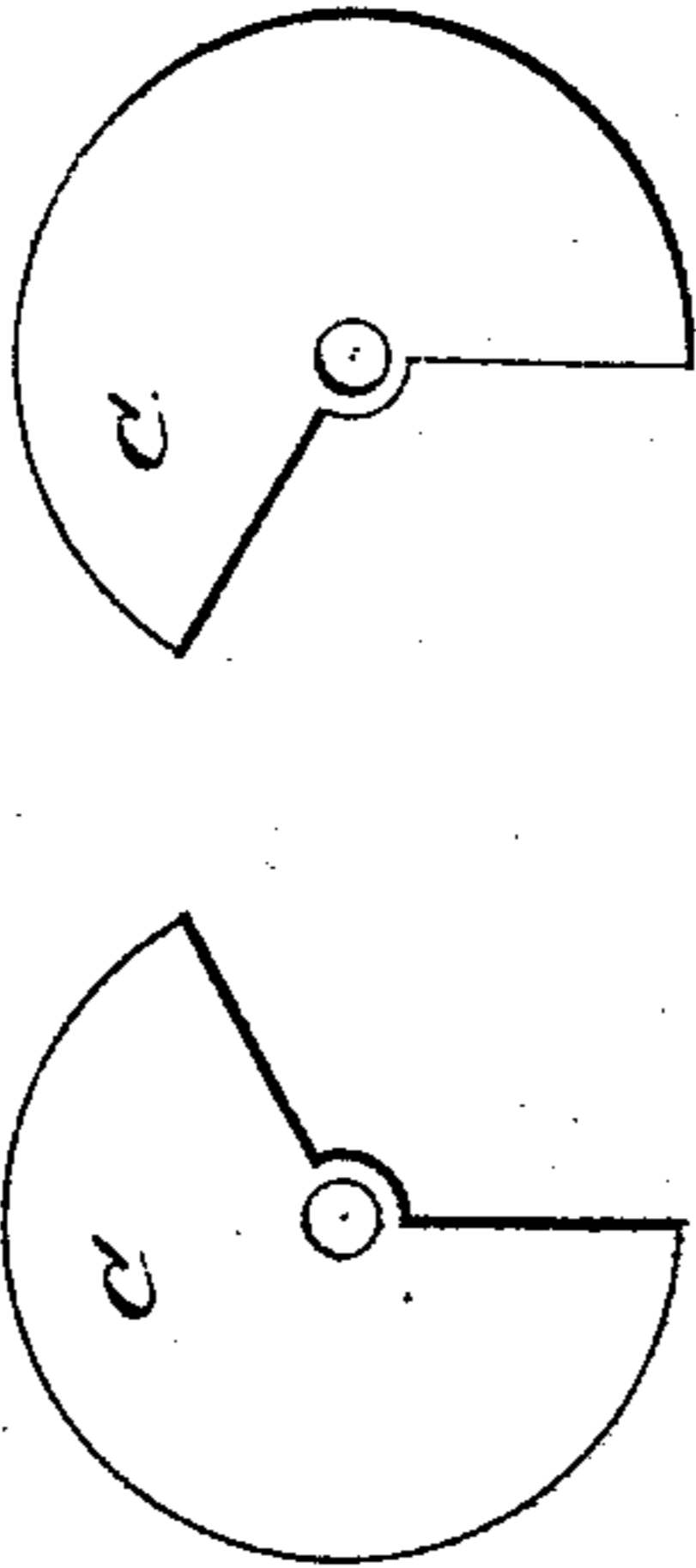


*G. W. Wright*  
*Steam Engine.*

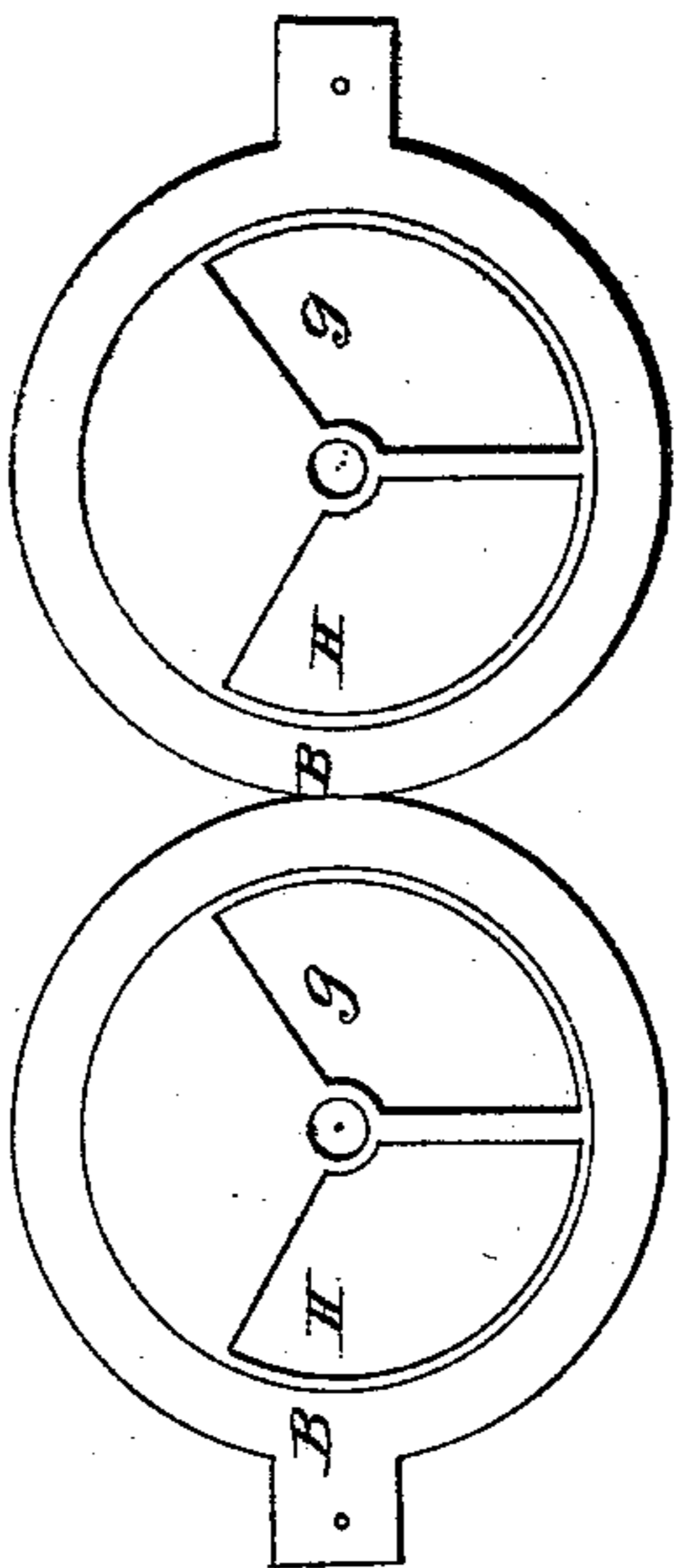
*N<sup>o</sup> 93,940.*

*Patented Aug. 17, 1869.*

*Fig. 2.*



*Fig. 1.*



Witnesses: "

*James H. Smith*  
*J. E. M. Bowen,*

INVENTOR:

*G. W. Wright*

# G. W. Wright Steam Engine.

Sheet 2-2, Sheet 18

N<sup>o</sup> 93,940.

Patented Aug. 17, 1869.

