

No. 804,112.

PATENTED NOV. 7, 1905.

D. GARDNER & J. O. NEWTON.

BRONZING MACHINE.

APPLICATION FILED JUNE 2, 1905.

3 SHEETS—SHEET 1.

Fig. 1.

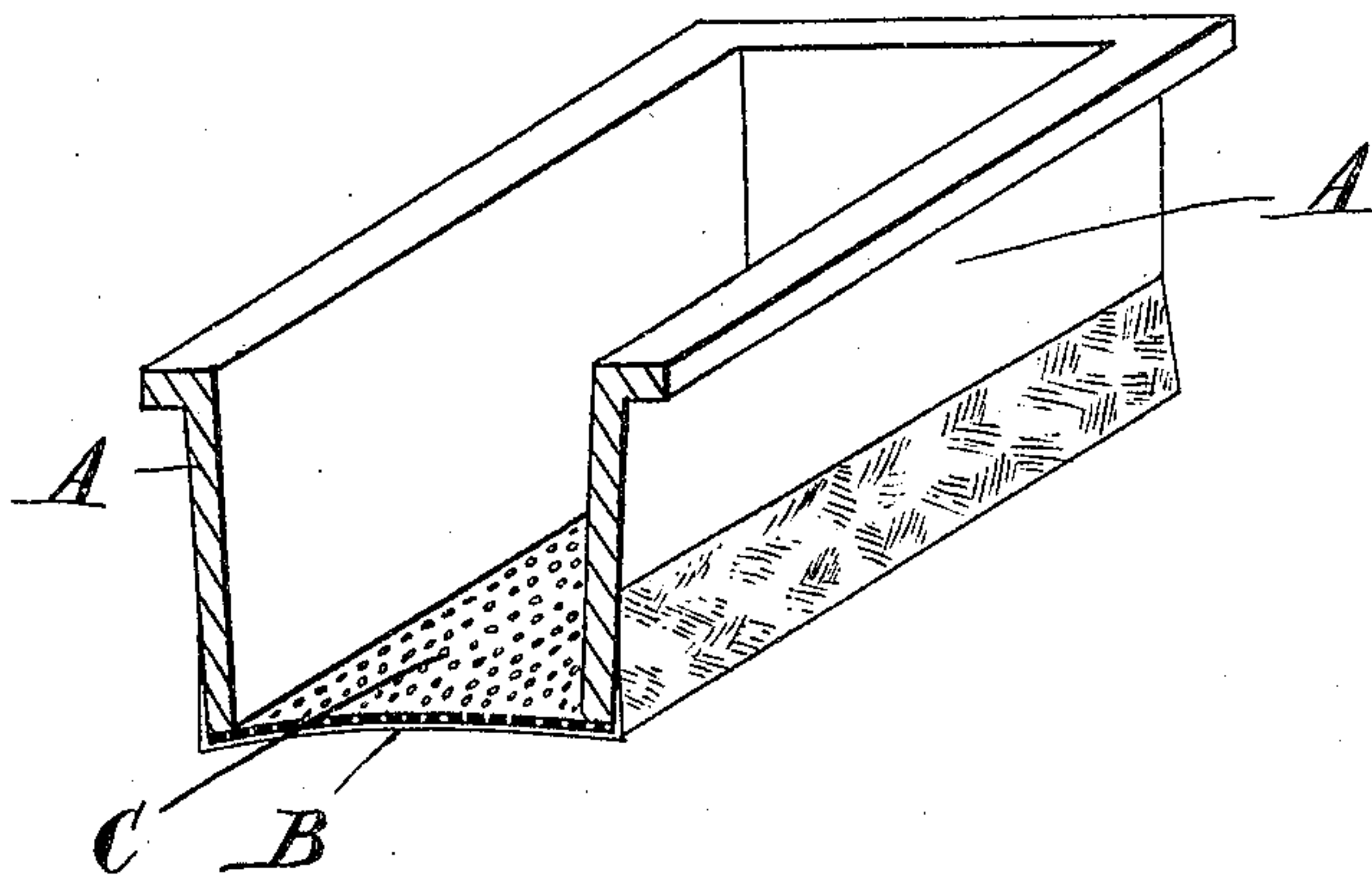
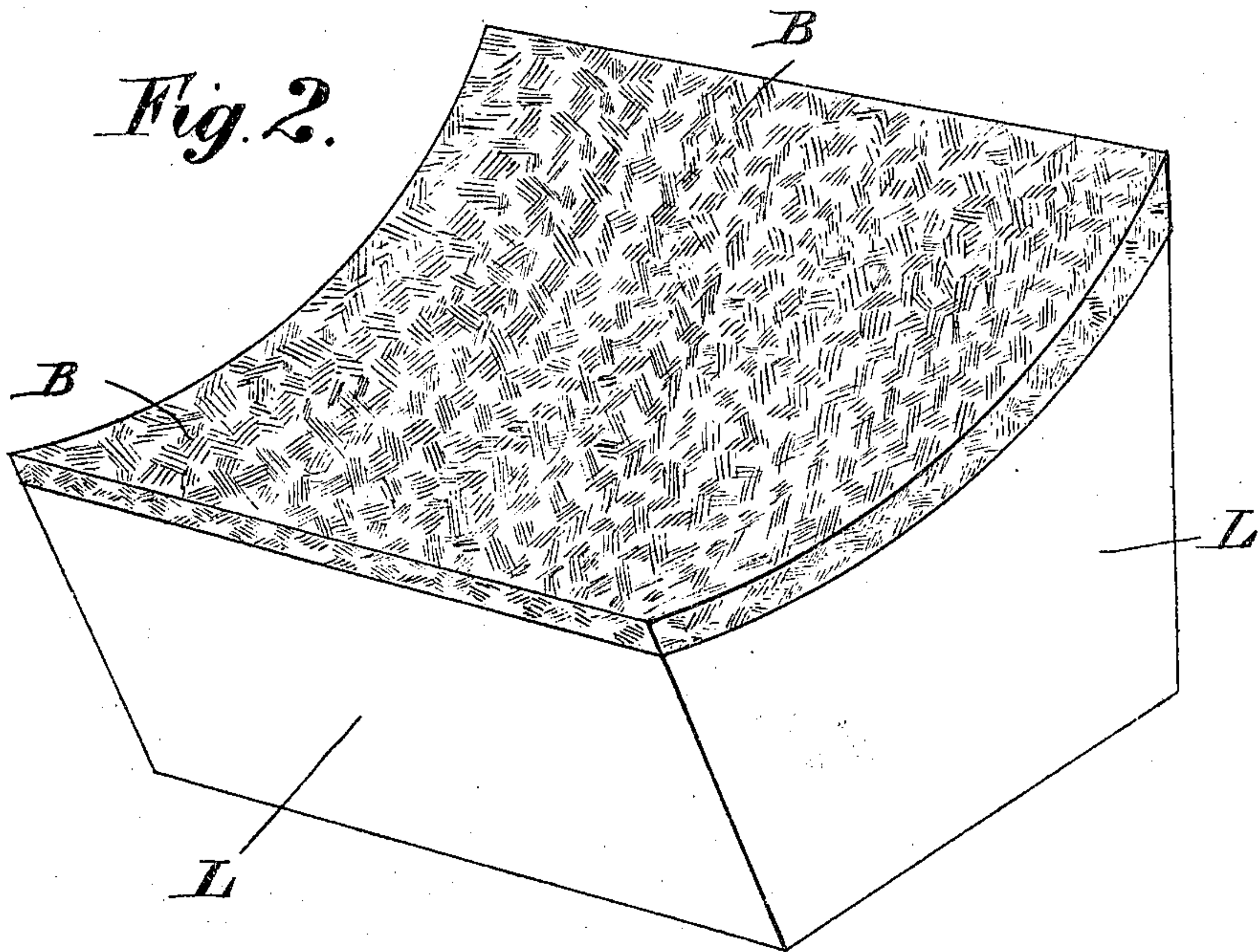


