

A. Kneass,

Water Wheel.

No. 105698.

Patented July 26. 1870.

Fig: 1.

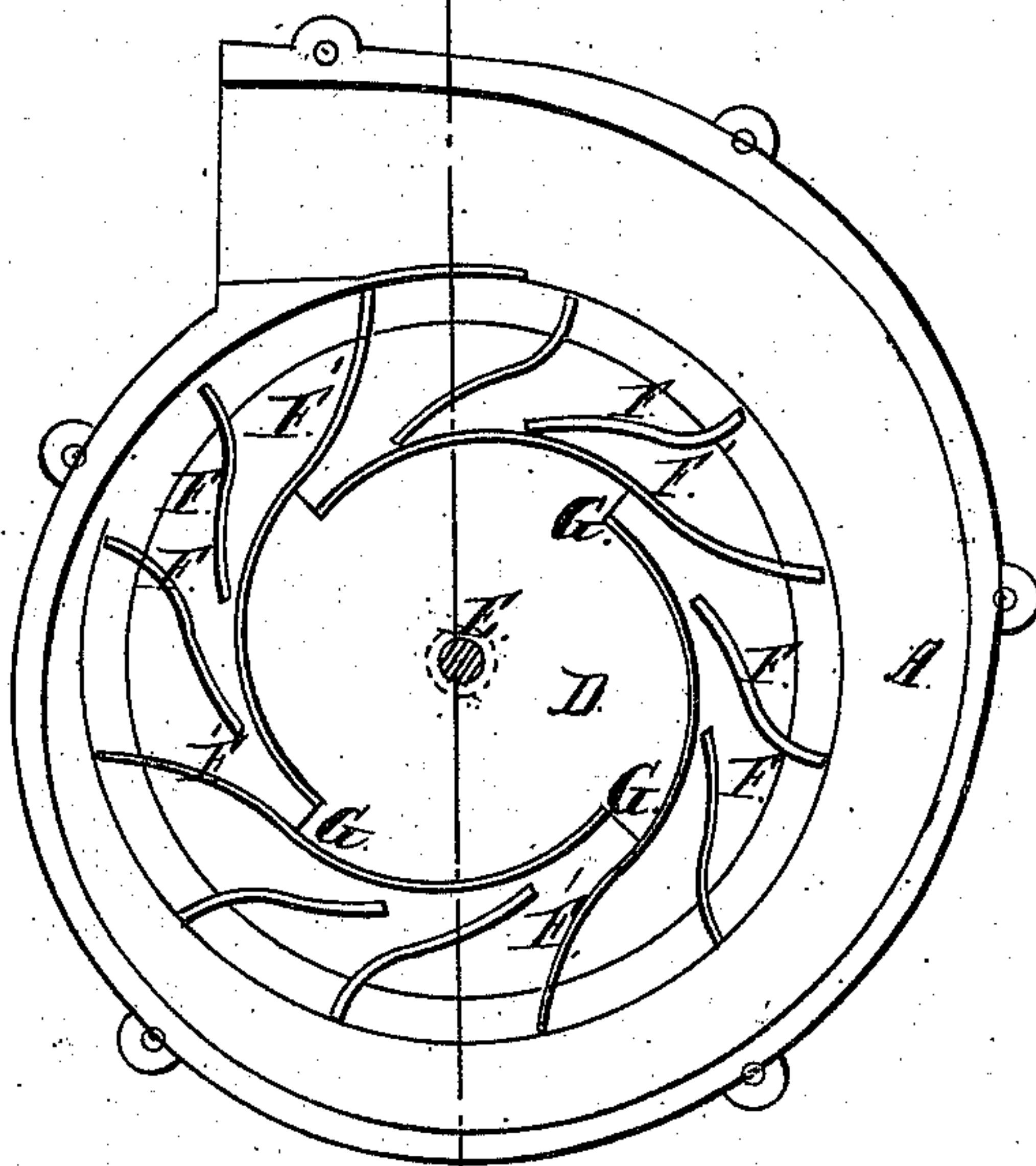
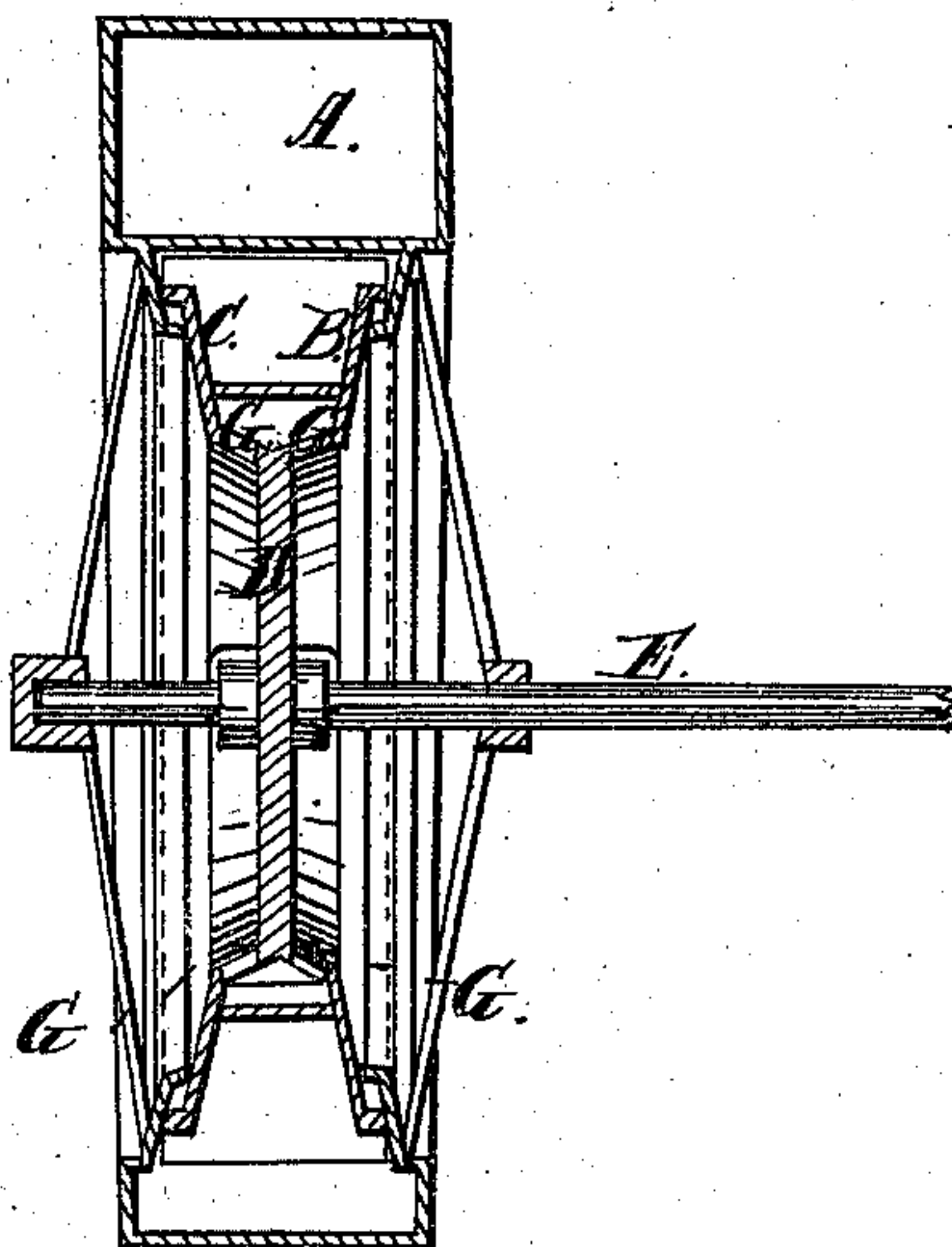


