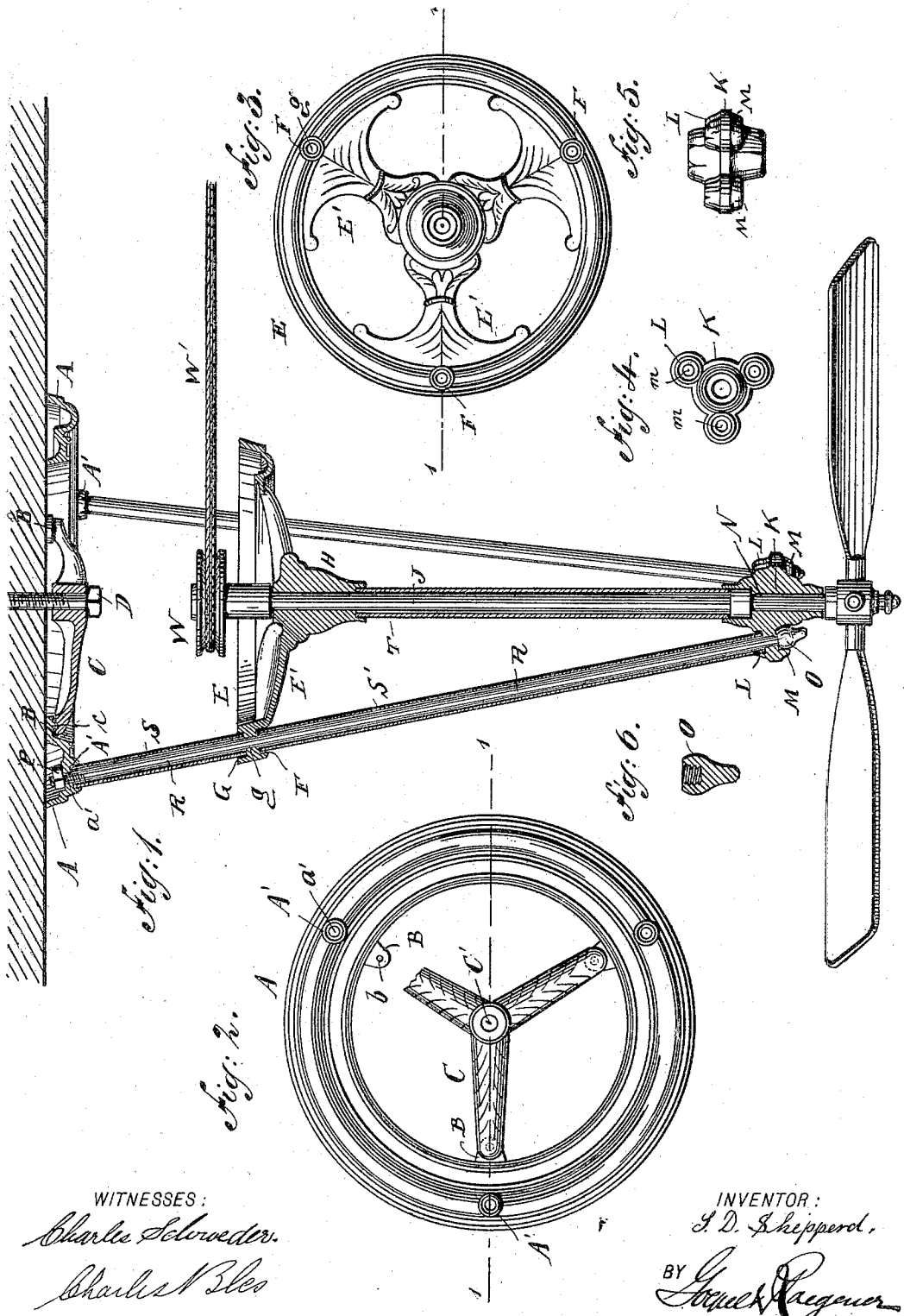
(No Model.)

S. D. SHEPPERD.

SUPPORTING FRAME FOR ROTARY FANS.

No. 488,293. Patented Dec. 20, 1892.



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SUPPORTING-FRAME FOR ROTARY FANS.

SPECIFICATION forming part of Letters Patent No. 488,293, dated December 20, 1892.

Application filed November 18, 1891. Serial No. 412,341. (No model.)

To all whom it may concern:

Be it known that I, SYLVANUS D. SHEPPERD, of Newark, in the county of Essex, State of New Jersey, a citizen of the United States, have invented certain new and useful Improvements in Supporting-Frames for Rotary Fans, of which the following is a specification.

