

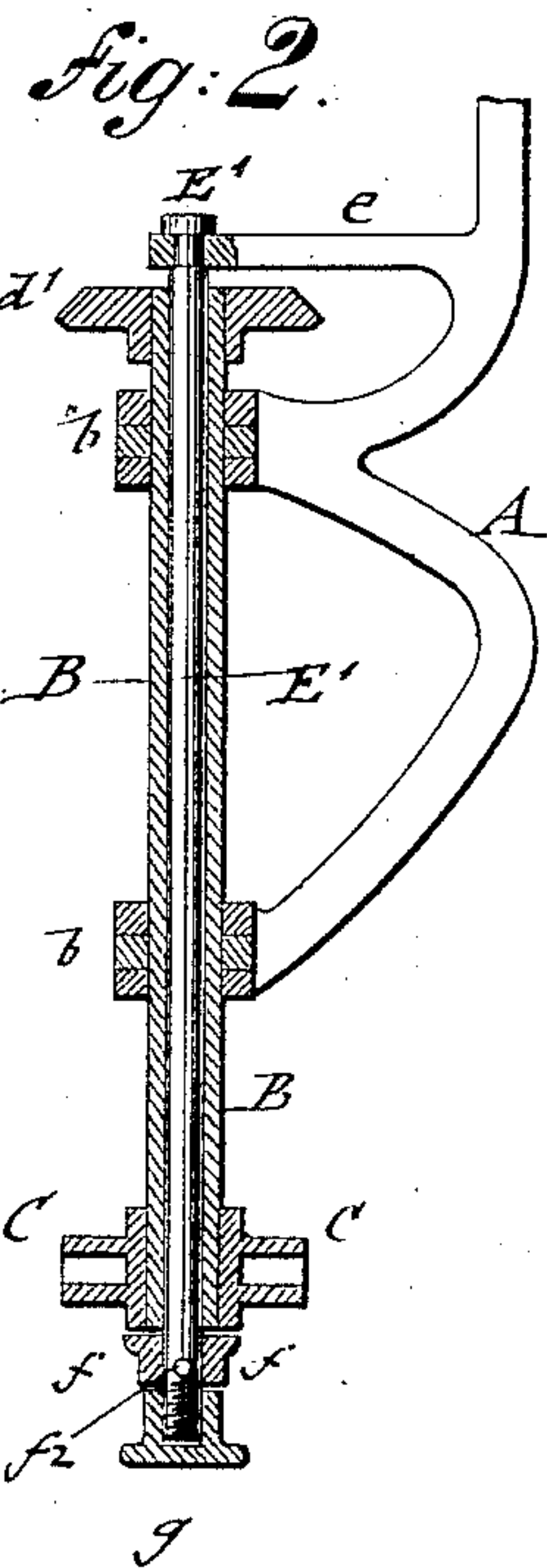
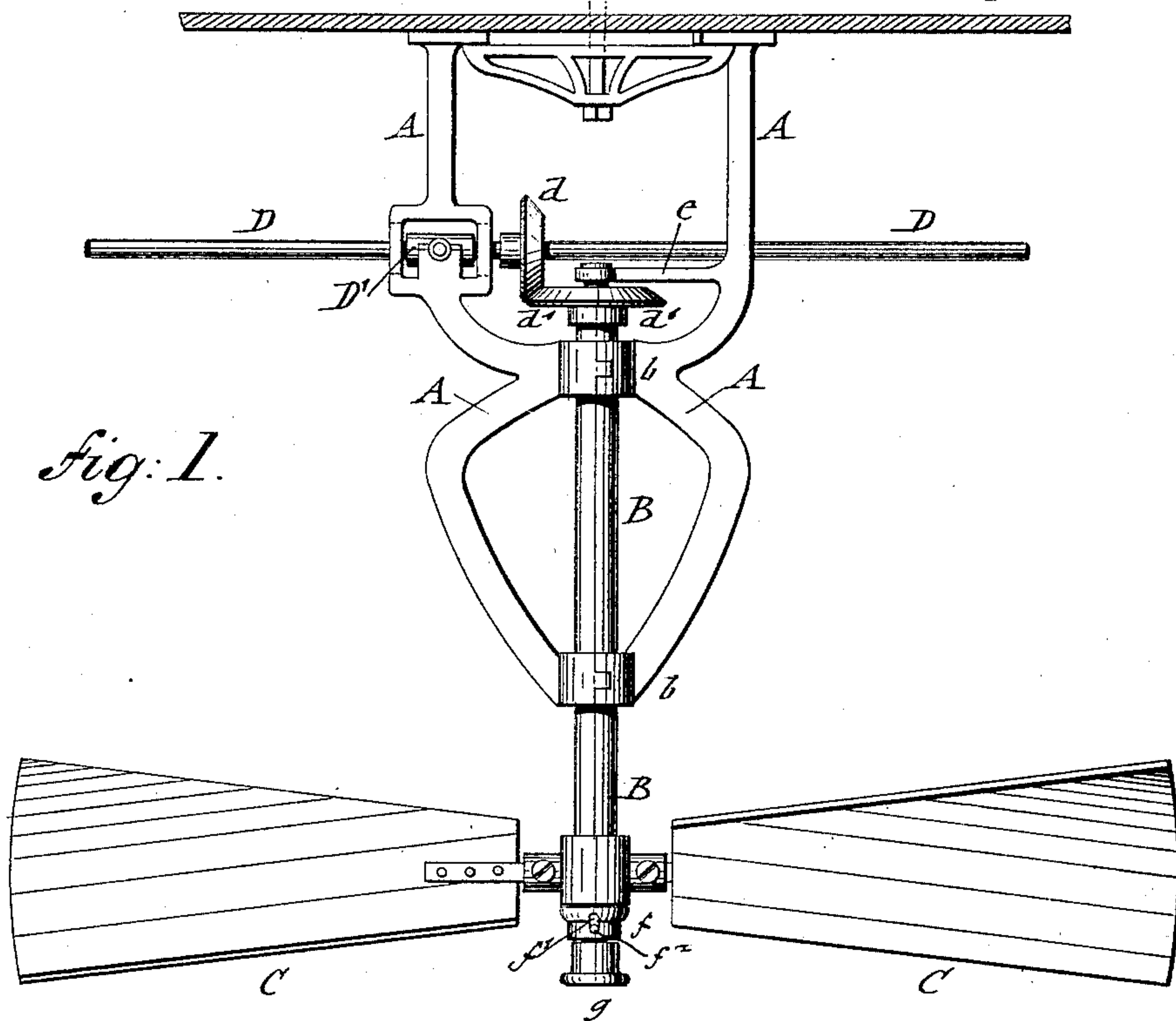
(No Model.)

