

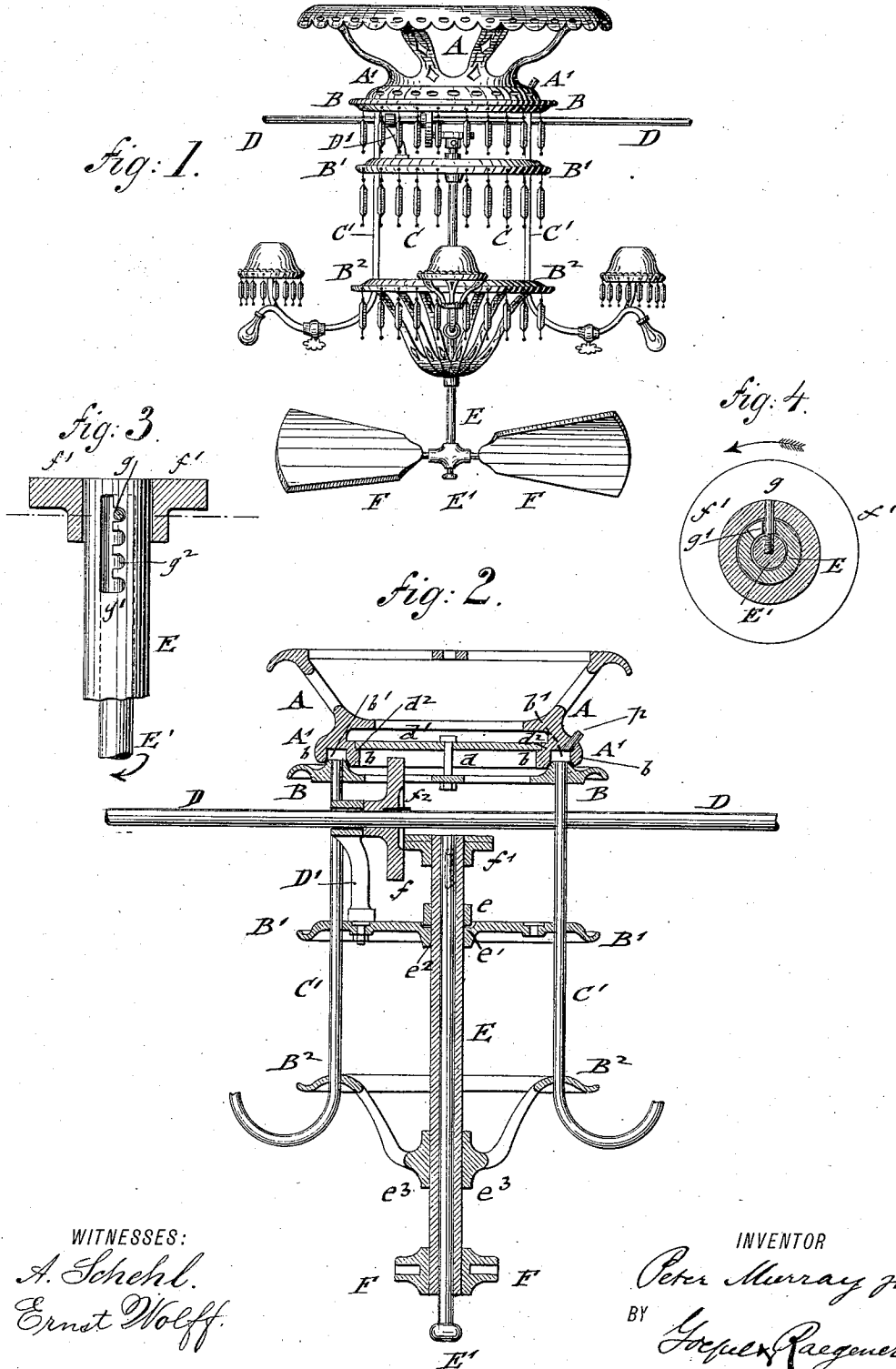
(No Model.)