Fig. 2.



Witnesses:

Wm. F. Jones.

G. D. Kessler

Inventors

Douglas Gardner

John O. Newton

By James L. Norris

Atty

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3 SHEETS—SHEET 2.

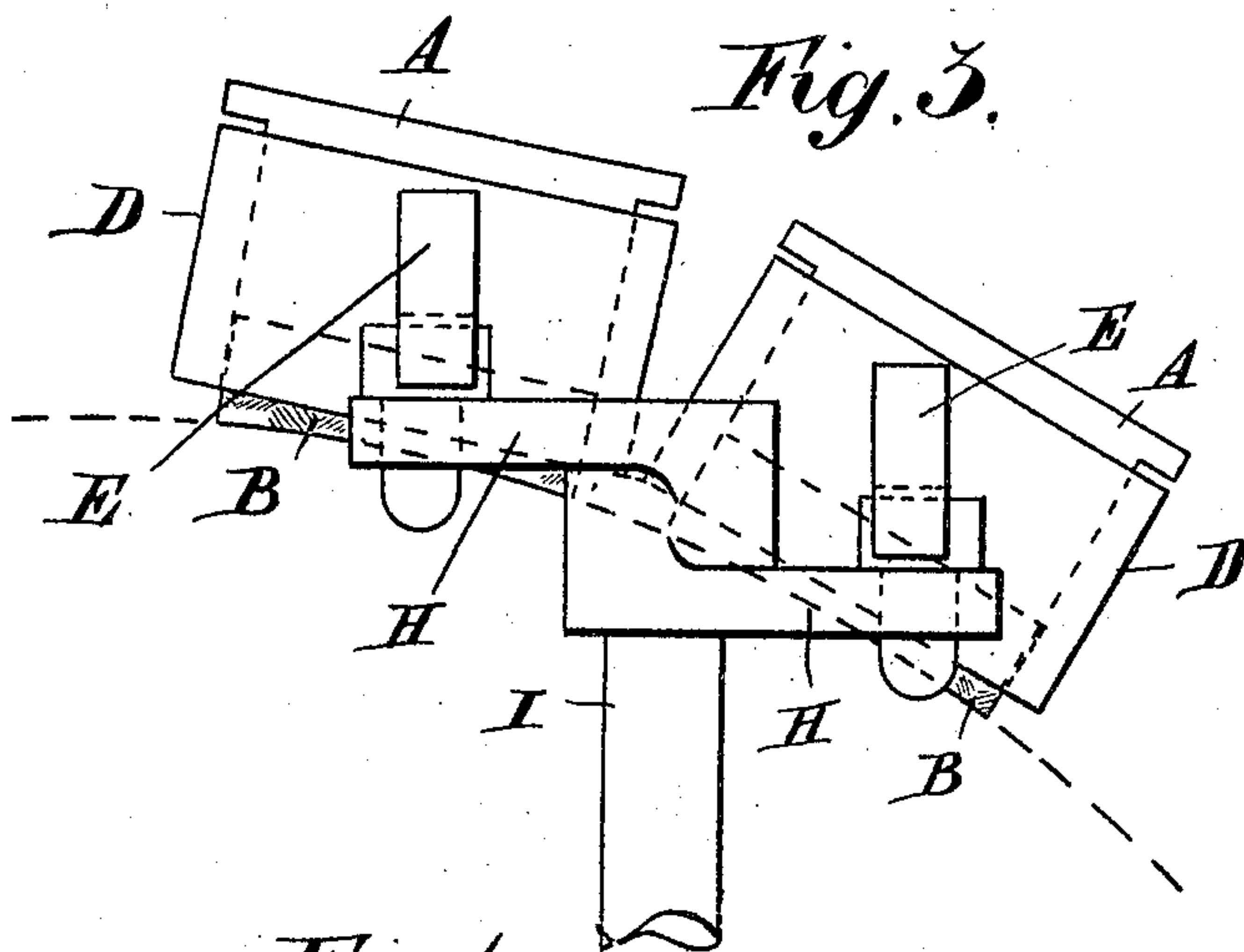
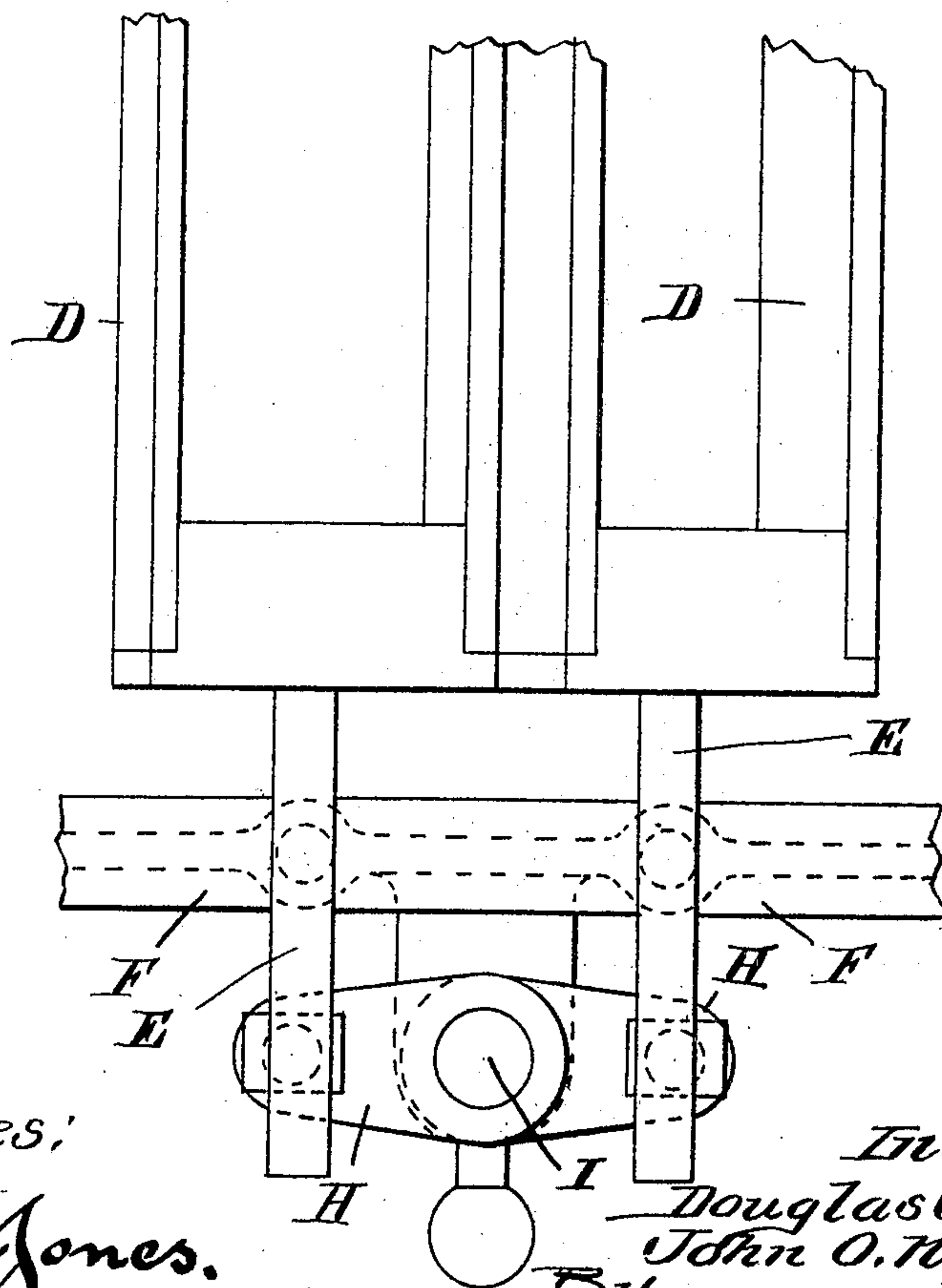


