

No. 707,809.

Patented Aug. 26, 1902.

M. VILLAZON.  
MOTOR.

(Application filed Aug. 22, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1

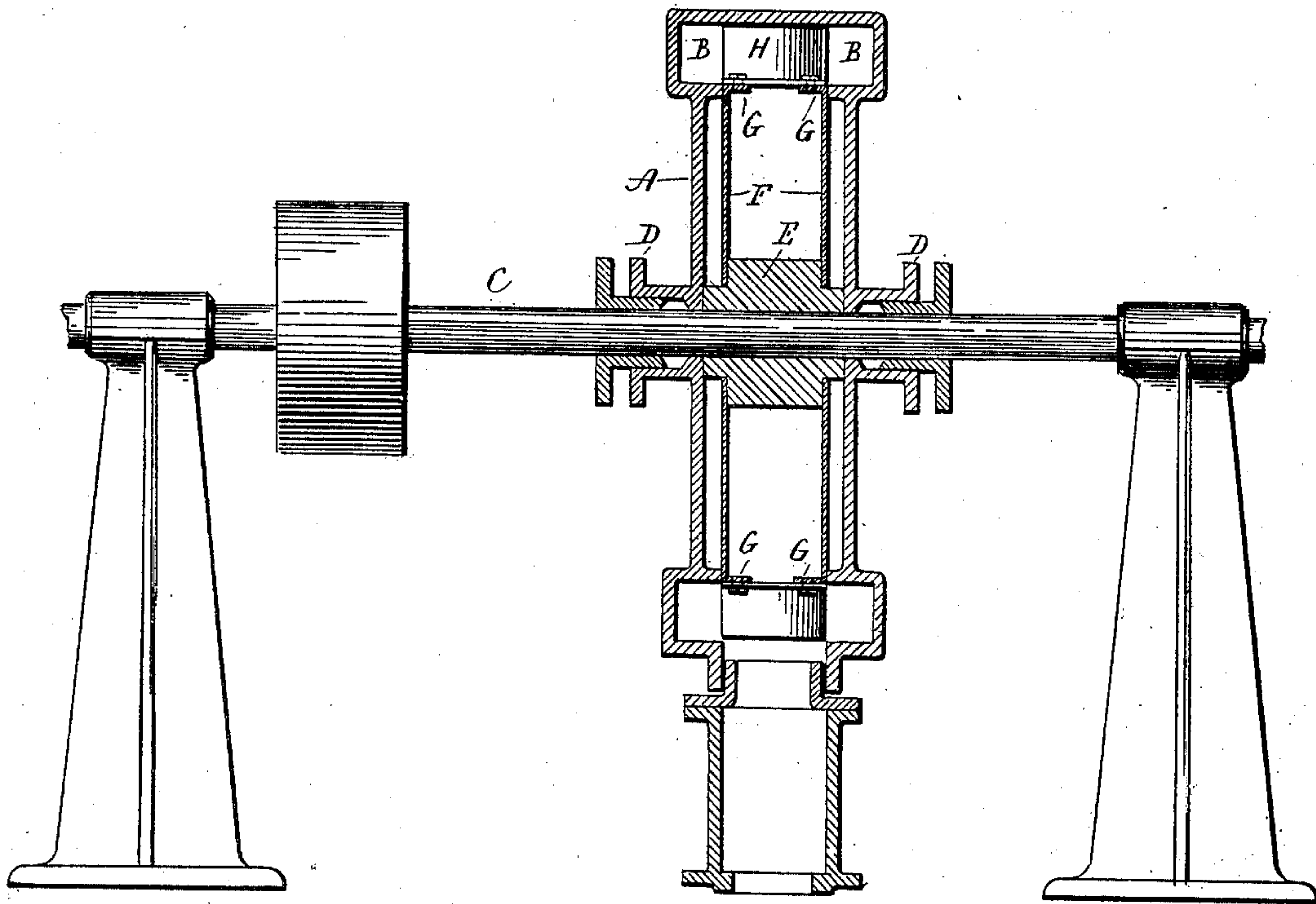
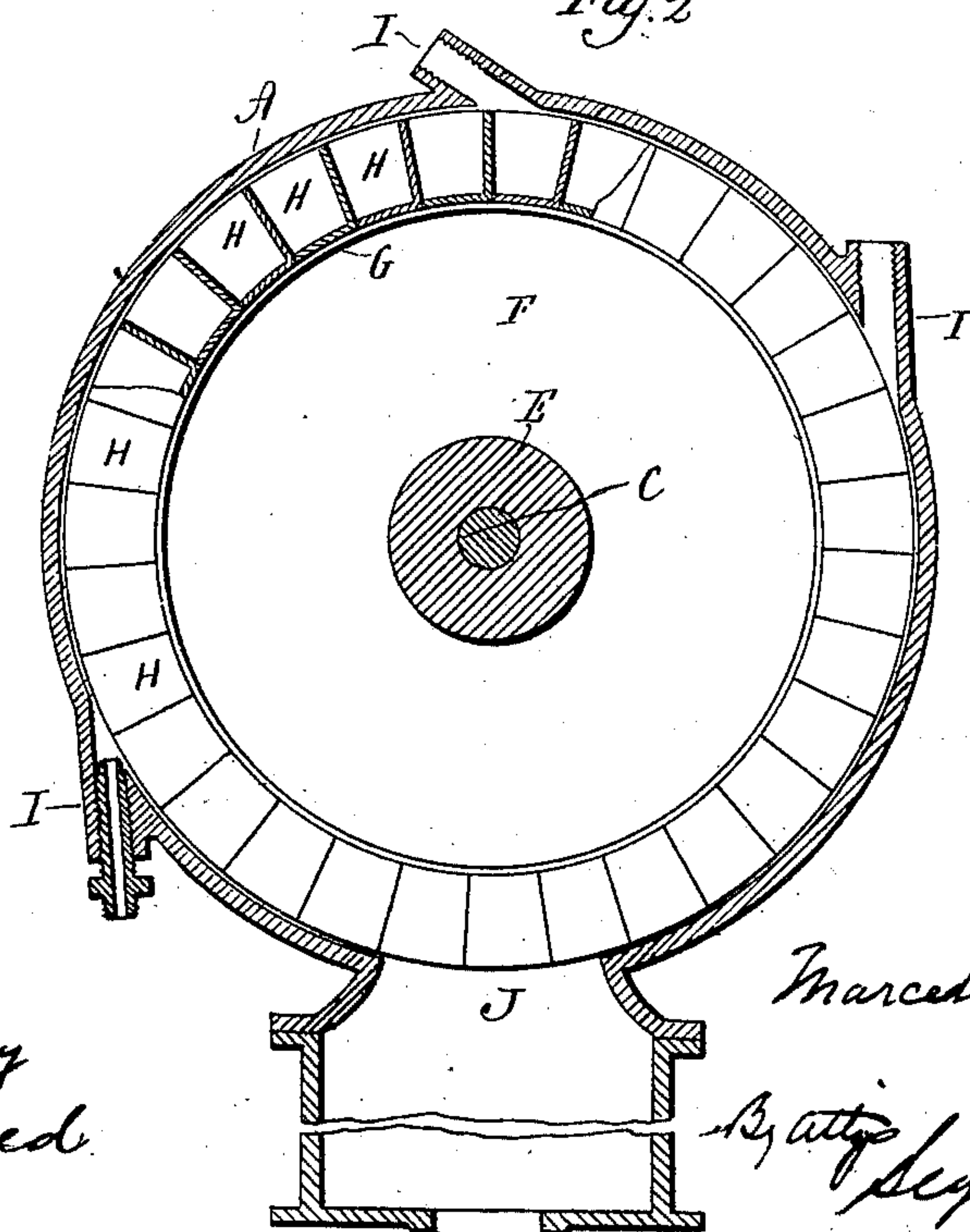


