

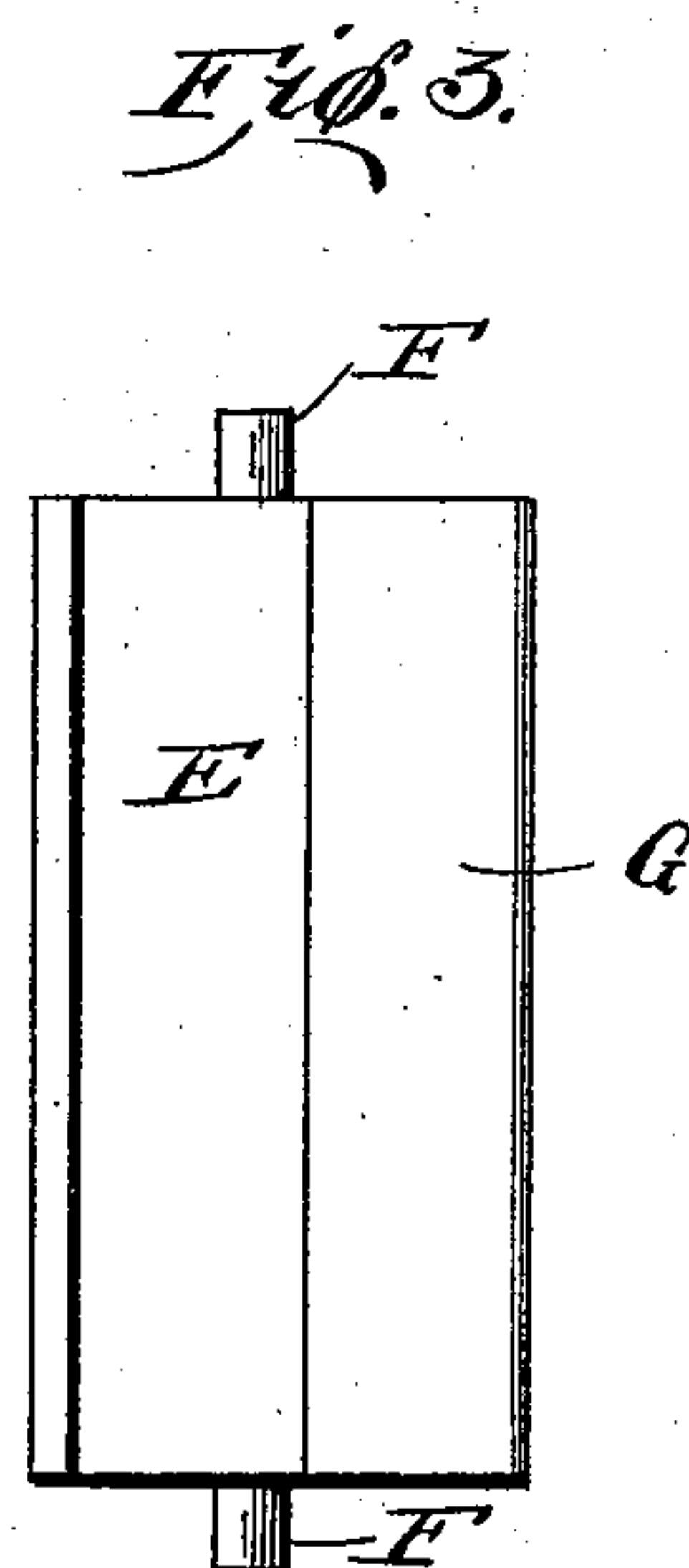
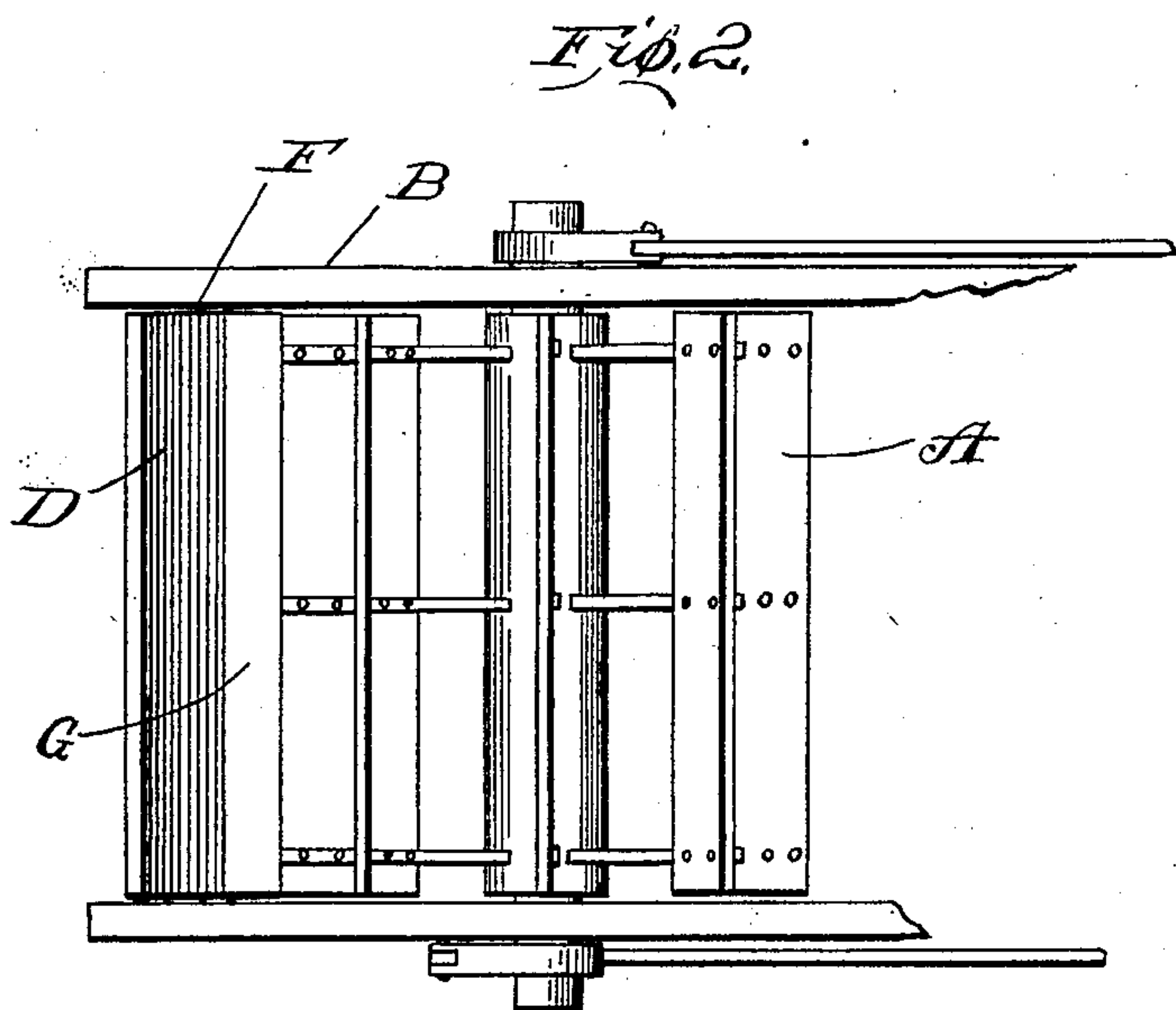