P. MURRAY, Jr.

COMBINED CHANDELIER AND ROTATING FAN.

No. 332,821.

Patented Dec. 22, 1885.



WITNESSES:
A. Schehl.
Ernst Wolff.

INVENTOR
Peter Murray Jr.
BY *Joseph Raegenes*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

PETER MURRAY, JR., OF NEWARK, NEW JERSEY, ASSIGNOR TO HIMSELF
AND ALFRED N. LEWIS, OF SAME PLACE, AND RICHARD S. T. CISSEL
AND ROBERT B. CISSEL, OF ELIZABETH, NEW JERSEY.

COMBINED CHANDELIER AND ROTATING FAN.

SPECIFICATION forming part of Letters Patent No. 332,821, dated December 22, 1885.

Application filed September, 18, 1885. Serial No. 177,416. (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 a Combined Chandelier and Rotating Fan, of which the following is a specification.

This invention relates to a combined chandelier and rotating fan, in which the frame and gas-tubes of the chandelier are used as a hanger-frame for the shafts by which rotary motion is imparted to the fan; and the invention consists, first, of a novel construction of the chandelier; secondly, of the arrangement of the fan-shaft at the center of the same; and, thirdly, of a friction-disk transmission, by which rotary motion is transmitted from the driving-shaft to the fan-shaft, as will be more fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of my improved chandelier and rotating fan. Fig. 2 is a vertical central section of the same, drawn on a larger scale, and Figs. 3 and 4 are details, showing the means by which the speed of the rotating fan-shaft is varied and thrown in or out of motion.

Similar letters of reference indicate corresponding parts.

In my combined chandelier and rotating fan the frame and gas-tubes of the chandelier are so constructed that they serve as a hanger-frame for supporting the horizontal driving-shaft and the vertical fan-shaft, which latter is located centrally to said hanger-frame. The lower part of the hanger-frame has to be so arranged that it can be turned axially on the stationary top part of the same, so that the gas-tubes can be adjusted to any position of the driving-shaft without interfering with the same.

The hanger-frame consists of a ring-shaped top part, A, and an axially-adjustable lower part, C. The top part, A, is attached by a center bolt, or in any other suitable manner, to the ceiling. It is provided at its lower part with a ring-shaped section, A', having circumferential flanges $b b$, to which the upper ring-shaped section, B, of the lower part, C,

is tightly fitted, so that the flanges form with the section B an annular groove or channel, b' , to which the gas is supplied by a gas-pipe, p . The lower part, C, of the hanger-frame is composed of the vertical gas-tubes $C' C'$ and three ring-shaped sections, $B B' B^2$, of which the upper section, B, is attached by a connecting-bolt, d , to a disk d' , which is supported on an interior seat, d^2 , of the top part, A, as shown in Fig. 2. The middle section, B' , serves to support the standard D' , which is provided at its upper end with a journal-bearing for the driving-shaft D, that passes below the upper section, B, through the lower part, C, of the hanger-frame. The middle section, B' , serves also as a support for the vertical fan-shaft E, which rests by a fixed collar, e , on a central depression, e' , of the middle section, B' . The vertical fan-shaft E turns in a bearing, e^2 , at the center of the middle section, B' , and on a central bearing, e^3 , of the lower section, B^2 , of the hanger-frame, as shown clearly in Fig. 2. The sections $B B' B^2$ are rigidly attached to the gas-tubes $C' C'$, so as to form a strong frame for supporting the driving-shaft D and fan-shaft E.

To the lower ends of the gas-tubes are applied the gas-burners and globes, as customary in gasoliers. The arms of the chandelier may also be provided with incandescent electric lamps and suitable conducting-wires, in case the same is to be used as an electrolier.

To the lower end of the shaft E is keyed the hub of a ventilating-fan, F, the blades of which are inclined in such a manner that the air is forced in downward direction away from the lights, so that they are not affected by the air set in motion by the fan.