Fig. 2



Witnesses  
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Fig. 3

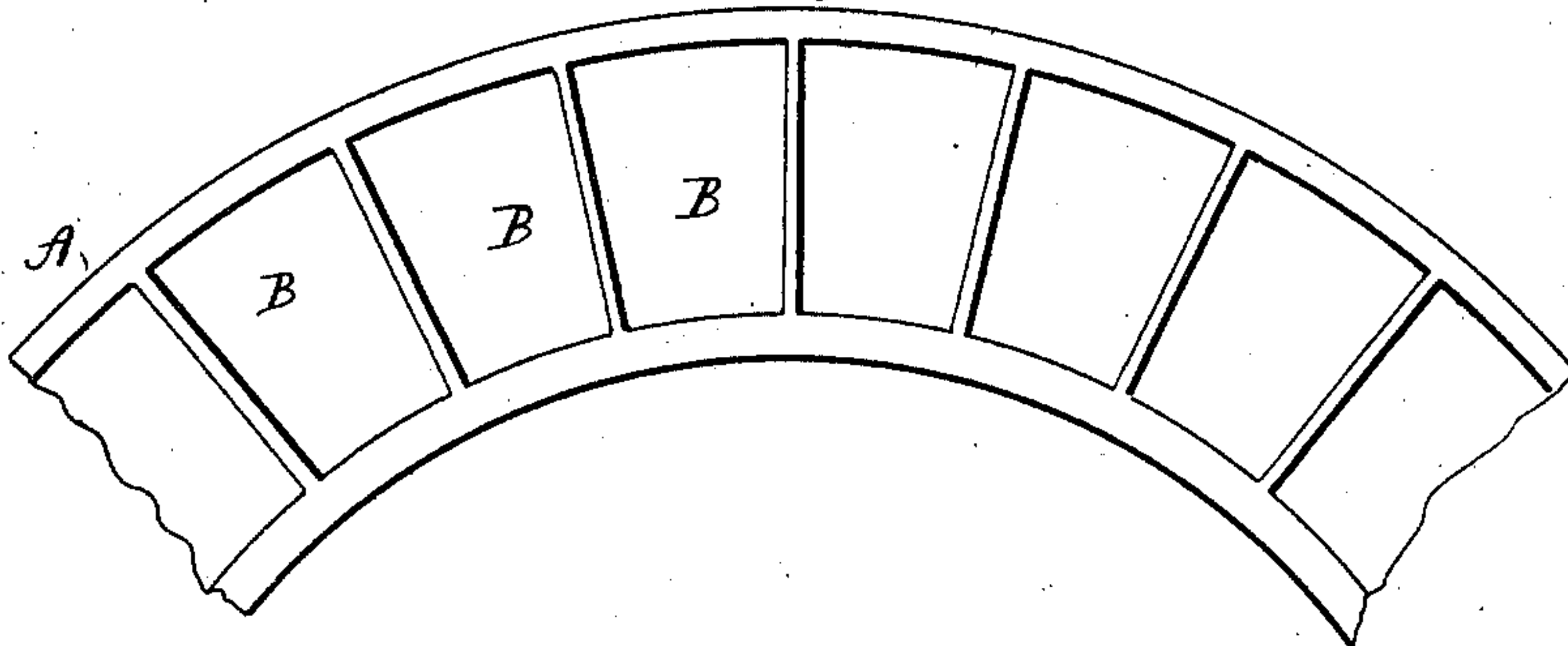