Fig. 4.



Witnesses:

Wm. F. Jones.

C. D. Kessler

Inventors

Douglas Gardner

John O. Newton

By James L. Noring.

Attest

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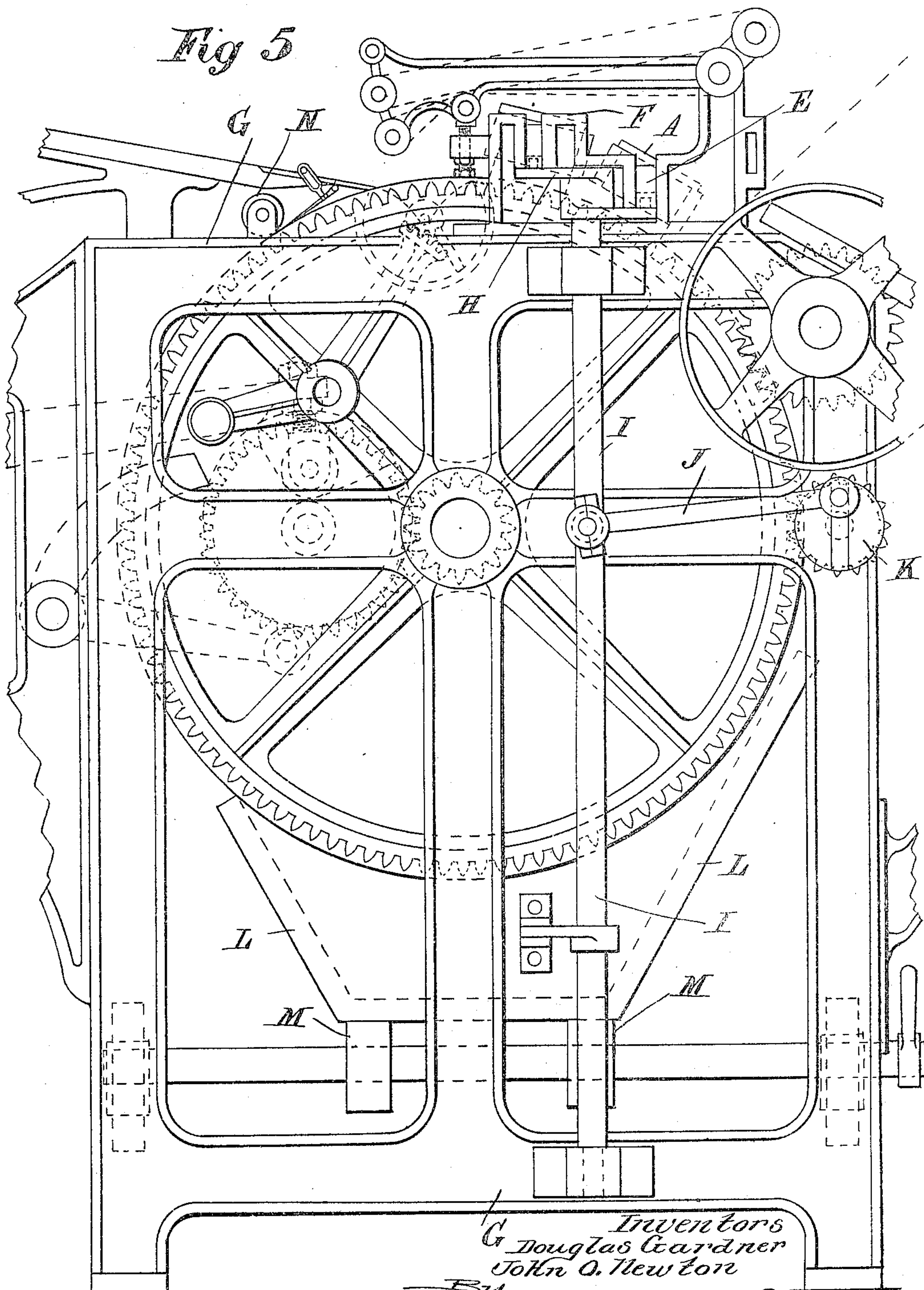
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D. GARDNER & J. O. NEWTON.

