(No Model.)

C. DANCEL.

CLUTCH.

No. 300,959. Patented June 24, 1884.

Fig. 1.

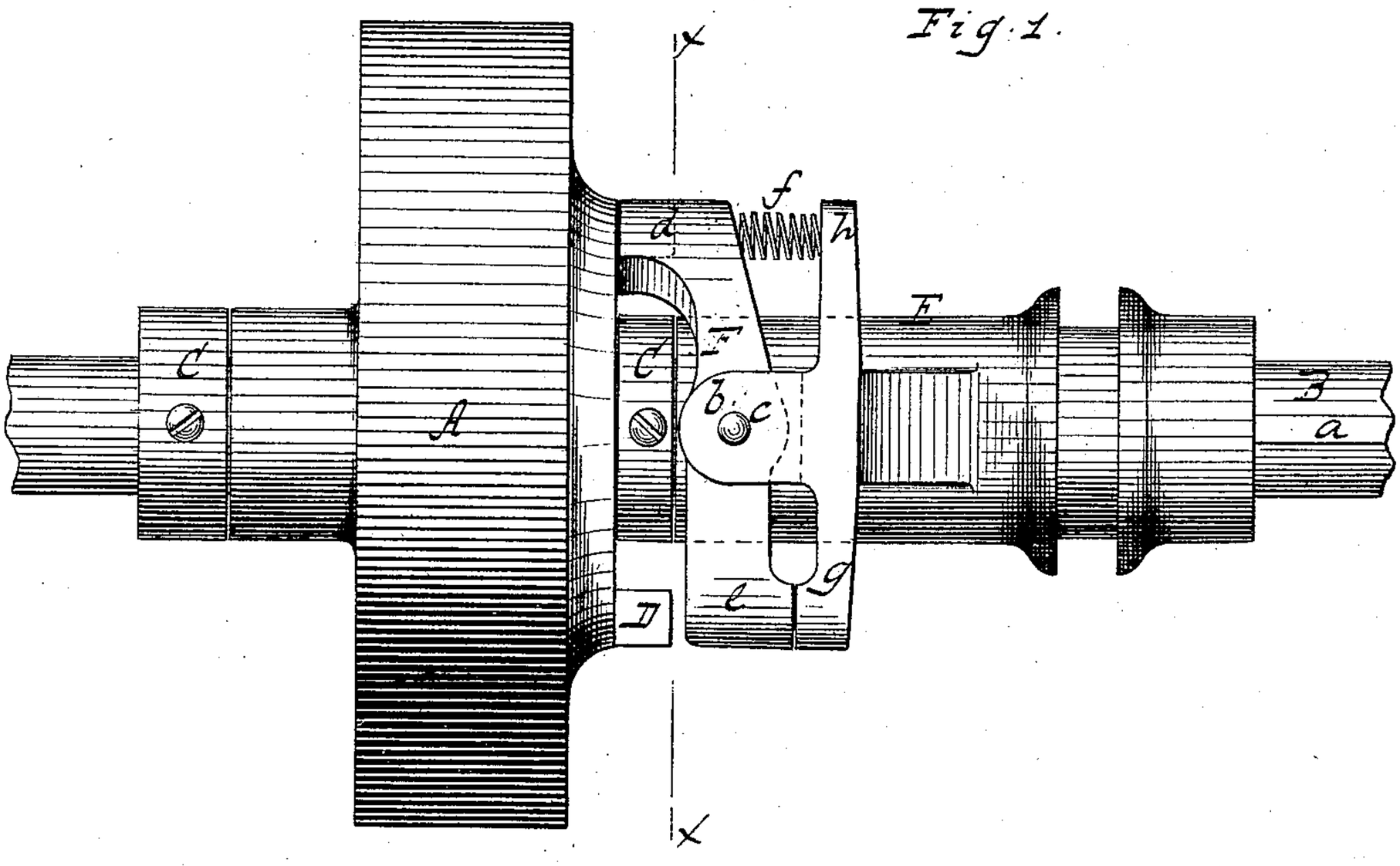
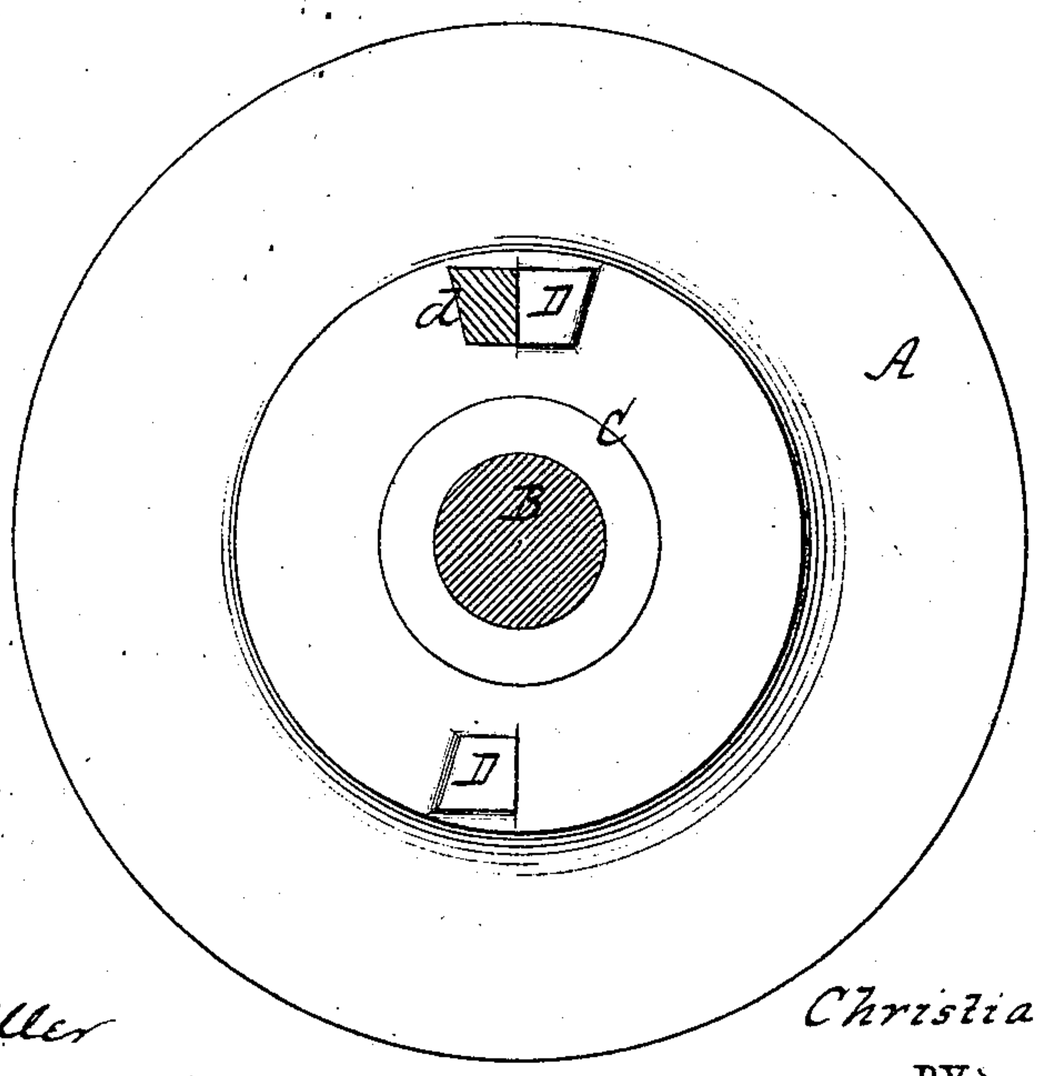