To the driving-shaft D is splined a friction-disk, f , while a second friction-disk, f' , is applied loosely to the upper end of the fan-shaft E, at right angles to the disk f , which is provided with a central depression, f^2 . The disk f' is adapted to be clutched to or unclutched from the fan-shaft E by means of an adjustable handle-rod, E' , that passes longitudinally through the tubular fan-shaft E to the upper end of the same. The upper end of the handle-rod E' is connected by a pin, g , with the hub of the friction-disk f' , said pin passing

through a vertical slot, g' , of the tubular fan-shaft E, which slot is provided at one side with rack-shaped recesses g^2 for the pin g , as shown in detail in Figs. 3 and 4. By taking hold of the lower end of the handle-rod E' the connecting-pin g is moved out of its recess by the motion of the tubular fan-shaft E, so that the handle-rod E', and with it the friction-disk f' , can be set higher or lower, and thereby the friction-disk f' adjusted nearer to or farther away from the center of the friction-disk f . By releasing the handle-rod E' the connecting-pin g engages one of the recesses of the slot g' , and couples thereby the disk f' to the fan-shaft E. By raising the handle-rod E' sufficiently, so that the disk f' is in line with the depression f^2 of the disk f , the fan F is stopped. By setting the friction-disk f' to the outer part of the friction-disk f the fan-shaft E is rotated slower or quicker, according to the distance of the friction-disk f' from the center of the friction-disk f . The collar e of the fan-shaft turns on the center bearing of the middle section, B', with but slight friction, owing to the buoying action of the fan, which balances to some extent the weight of the fan-shaft and handle-rod.

In place of the mechanism by which the friction-disk f' is set—that is to say, in place of the center rod and the clutch device by which it is connected with the hub of the friction-disk f' —any other clutching mechanism may be used, as I do not confine myself to the special construction shown.

By the employment of friction-disks the transmitting belts and pulleys are dispensed with, which would interfere with the gas-tubes of the chandelier, and would be objectionable, owing to their unsightly appearance.

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

1. The combination of a hanger-frame composed of a stationary top section attached to the ceiling, and a lower axially-adjustable section with a driving-shaft, a fan-shaft carrying a fan at the lower end, and friction-disks by which rotary motion is transmitted from the driving-shaft to the fan-shaft, substantially as set forth.

2. The combination of a hanger-frame having center bearings for the fan-shaft, a driving-

shaft supported on a standard of said hanger-frame, a vertical fan-shaft having a fan at the lower end, and friction-disks by which rotary motion is imparted by the transmitting-shaft to the fan-shaft, substantially as set forth.

3. The combination of a hanger-frame, consisting of a stationary top section, gas-tubes, and ring-shaped sections, a driving-shaft, a vertical fan-shaft, and friction-disks on said driving-shaft and fan-shaft, substantially as set forth.

4. The combination of a stationary hanger-section attached to the ceiling, said hanger-section having an annular groove or channel, an axially-adjustable hanger-section formed of ring-shaped sections, and gas-tubes communicating with said channel, the lower section being connected by a center bolt and disk to the top section, and provided with center-bearings for the vertical fan-shaft, substantially as set forth.

5. The combination of a hanger-frame, a driving-shaft supported by said hanger-frame, a tubular fan-shaft supported by center bearings of said hanger-frame, transmitting friction-disks on the driving-shaft and fan-shaft, a handle-rod passing through the fan-shaft, and a clutch mechanism whereby the friction-disk on the fan-shaft can be set higher or lower, so as to vary the speed of the fan, substantially as set forth.

6. The combination of a hanger-frame, a driving-shaft supported by said frame, a friction-disk applied to the driving-shaft and having a central depression, a tubular fan-shaft supported by said hanger-frame, a fan keyed to the lower end of the fan-shaft, a friction-disk arranged loosely on the upper end of the fan-shaft, a center rod, and means for connecting the center rod with the friction-disk of the fan-shaft, so that it can be raised or lowered or placed in line with the central depression of the friction-disk of the driving-shaft, 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:

PAUL GOEPEL,
SIDNEY MANN.