J. SMITH.

CONVERTING MOTION.

No. 190,917. Patented May 15, 1877.

Fig. 1.

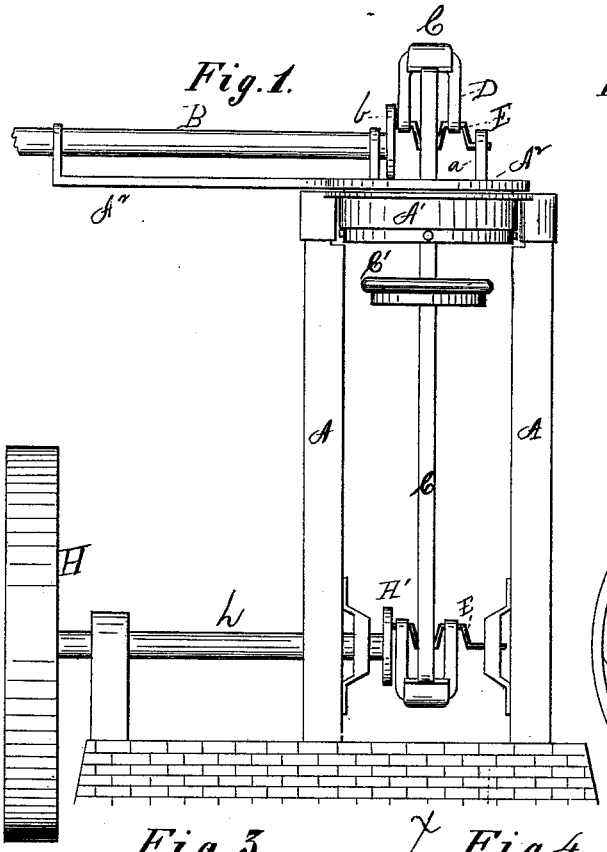


Fig. 2.

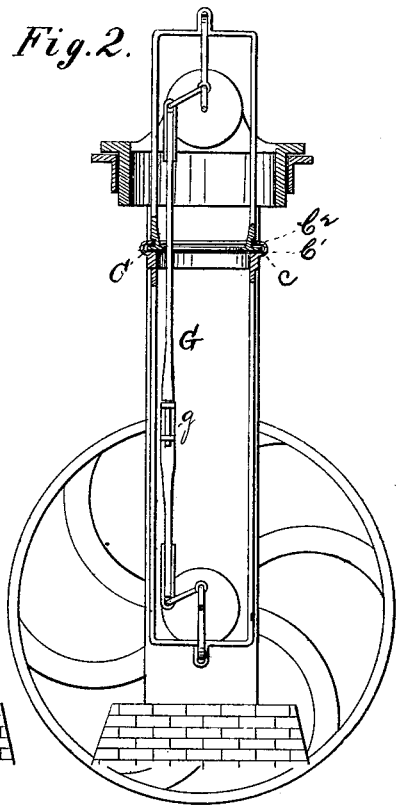


Fig. 3.

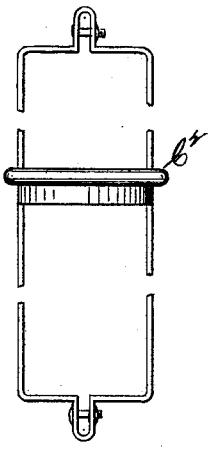


Fig. 4.

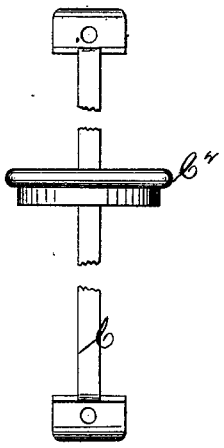
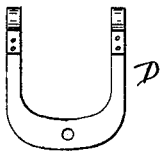


Fig. 5.



WITNESSES:

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JOHN SMITH, OF HORICON, WISCONSIN.

IMPROVEMENT IN CONVERTING MOTION.

Specification forming part of Letters Patent No. **190,917**, dated May 15, 1877; application filed March 17, 1877.

To all whom it may concern:

Be it known that I, JOHN SMITH, of Horicon, in the county of Dodge and State of Wisconsin, have invented certain new and useful Improvements in Attachments to Windmills; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The same letters and figures of reference are used to indicate the corresponding parts.

After describing the invention, its nature and extent will be shown in the claims.

Figure I° is a side view of my invention. Fig. II is an end view, shown in section through line *x x*, Fig. I. Fig. III is an enlarged view of the double pitman C, and the disk C^2 detached. Fig. IV is a transverse view of the same. Fig. V is the yoke D, detached and enlarged.

A A are the towers, upon which is a platform, A^1, supporting the turn-table A^2, in which is journaled the shaft B of the wind-wheel, as shown in Fig. I.

The shaft B has on the inner end a wheel, *b*, to which is rigidly fixed one end of the compound crank E. D is the yoke, having bearings for the compound crank E. (See Fig. I.) The crank E has bearings in the yoke D and the arm *a* of the turn-table A^2, and in the upper end of the pitman G, as shown in Fig. II. The double pitman C has a disk, C^1, on the lower end of the upper portion of said pitman, which revolves in the outer disk C^2, having the flange *c*, as shown in Fig. II. The lower portion of the pitman C is connected with a compound crank, E, and yoke D, as shown in Fig. I, in precisely the same way as at the upper end. The pitman G has a swivel at *g*, and connects the two compound cranks E E, as shown in Fig. II.

The arm of the crank E, where it is rigidly attached to the wheel *b*, is at an angle of forty-five degrees with that arm which has a bearing in the pitman G. The same is true of the crank E at the bottom, which is rigidly fixed to the wheel H^1 on the end of the shaft *h*, which rotates the driving-wheel H.

The compound cranks E are set at such an angle to each other (being less than forty-five degrees) so as to overcome the dead-point each in the other. The pitman C connects the revolving disks C^1 C^2 to yoke D at both ends, which permits an adjustment with the cranks E E, thereby giving it a direct central draft, and prevents the wind-wheel from being thrown edgewise to the wind, and obviates the necessity of having a fan or vane to throw the wind-wheel directly into the face of the wind.

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

1. The compound cranks E E, pitman G having swivel *g*, and double pitman C having disks C^1 and C^2, and yoke D, as and for the purpose described and shown.

2. The turn-table A^2, shafts B and *h*, wheels *b* and H′, yokes D, cranks E, pitmen C and G, when combined, arranged, and operated as shown and described, and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand.

JOHN SMITH.

Witnesses:

J. B. HAYS,

AARON E. BAKER.