewing-Machines, of which the following is a full, clear, and exact description.

This invention relates to the novel clutch mechanism shown in the drawing and hereinafter described, which is especially adapted for connecting and disconnecting, at will, the hand wheel of a sewing machine head and the coaxial belt pulley.

The invention is illustrated in the accompanying drawing, in which—

Figure 1 is an inside view, partly broken away, of the invention. Fig. 2 is a central longitudinal sectional view. Fig. 3 is an outside view of the invention; and Fig. 4 is a detached view of the split spring ring which is a part of the invention.

Referring to the parts by letters A represents the so-called hand wheel which is fixed to the rotatable shaft C. This shaft is suitably mounted, and is the main shaft of the sewing machine head,—a fragment of the latter being shown in Fig. 2.

B represents a belt pulley which is rotatively mounted so as to be coaxial with the said shaft. In the particular construction shown the belt pulley rotates upon the hub a of the hand wheel.

In the inner face of the wheel A is a coaxial cylindrical recess a', in the cylindrical wall of which is an annular groove a^2. The pulley B projects into this recess,—and on the inner edge of this wheel is an outwardly extended annular flange b which is a trifle smaller in diameter than the internal diameter of the cylindrical recess. When the hand wheel and belt wheel are in the relative positions stated and shown, a split ring D of spring wire is compressed and put into the groove a^2; and when there its tendency to expand keeps it there; and it serves as a flange which lies outside of the flange b.

E represents a set screw which screws through the rib of the hand wheel, and against the inner face of the belt wheel B. When it is desired to connect the two wheels the screw is screwed in, and the flange b of the belt wheel B is forced into frictional contact with the wire D.

A radial hole a^3 is preferably bored in the wheel A, so as to intersect the annular groove a^2 as shown in Fig. 2. To remove the wire D, so that the two wheels may be separated, a stiff wire may be passed through the hole a^3 and pushed against wire D so as to push it out of groove a^2.

Having described my invention, I claim:

1. In a clutch, the combination of a wheel having in one face a coaxial cylindrical recess, the cylindrical wall of which has an annular groove, with an independently rotatable coaxial wheel which projects into said recess and has an outwardly extended flange which lies behind said groove, and a piece of spring wire lying partly in and partly outside of said groove, and means for moving the flanged wheel longitudinally to cause its flange to engage with said wire.

2. In a clutch, the combination of a wheel having in one face a coaxial cylindrical recess, the cylindrical wall of which has an annular groove, with an independently rotatable coaxial wheel which projects into said recess and has an outwardly extended flange which lies behind said groove, and a piece of spring wire lying partly in and partly outside of said groove, and a set screw screwing through the first named wheel against the other wheel, whereby the flange on the latter wheel may be fixed against said wire.

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

CHARLES E. COLEGROVE.

Witnesses:
E. L. THURSTON,
H. R. SULLIVAN.