Fig. 1. Horizontal Section

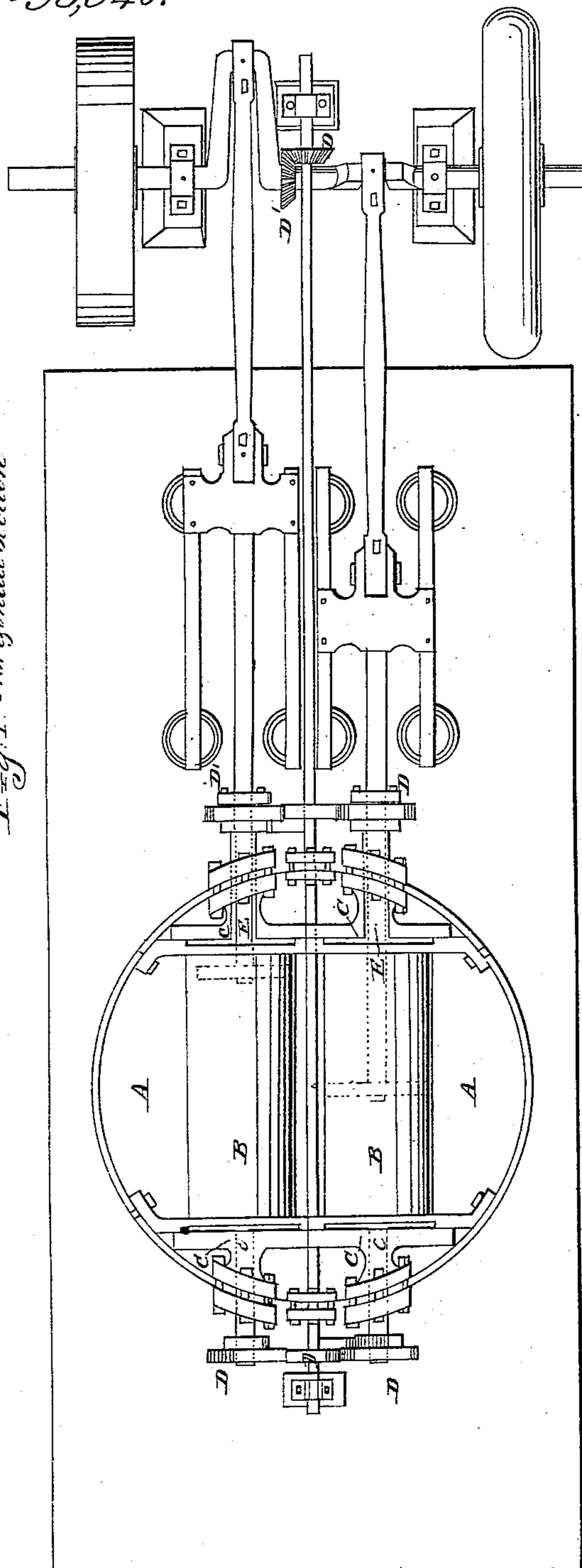
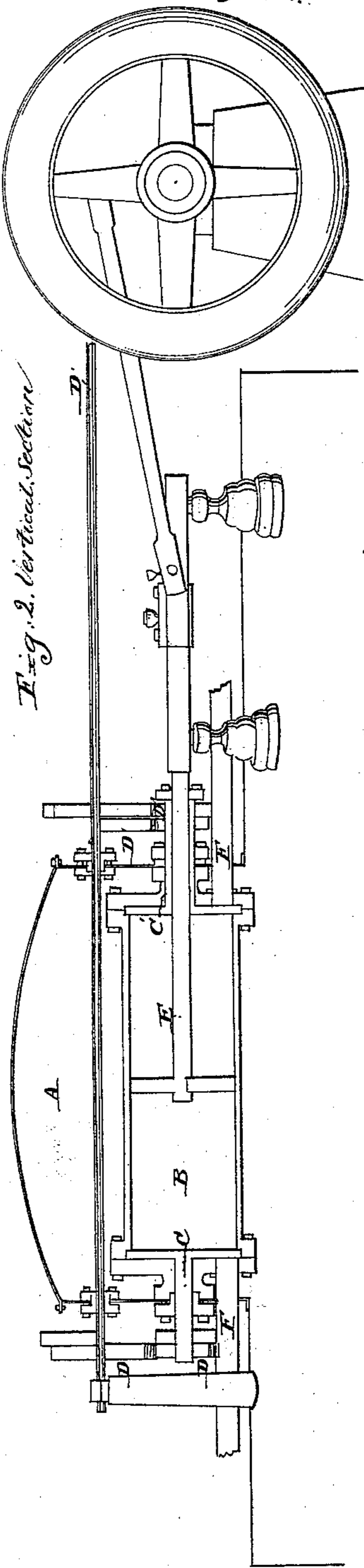


Fig. 2. Vertical Section



Witnesses:

*James L. Smith*  
*J. M. Bowen*

INVENTOR:

*G. W. Wright*

# United States Patent Office.

GEORGE W. WRIGHT, OF WASHINGTON, DISTRICT OF COLUMBIA,  
ASSIGNOR TO FRANCIS WRIGHT, OF SAME PLACE.