This invention relates to that class of frames for supporting-fans that are attached to ceilings.

The object of my invention is to provide a fan-frame of this kind, which is simple in construction, can be packed in small space and easily erected and fastened for use.

The invention consists in a supporting-frame for rotary fans constructed with an annular top-frame, a circular intermediate-frame and a bottom socket-piece, rods extending from the socket-piece to the annular top-frame and through the intermediate-frame, tube-sections surrounding said rods between the top and intermediate-frames and the socket-piece, and a fan-shaft mounted in the intermediate-frame and in the bottom socket-piece.

The invention also consists in the construction and combination of parts and details as will be fully described hereinafter and finally pointed out in the claim.

In the accompanying drawings, Figure 1 is a vertical, transverse-sectional view of my improved supporting-frame for rotary-fans on the line 1 1 of Figs. 2 and 3; Fig. 2 is a plan-view of the underside of the annular top-frame and spider, parts being broken out; Fig. 3 is a plan-view of the underside of the intermediate transverse circular frame; Fig. 4 is a plan-view of the bottom socket-piece; Fig. 5 is a side-view of the same; Fig. 6 is an enlarged, vertical, transverse section of the ornamental bottom-nut.

Similar letters of reference indicate corresponding parts.

The annular frame A, profiled according to any desired pattern, is provided on its under-ornamental surface with three sockets A′, in the top of each of which an aperture a' is formed. Said annular frame A is also provided on its inner edge adjacent to each socket a' with a lug B provided with a nipple b on its underside, which nipples b fit into depressions or recesses c in the ends of the arms of a spider-frame C, provided with a central aperture C′, through which the screw-bolt D or an analogous device is screwed into the ceiling or like support. The intermediate circular-frame E is provided at its rim with the sockets F on the underside and the sockets G on the upper side, apertures g connecting the corresponding sockets. Arms E′ connect the ring-shaped frame E with the hub H having a longitudinal bore through which the fan-shaft J can pass. The bottom socket-piece K is provided on its upper end with the three sockets L and in its underside with the three sockets M, which sockets are connected by the apertures m, and said socket-piece K is also provided with a central bore N for the fan-shaft J. Ornamental nuts O, the upper ends of which fit into the bottom sockets M in the socket-piece K are screwed on the lower ends of rods R, which are passed through the apertures m of the socket-piece K, the aperture G of the intermediate-frame E and the apertures a' of the top-annular frame A. The upper ends of said rods are threaded and nuts P screwed thereon, which nuts are concealed within the cavities of the ring-shaped piece A. Between the frames A and E the rods R are surrounded by the tubes S, the ends of which are held in the sockets A′ of the frame A and the sockets G of the frame E, and between the frame E and the socket-piece K the rods are surrounded by tubes S′, the ends of which are held in the sockets F of the frame E and the upper sockets L of the socket-piece K. By drawing-up the nuts P, the several parts forming the frame can be drawn firmly and rigidly together. The fan-shaft J is surrounded by a tube T, the ends of which rest in the central top-socket of the socket-piece K and in the socket in the lower end of the hub H of the frame E, and on the upper end of said fan-shaft the grooved-pulley W is fixed, over which the driving-belt W′ passes. By loosening the screw D the entire frame can be removed from the ceiling, and can easily be taken apart upon taking off the nuts P. The frame can thus be packed very compactly for shipping and can easily be erected for use. It is strong, firm and rigid, as the rods and tubes thoroughly brace each other.

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

In a supporting frame for rotary fans, the combination, with an annular top-frame having sockets at its under side, of a bottom socket-piece having sockets in its upper and under sides, an intermediate circular frame also having sockets in its upper and under sides and a central sleeve forming a bearing for the fan-shaft, rods connecting the top frame and the socket-piece and passing through apertures in the intermediate frame, top-sections surrounding said rods and having their ends resting in the sockets of the top-frame, intermediate frame and socket-piece, nuts screwed on the upper ends of said rods above the upper surface of the top-piece, nuts screwed on the lower ends of said rods and resting on the upper edges of the socket-piece, a tube extending from the annular piece to the intermediate piece, a fan-shaft having bearings in the sleeve of the intermediate piece and in the socket-piece, a pulley fixed on said shaft above the intermediate piece and fan-wings secured on said shaft below the annular piece, 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.

SYLVANUS D. SHEPPERD.

Witnesses:

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