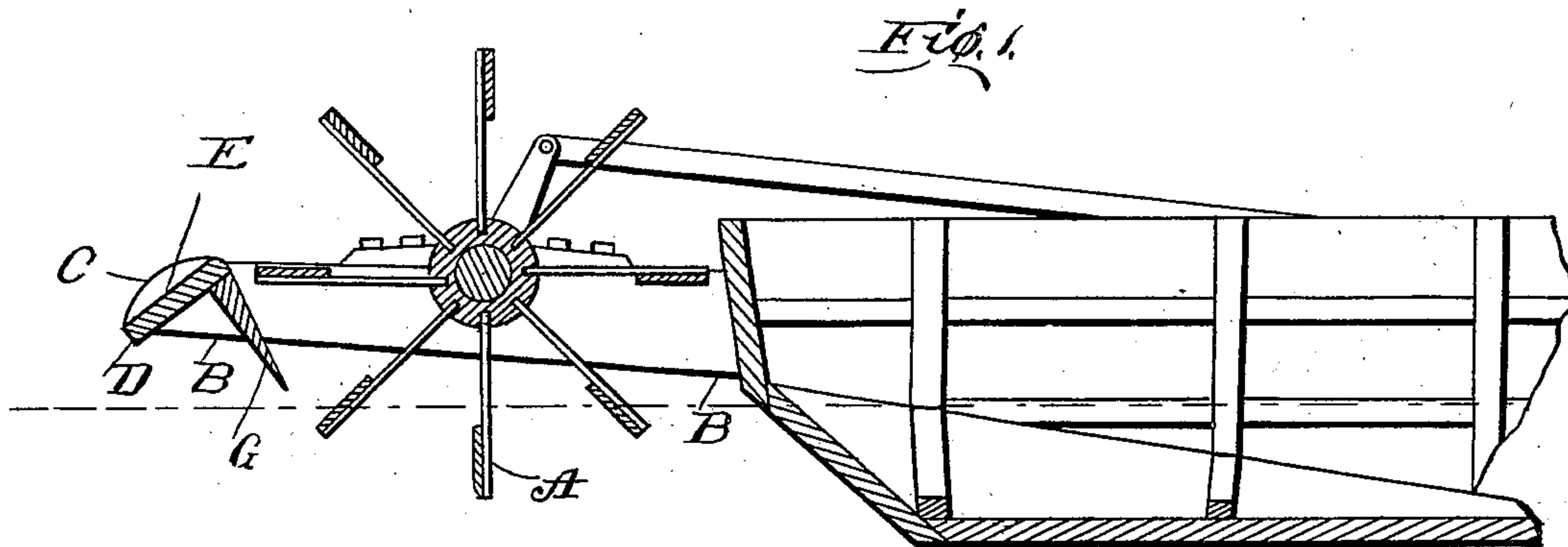
No. 730,889.