*Letters Patent No. 93,940, dated August 17, 1869.*

## IMPROVEMENT IN STEAM-ENGINES.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, GEORGE W. WRIGHT, of the city of Washington, District of Columbia, have invented a new and useful Steam-Engine; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which are lettered to correspond with and form part of these specifications.

To enable the public to understand the nature of this my invention, and those skilled in the mechanic arts to construct and use the same, I proceed to describe it as follows, to wit:

Figure 1, plate 1, is a horizontal sectional view of the dome of a steam-boiler, as represented by letters A A.

B B are two steam-cylinders, placed within the steam-dome.

C C are revolving disks, to which motion is imparted by gear-wheels D D.

C' C' are revolving disks, through which the piston-rods E E pass, and to which motion is imparted by gear-wheels D' D'.

Figure 2, plate 1, is a vertical sectional view of a horizontal steam-boiler.

A is the steam-dome.

B is the steam-cylinder.

C and C' are the revolving disks, to which motion is imparted by gear-wheels D and D'.

F F are exhaust pipes, leading to the condenser.

Figure 1, plate 2, is an end view of the two cylinders B B;

G G are the openings through which steam is admitted to the cylinders;

H H are openings, through which steam is exhausted into exhaust-pipes F F, plate 1, fig. 2;

Figure 2, plate 2, are the disks C C; and

D D are the gear-wheels, by which the disks are made to revolve.

The manner in which this engine is to be constructed and worked is as follows:

The gear-wheels D D, which revolve the disks, receive their motion from the main shaft, as seen in plate 1, fig. 1.

The disks C C, plate 1, fig. 1, are plates of metal, and are connected to the gear-wheels D D, by rods of metal of suitable dimensions passing through the cylinder-heads and the vertical sides of the steam-dome A, as seen in plate 1, fig. 2, having suitable packing to make them steam-tight.

The disks C' C' are constructed in a similar manner to the disks C C, and are connected to the gear-wheels D' D' by means of hollow cylinders, through which the piston-rods move, also being suitably packed.

The cylinders, when bored out, are to have double heads; the inside one is to have two openings, as shown in plate 2, fig. 1, one marked G to be used to

supply steam, and opening directly into the boiler, and the other, marked H, to be connected to the exhaust-pipes F F, plate 1, fig. 2.

The disks C C are to be countersunk, and ground into the heads of the cylinders, as shown in plate 1, fig. 1.

I immerse the steam-cylinders B B inside the dome A A of the boiler, and stay and secure them, as is shown in plate 1, fig. 1, or in any other suitable manner.

The opening G, of the cylinder B, and disk C, plate 2, figs. 1 and 2, now being set opposite each other, steam passes into the cylinder B.

When the requisite quantity has passed in, the sectional gear-wheels D now come in gear, and the disk is made to revolve one-third of its circumference, which completely cuts off the further ingress of steam to the cylinder and leaves it closed for the expansion of steam to finish the stroke.

When the piston arrives at the end of the stroke, or near it, the gear-wheels D again come in gear, and the disk is made to revolve in the same direction as before another third of its circumference, which last movement opens the exhaust H, leaving the feed G still closed. At this moment the gear-wheels, at the opposite end of the cylinder, come in gear, and the disk at that end is opened, and steam is admitted on that side of the piston, forcing it back to its starting-point. When the piston arrives near the end of the return-stroke, the disk, by means of the gear-wheels, is given a backward revolution of two-thirds its circumference, which movement simultaneously closes the exhaust and opens the feed, leaving the disk in the same position as at the start.

When one piston has made a half stroke, the disk on the other cylinder comes in position to admit the steam, and thus works the cranks at right angles to each other.

### Claims.

What I claim as my invention, and what I wish to secure by Letters Patent of the United States, is—

1. The combination and arrangement of the movable disks C and C', at each end of the cylinders, cylinders B, and boiler A, substantially as herein set forth.

2. The combination of the steam-cylinders, disks C and C', gear wheels D and D', whereby to actuate the disks for the ingress, cutting off, and egress of steam, substantially upon the principle and in the manner as herein set forth.

G. W. WRIGHT.

Witnesses:

JAMES S. GRINNELL,  
J. E. M. BOWEN.