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHRISTIAN DANCEL, OF NEW YORK, N. Y.

CLUTCH.

SPECIFICATION forming part of Letters Patent No. 300,959, dated June 24, 1884.

Application filed November 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN DANCEL, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Clutches, of which the following is a specification.

This invention consists in the combination, with a pulley mounted loosely on a shaft and having on its inner face a series of projections, and with a clutch-sleeve feathered on the shaft, of a lever pivoted between its ends to the sleeve to form two arms projecting in reverse or opposite directions from the pivot, so that when the clutch-sleeve is moved toward the pulley one end of the lever will be thrown into engagement with one of the projections on the pulley, as more fully hereinafter set forth.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a side view, partly in section. Fig. 2 is a transverse section on the plane *x x*, Fig. 1.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates a pulley, which is mounted loosely upon the shaft B, being prevented from moving in a direction parallel to the axis of said shaft by collars C C, which are secured to the shaft on opposite sides of said pulley. On the inner face of the pulley are formed a series of projections, D, two such projections being shown in the drawings, Fig. 2. On the shaft B is also mounted the clutch-sleeve E, which is connected to the same by a feather-key, *a*, so that it is compelled to revolve with the same, while at the same time it can be moved in the direction of the axis of said shaft. Said clutch-sleeve is provided with a lug, *b*, which forms the bearing for a pivot, *c*, on which swings the lever F. This lever is centrally hung, so as to form two arms, *d* and *e*, which project in reverse or opposite directions from the pivot, and the arm *d* is preferably turned at its extremity toward the pulley in the form of a lug, so that when the clutch-sleeve is moved toward the pulley the lug on the arm *d* of the lever F will be thrown into engagement with one of the projections on the pulley through the medium of another one of the projections on the pulley acting against the extremity of the other arm, *e*, of the lever, whereby the pulley is thrown in gear with the shaft instantaneously without the danger of injury to any part of the mechanism, and without producing a disagreeable noise. From the lug *b* of the clutch-sleeve extend in opposite directions two arms, *g* and *h*, and between the arm *h* and the arm *d* of the lever F is arranged a spring, *f*, the other arm, *g*, serving as an abutment for the arm *e* of said lever. The arm *e* of the lever may, however, be omitted, if desired, and the arm *d* with spring *f* employed alone. In the latter case, if the clutch-sleeve E is moved toward the pulley and the arm *d* strikes against one of the projections D, said arm is momentarily forced back from the pulley, but is immediately forced toward the pulley by the spring *f*, so that it catches without fail against the next projection D. When the spring F is omitted and the two arms *d* and *e* employed, if the clutch-sleeve be moved toward the pulley, the arm *d* will strike one of the projections D and be momentarily forced away from the pulley, but immediately one of the projections D strikes the arm *e* and throws the arm *d* toward the pulley to catch against the next projection D, thus revolving the pulley. I prefer to use the spring in either event, since it serves to prevent violent vibrations of the lever, and positively moves the same into engagement with the pulley.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the pulley loosely mounted on the shaft and having on its face a series of projections, of the clutch-sleeve feathered on the shaft, and a lever pivoted between its ends to the sleeve to form two arms, which project in reverse directions from the pivot, substantially as described.

2. The combination, with the shaft and the loose pulley thereon having its face provided with lateral projections, of the clutch-sleeve feathered on the shaft to revolve therewith and move longitudinally thereon, a lever pivoted to and moving with the clutch-sleeve, and a spring acting on the lever to throw it into engagement with one of the projections on the pulley when the clutch-sleeve is moved on the shaft toward the pulley, substantially as described.

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

CHRISTIAN DANCEL. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.