PATENTED JUNE 16, 1903.

S. A. DUVALL.
BOAT.

APPLICATION FILED FEB. 19, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

STEPHEN A. DUVALL, OF PENRITH, WEST VIRGINIA.

BOAT.

SPECIFICATION forming part of Letters Patent No. 730,889, dated June 16, 1903.

Application filed February 19, 1903. Serial No. 144,091. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN A. DUVALL, a citizen of the United States, residing at Penrith, in the county of Hancock and State of West Virginia, have invented certain new and useful Improvements in Boats, of which the following is a specification.

This invention relates to improvements in boats which are propelled by paddle-wheels, the wheel either being arranged astern or at the sides; and the main object of my invention is the provision of a scraper which is adapted to be so placed in relation to the wheels as to scrape the surplus water from the paddles as the same leaves the water after making a stroke, thus relieving the strain upon the wheel and propelling mechanism where the water is carried upon the wheel as the same is being revolved.

Another object of my invention is the provision of a scraper which is simple, durable, and inexpensive and which is very easily applied and is therefore thoroughly efficient and practical in use.

To attain these objects the invention consists of a scraper for this purpose embodying novel features of construction and combination of parts, substantially as disclosed herein.

In the accompanying drawings, Figure 1 is a section through the stern end of a stern-wheeler boat, showing my scraper in position. Fig. 2 is a bottom plan view of the paddle wheel and scraper in operative position, and Fig. 3 is a scraper removed.

Referring to the drawings, A designates a paddle-wheel, which is journaled in the proper bearings upon the projecting beams B, astern of the boat. The ends of these beams are slightly rounded, as at C, and secured thereto is my scraper D. This scraper is provided with a top E, provided with the oppositely-extended projections F in order that the scraper or blade G may properly depend in place between the beams and be secured in

the proper position to scrape the paddles of the wheels one at a time as they ascend from the water, thus relieving the wheel from the strain of lifting the extra weight of dead water after the paddle has exerted all of the propelling pressure against the water. The top side of the scraper may be slightly concaved or straight, but is placed in such a position as to give the water after it has been scraped by the scraper a downward chute back into the river.

From the foregoing description, taken in connection with the drawings, it will be seen that I provide a simple, durable, and inexpensive device which is readily attached to the side and stern wheels of boats and which absolutely prevents the dead water from being carried upon the paddles after they have left the water, thus relieving the machinery of a great strain, saving energy and energy-producing material, such as coal and steam, and at the same time increasing the speed of the boat, as the power exerted for raising this dead water is reserved for the propelling of the boat.

What I claim as new, and desire to secure by Letters Patent, is—

The combination with a boat provided with paddle-wheels, of a scraper secured to the rear of the paddle-wheels and provided with a forwardly-inclined scraper adapted to have its lowest edge in close proximity to the blades of the wheel and slightly above the level of the water so as to cut off the water raised by said wheel, and a downwardly-inclined apron or top to cause the water scraped from the wheel to be converted downwardly.

In testimony whereof I affix my signature in presence of two witnesses.

STEPHEN A. DUVALL.

Witnesses:

WM. GRAHAM,
W. M. MCKNIGHT.