Fig. 4

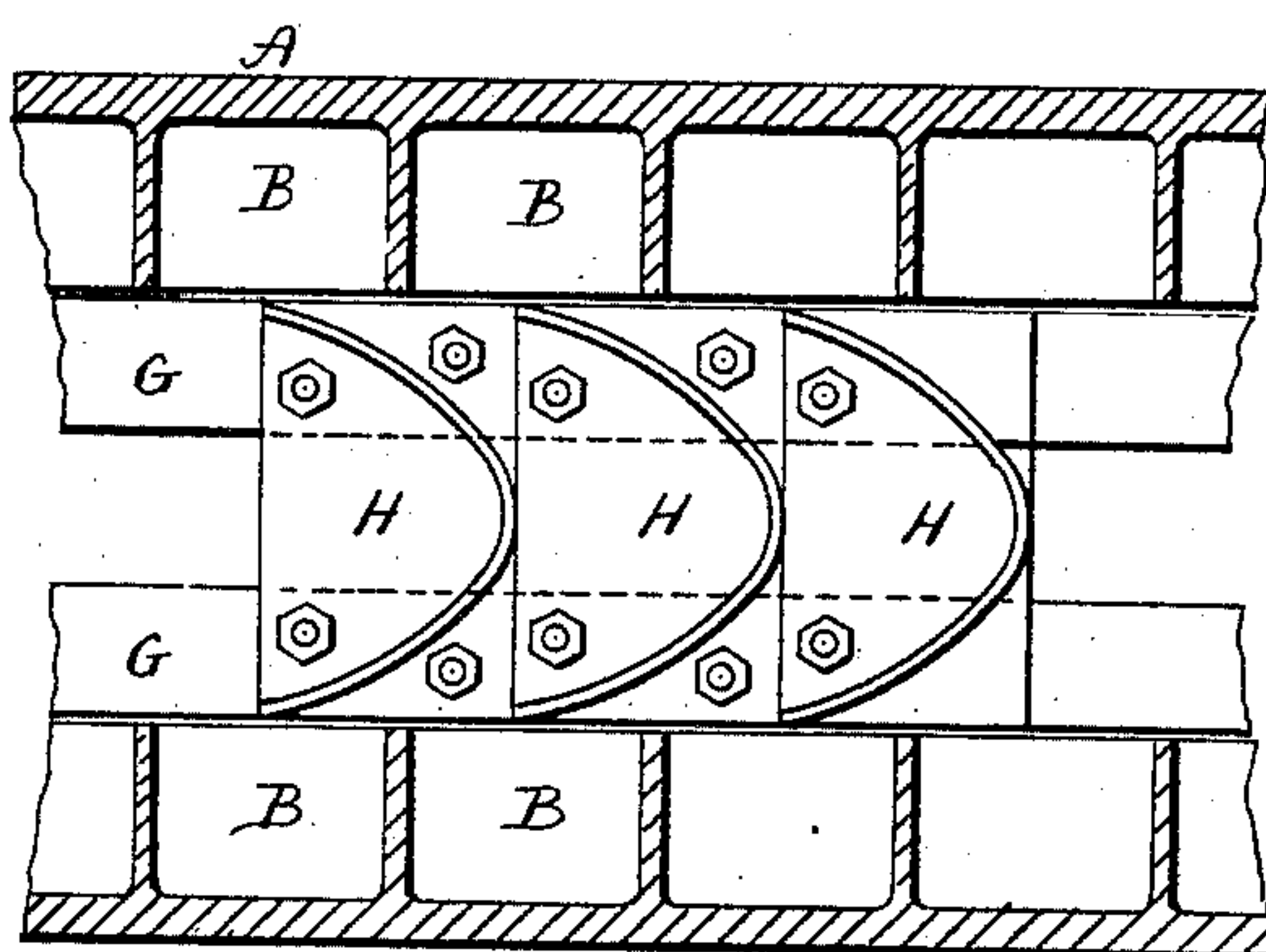
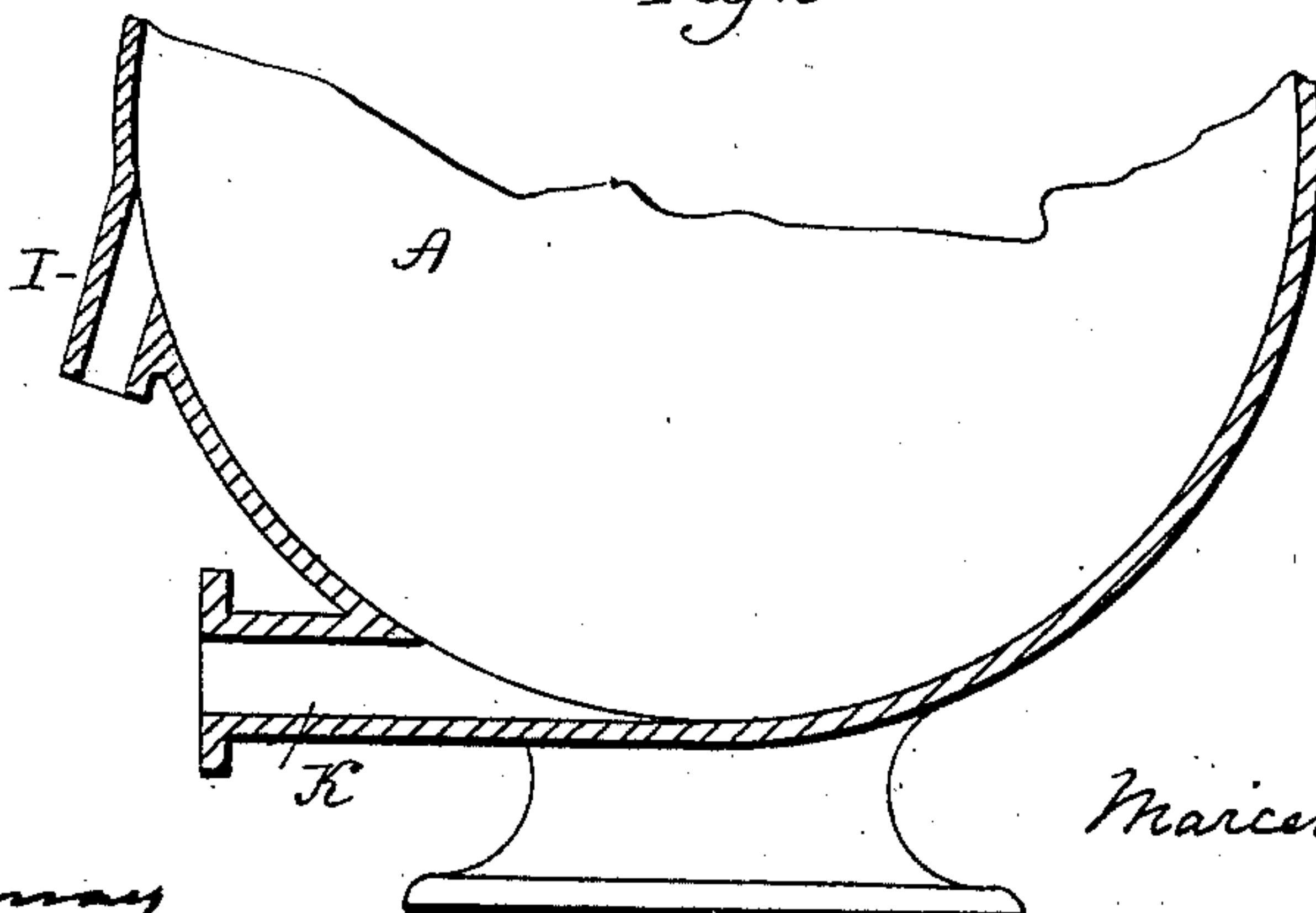