P. MURRAY, Jr.

ROTARY FAN.

No. 348,683.

Patented Sept. 7, 1886.



WITNESSES:

A. Schehl.
Martin Petry.

INVENTOR

Peter Murray Jr.
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ATTORNEYS.

UNITED STATES PATENT OFFICE.

PETER MURRAY, JR., OF NEWARK, NEW JERSEY, ASSIGNOR TO THE BACKUS MANUFACTURING COMPANY, OF SAME PLACE.

ROTARY FAN.

SPECIFICATION forming part of Letters Patent No. 348,683, dated September 7, 1886.

Application filed May 12, 1886. Serial No. 201,930. (No model.)

To all whom it may concern:

Be it known that I, PETER MURRAY, Jr., of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Rotary Fans, of which the following is a specification.

This invention relates to a rotary fan-shaft of that class which is suspended by a suitable hanger-frame from the ceiling, so as to ventilate counting-rooms, stores, restaurants, and similar places; and the invention consists of a hanger-frame attached to the ceiling, a tubular fan-shaft supported in bearings of said hanger-frame, a fan attached to the lower end of said fan-shaft, a fixed rod passing through the tubular fan-shaft, and provided at the lower end with means for raising or lowering the tubular fan-shaft and throwing a friction-disk at its upper end in and out of mesh with a friction-disk shaft supported in bearings pivoted to one of the legs of the hanger-frame.

