

WHITMORE & SONS, *continued.*

4. MODEL OF IMPROVED INDEPENDENT STEAM BOILER OR GENERATOR, with 2 internal flues, and so constructed as to allow for the unequal contraction and expansion usually experienced in the Cornish boiler, and also for the easy detachment of the same for the effectual removal of incrustation or deposit, or repairs when occasion requires it.

It is encased in a jacket of sheet plate (which may be lagged and felted), with smoke box, door fittings, and funnel, complete; rendering the fixing in brickwork unnecessary, and providing at the same time an unusual amount of heating surface all round the boiler; thus ensuring safety, purity of steam, and economy of fuel.

5. MODEL OF IMPROVED MACHINE for dressing flour through silks, with cylindrical shaft, trussed reel, vibrators, feeding apparatus and conveyors, complete.

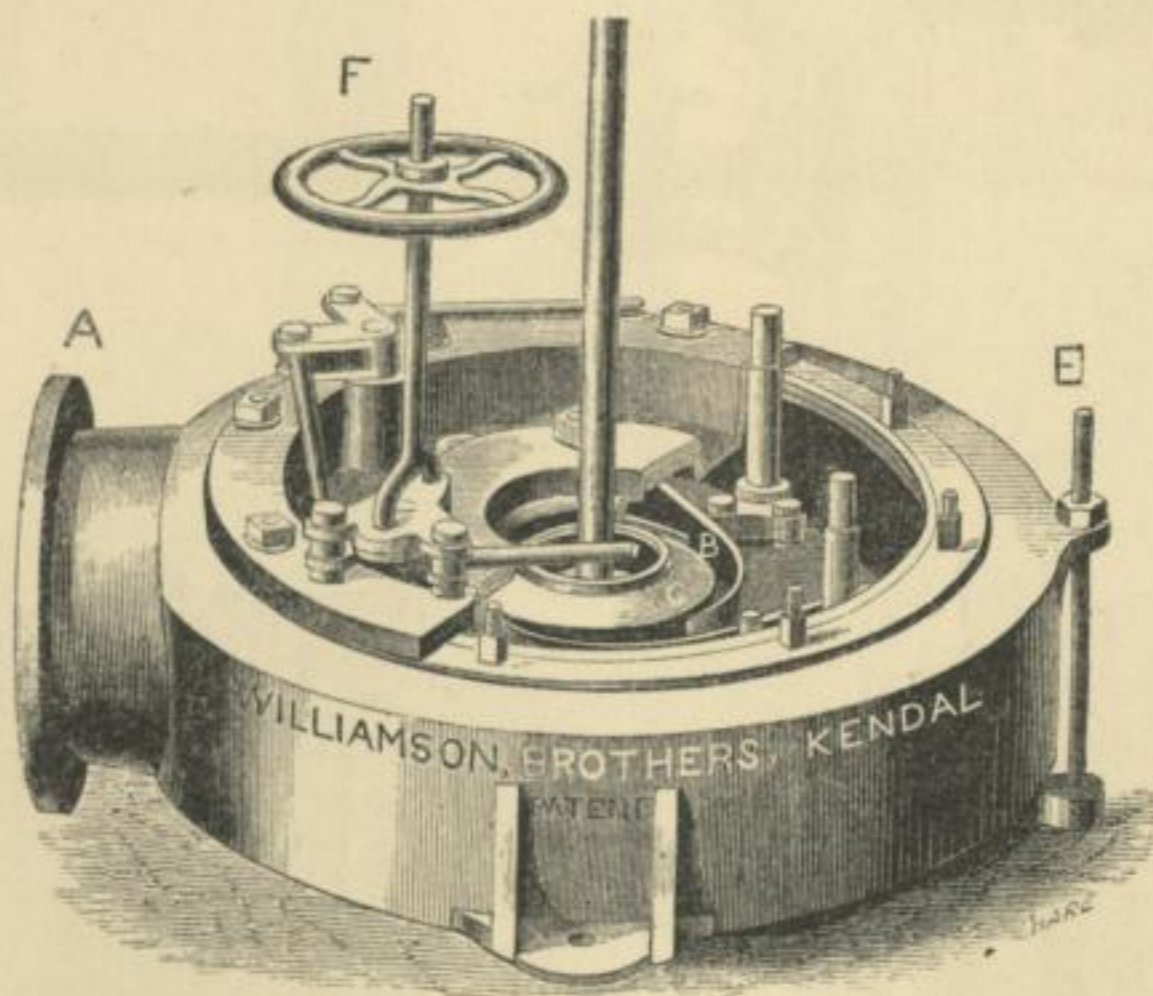
6. MODEL OF IMPROVED IRON BREAST WATER WHEEL with ventilated curvilinear buckets and supply valve, and apparatus complete.

7. MODEL OF TOWER WINDMILL with patent sails and self-winding tackle.

Whitmore & Sons have fitted up a considerable amount of the above improved corn-mill machinery in establishments on a large scale in this and foreign countries, the arrangements differing according to circumstances, particulars and testimonials of which will be given on application either at their Works, or at the Exhibition stand, where drawings may be seen of them; and of both single and double cylinder high and low pressure and condensing steam engines, boilers with patent furnaces, general mill, sawing, and agricultural machinery of their manufacture.

[2026]

WILLIAMSON BROTHERS, *Canal Iron Works, Kendal, Westmoreland.*—Patent vortex turbines, blowing fan, centrifugal pump, &c.



PATENT VORTEX TURBINE, an improved means of applying water-power.

The vortex turbine is equally adapted for high and low falls. Its peculiar advantages are:—

1. That the power is obtained with a slower velocity of the water, and consequently with less friction than in ordinary turbines.
2. Great steadiness and regularity of motion.
3. A thoroughly efficient means of adjustment to

varying supplies of water. A large working model is exhibited in motion.

Williamson Brothers also exhibit in action—

- A WHIRLPOOL BLOWING FAN,
- A WHIRLPOOL CENTRIFUGAL PUMP; and
- A PATENT VERTICAL-COLUMN STEAM ENGINE.

Descriptive circulars may be had on application to the makers.

[2027]

WILSON, JOHN C., & Co., 14A *Cannon Street, London, E.C.*—Portable steam sugar-cane mill. (*See page 87.*)

[2028]

WISE, FRANCIS, 22 *Buckingham Street, Adelphi, W.C.*—Feed water regulator, indicator, and alarm for steam boilers. (*See page 88.*)

[2029]

WOOD, ROBERT, & SONS, *Leeds.*—20-horse double-cylinder engine, steam pump, shafting, pulleys, and wheels.