Fig. 5



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# UNITED STATES PATENT OFFICE.

MARCELINO VILLAZON, OF NEW HAVEN, CONNECTICUT.

## MOTOR.

SPECIFICATION forming part of Letters Patent No. 707,809, dated August 26, 1902.

Application filed August 22, 1901. Serial No. 72,882. (No model.)

*To all whom it may concern:*

Be it known that I, MARCELINO VILLAZON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Motors; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken sectional view of a motor constructed in accordance with my invention; Fig. 2, a vertical central section of the same; Fig. 3, a broken inside view of the outer edge of the case, showing the chambers therein; Fig. 4, a broken sectional view showing the relation of the buckets to the chambers; and Fig. 5, a broken side view of the case or shell, showing provision for further utilization of the driving power.

This invention relates to an improvement in motors, the object of the invention being to obtain the dynamic force from the impact force without the intervention of pistons or other devices, the power being directed against buckets secured to the periphery of a wheel fixed to a driving-shaft; and the invention consists in the construction as hereinafter described, and particularly recited in the claims.

In carrying out my invention I mount a circular case or shell A, in opposite sides of the interior of which, at the periphery, is a series of resilient chambers B, opening into the case, but otherwise closed. Through this case or shell A the driving-shaft C extends, the usual stuffing-boxes D being provided on opposite sides of the shell. Within the shell is a wheel, comprising a hub E, keyed to the shaft, and supporting flanges F, the outer edges G of which are turned inward to form rims, to which a series of buckets H are secured. These buckets are parabolical and correspond in width to the distance between the chambers B and in length correspond substantially to the width of the chambers at their outer ends. At one or more points in the periphery of the shell are inlets I for the admission of steam, water, or other driving force, which is admitted at an angle of about fifty degrees to the radius of the shell, and arranged to open in the central line of the buckets H. Steam as it is admitted enters the buckets H and forces them forward, the force of the steam acting

directly against the tip of the buckets, from which it escapes into the chambers B, and as the wheel revolves and the buckets pass the chambers the chambers gradually become filled with the steam under pressure, the expansion of which forces it out. The exhaust-steam may escape through an opening J in the bottom of the case, or as the full force or impulse of the steam will not have been utilized it may be conducted from the shell, through a passage K at the lower end thereof, to a second motor.

I am aware that motors comprising a wheel having V-shaped buckets have been used in connection with the casing, having chambers on opposite sides of the casing in line with said chambers, which chambers have been provided with outlet-passages through which steam may escape, and therefore do not wish to be understood as claiming such as my invention.

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

1. A motor comprising a shell or case formed with a series of chambers in opposite sides opening into the shell but otherwise closed, a wheel mounted in said shell and formed with a series of peripheral parabolic buckets arranged in line with said chambers across the mouths of which they pass, a tangential inlet-opening through the shell directly in line with and against the tips of said buckets, and an exhaust or discharge opening in the bottom of the shell.

2. A motor comprising a shell or case formed with a series of chambers in opposite sides, a wheel mounted in said shell, said wheel comprising a hub and flanges supported on opposite sides thereof, said flanges turned inward at their outer edges, a series of parabolic buckets secured to the said turned-in edges, said buckets being arranged in line with said chambers across the mouths of which they pass, and an inlet-opening through the case directly in line with and against the tips of the said buckets, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

MARCELINO VILLAZON.

Witnesses:

LILLIAN D. KELSEY,  
J. H. SHUMWAY.