In the accompanying drawings, Figure 1 represents a side elevation of my improved rotary fan, and Fig. 2 is a vertical central section of the same.

Similar letters of reference indicate corresponding parts.

A in the drawings represents the supporting hanger-frame, which is made of any approved construction, and attached rigidly to the ceiling. The hanger-frame A is provided with bearings *b b* for the tubular fan-shaft B, to the lower end of which the fan C is attached. The driving-shaft D is supported in hangers (not shown in the drawings) near the ceiling and in a pivoted tubular bearing, D', pivoted to lugs of one of the legs of the hanger-frame, as shown in Fig. 1. The pivoted bearing D' facilitates the alignment of the shaft and prevents the binding of the shaft, whereby unnecessary friction is caused. Its use also saves time in securing the hanger-frame to and adjusting it on the ceiling. A beveled friction-disk, *d*, is keyed to the driving-shaft D, and arranged to mesh with a friction-disk, *d'*, at the upper end of the tubular fan-shaft B. Through the fan-shaft B passes a fixed center rod, E', that is attached to a horizontal bracket-arm, *e*, cast integral with the hanger-frame A, or to any other suitable point of support. The fixed rod E' extends below the lower end

of the tubular fan-shaft B, and is provided with a sliding sleeve, *f*, that is guided by a slot, *f'*, on a fixed pin, *f''*, of the rod E'. A screw-button, *g*, engages the screw-threaded lower end of the rod E', and serves to raise or lower the sleeve *f*, and thereby the tubular fan-shaft B, according as the fan is to be stopped or rotated. As the sleeve *f* is prevented from rotating by the pin *f''*, it serves to support the fan-shaft without interfering with the screw-button *g*, so as to cause the shifting or detaching of the same. By turning the button *g* on the lower end of the rod E' the sleeve *f*, and thereby the tubular fan-shaft B, is raised, so that the motion-transmitting friction-disks *d* and *d'* are thrown in mesh with each other for rotating the fan C, while, by turning the button *g* in opposite direction on the fixed rod E', the sleeve *f* is lowered on the rod E', so that the friction-disks *d* and *d'* are thrown out of mesh and the motion of the fan interrupted. In this manner a comparatively simple construction of rotary fan-shaft is obtained, which can be readily thrown in or out of motion, as required.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a hanger-frame suspended from the ceiling, of a driving-shaft and a tubular bearing pivoted to one of the legs of the hanger-frame, the said leg being provided with bearings for the pivots of the above-mentioned tubular bearing, substantially as set forth.

2. The combination of a supporting hanger-frame, a tubular fan-shaft supported in bearings of said hanger-frame, a fan attached to the lower end of said fan-shaft, a fixed center rod passing through said tubular fan-shaft, a driving-shaft, a friction-gear for transmitting the motion of the driving-shaft to the fan-shaft, and means whereby the tubular fan-shaft is raised or lowered on the fixed center rod, so as to throw the friction-gear in or out of mesh and rotate or stop the fan, substantially as set forth.

3. The combination of a supporting hanger-frame having a horizontal bracket-arm, a tubular fan-shaft supported in bearings of said frame, a fan attached to the lower end of said fan-shaft, a fixed center rod passing through said tubular fan-shaft and attached to the

5 bracket-arm of the hanger-frame, a driving-shaft, a friction-gear for transmitting motion from the driving-shaft to the fan-shaft, a sleeve guided at the lower end of the fixed rod, and a screw-button at the lower end of the fixed rod, said screw-button being adapted to raise or lower the sleeve and fan-shaft and throw the latter in or out of gear, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

PETER MURRAY, JR.

Witnesses:

MARTIN PETRY,
SIDNEY MANN.