Fig: 2.



Witnesses:

A. W. Almqvist

Alex. F. Roberts

Inventor:

Alfred Kneass

per. Munn & Co.
attys.

UNITED STATES PATENT OFFICE.

ALFRED KNEASS, OF NORTHUMBERLAND, PENNSYLVANIA.

IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. **105,698**, dated July 26, 1870.

To all whom it may concern:

Be it known that I, ALFRED KNEASS, of Northumberland, in the county of Northumberland and State of Pennsylvania, have invented a new and Improved Water-Wheel; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to improvements in that class of water-wheels in which the application of the water is designed to be such as to impart both direct and reactionary force; and it consists in a peculiar arrangement of curved buckets, receiving the water at the periphery from a scroll in a direct-acting way, and discharging toward the center through issues common to two or more buckets, and above and below a central disk by which the buckets and rims are attached to the vertical shaft, all as hereinafter more fully described.

Figure 1 is a horizontal section of my improved wheel, and Fig. 2 is a transverse section of the same.

Similar letters of reference indicate corresponding parts.

A is the scroll; B, one rim of the wheel, and C the other. D is the central disk, to which the rims converge, and by which the whole is attached to the shaft E. F and F' represent the buckets, arranged between the rims B C, beginning at the periphery, where they are widest, nearly in radial lines, but assuming the double curved lines shown in the drawing,

terminating tangentially at the inner edges of the rims, except every third bucket, F', which continues around the inner edges of the rim the distance of three spaces, forming issues G for three buckets. These issues are narrowed down by the inclined arrangement of the rims B C, and they are divided horizontally by the disk D, so that one-half the water is discharged above and the other below the said disk.

It will be seen that by this arrangement the first application of the water on the buckets at the periphery has the effect to impel them around by direct action the way the water runs, and that in passing through the issues G, the motion being reversed and the area of the issues contracted, a powerful reacting force is imparted to the wheel in the same direction that the direct action impels it. These issues may be provided with adjustable slides on the exterior walls of the rims B C for varying their capacity of discharge as required, according to the amount of power required.

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

1. The arrangement of the converging rims B C, disk D, and buckets F F', all substantially as specified.

2. The arrangement of the buckets F' with the buckets F and the rims B C, forming the issues G, common to two or more buckets, substantially as specified.

ALF. KNEASS.

Witnesses:

A. J. MILLER,
ABEL GIBBONS.