

P. J. BENDER.

Fanning-Apparatus for Rooms.

No. 163,628.

Patented May 25, 1875.

Fig. 1.

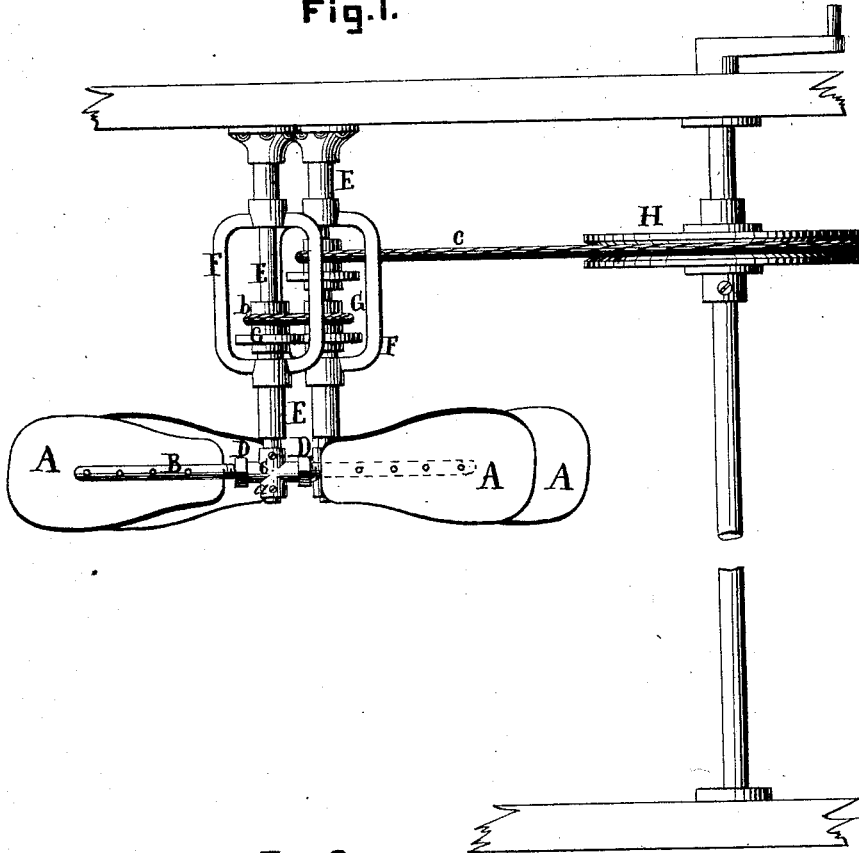
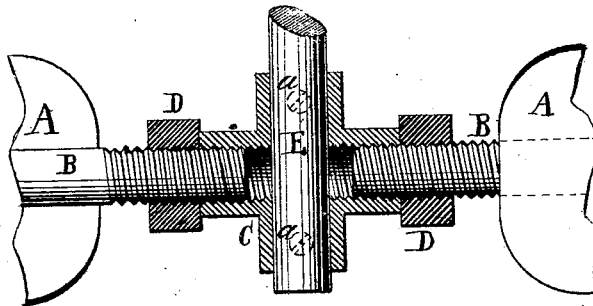


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

PHILIPP J. BENDER, OF NEW YORK, N. Y.

IMPROVEMENT IN FANNING APPARATUS FOR ROOMS.

Specification forming part of Letters Patent No. **163,628**, dated May 25, 1875; application filed September 21, 1874.

To all whom it may concern:

Be it known that I, PHILIPP J. BENDER, of the city, county, and State of New York, have invented a certain new and useful Improvement in Fans for Rooms, of which the following is a specification:

This invention relates to a system of rotary fans, which are disposed in a room or apartment in such a manner as to keep the air of the room in a cool state, and the room ventilated.

My invention consists of a joint having screw-threaded sockets, in which the screw-threaded shanks of the fans are screwed, the said fans being capable of adjustment, and being locked in position by locking-nuts or otherwise. This socket-joint is mounted upon a shaft arranged in a hanger, so as to be adjustable vertically upon said shaft, all as will be hereinafter described, and pointed out in the claim.

This invention is illustrated in the accompanying drawing, in which Figure 1 is a side view, as put up in a room or apartment. Fig. 2 is a longitudinal central section of the socket-joint on a larger scale than in the preceding figure.

Similar letters indicate corresponding parts.

The letters A designate the fan-blades, which are made of any chosen form or shape, and are secured to their shanks B in any suitable manner. The shanks B are provided with a screw-thread, and are fitted in the sockets of a joint, C, which sockets are provided with a corresponding thread, so that the shanks B turn in their sockets, and thereby can be adjusted in any plane or angle, by which means the currents of air produced by the rotation of the fans can be disposed in any chosen direction. The fans are held in the required plane by means of locking-nuts D, which work on the screw-shanks B, and abut against the lateral ends of the socket-joint. By means of the screw-thread the shanks B can be moved toward and from the socket-joint C, and thereby the fans are rendered adjustable in a longitudinal direction. I can thus adapt the

range or distance of the fans to the size or dimensions of the room where they are put up. The fans are locked in position by means of the nut D, or by any other means suitable for the purpose. The socket-joint C is provided with as many lateral branches or sockets as there are fans, (of which there are two to each socket-joint in this example,) while it is provided with two vertical branches, which slide on a vertical shaft, E. The branches last named are held on the vertical shaft by means of adjusting-screws *a*, and by loosening these screws the socket-joint, and with it the fans, can be raised and lowered to the extent of the length of the shaft, whereby the range or position of the fans is regulated in a vertical direction. The vertical shaft E rotates in a hanger, F, which is secured in any convenient position in the room or other place where the fans are used.

In the present example I have shown two series of fans, which are connected with each other by a band, *b*, running over pulleys G, which are mounted on the respective vertical shafts, while by a secondary pulley and band, *c*, one of the shafts is connected with a driving wheel or pulley, H.

By imparting a revolving motion to the shaft of this driving-wheel H, such motion is communicated to the vertical shafts E, and the fans are set in motion.

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

The joint C, provided with screw-threaded sockets, in combination with the fans A, having the screw-threaded shanks B, the locking-nuts D, vertical shaft E, and hanger F, all being constructed and arranged to operate substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 17th day of September, 1874.

PHILIPP J. BENDER.

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.