BRONZING MACHINE.

APPLICATION FILED JUNE 2, 1905.

3 SHEETS—SHEET 3.



Witnesses:
Wm G. Jones.
C. D. Hester.

Inventors
G Douglas Gardner
John O. Newton
By *James L. Norris*
att'y.

UNITED STATES PATENT OFFICE.

DOUGLAS GARDNER, OF UPTON PARK, AND JOHN OLIVER NEWTON, OF
SOUTH WOODFORD, ENGLAND.

BRONZING-MACHINE.

No. 804,112.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed June 2, 1905. Serial No. 263,484.

To all whom it may concern:

Be it known that we, DOUGLAS GARDNER, residing at 506 Green street, Upton Park, and JOHN OLIVER NEWTON, residing at 2 Salisbury Villas, Latchett Road, South Woodford, county of Essex, England, subjects of the King of Great Britain, have invented certain new and useful Improvements in Bronzing-Machines, of which the following is a specification.

The object of this invention is to fit a bronzing-machine with two troughs having their bottoms provided with chamois-leather, flannel, or any other suitable material, through which the bronze-powder percolates and is taken up by the adhesive preparation on the paper, the paper passing under the troughs and in contact with the flannel. After the paper has passed under the troughs it is carried against another trough covered with flannel, which acts as a duster, the surplus powder percolating through the flannel and falling into the trough for after collection.

Our invention will be readily understood from the following description, aided by the accompanying drawings, which show the upper and lower troughs and also their application to a rotary bronzing-machine.

Figure 1 is a perspective section of a single trough having a flannel or like covered bottom for applying the powder. Fig. 2 is a perspective view of a trough having a flannel or like covered top for removing surplus powder from the paper. Fig. 3 is an end elevation of two troughs for applying the powder and showing their connection to their carriers and the oscillating shaft. Fig. 4 is a plan of the troughs, carrier, and oscillating shaft, part of the carrier being broken away. Fig. 5 is a side view of a rotary bronzing-machine with troughs in position.

The powder-application troughs A are constructed of box shape and with their bottoms covered with chamois-leather, flannel, or other suitable material B, this being preferably held to the trough by cementing same to the sides and ends of the trough A. Between the trough A and flannel B we arrange a sheet of perforated metal C or the like so that the flannel will be kept in position and yet the powder will be allowed to percolate through the flannel B, the metal perforated sheet being shaped to the radius of the cylinder or traveling bed, so that the paper can

be passed in perfect contact with the flannel over its entire surface. The dusting-trough is constructed in like manner on the top part thereof.

The powder-applying troughs are fitted in a framework D, having arms E resting in brackets F on the frame G of the machine, and such frames D are connected to arms H of a rocking shaft I, this being connected by a link J to a crank-disk K, operated from some moving part of the machine to impart an oscillating motion to the troughs A and also dusting-box L, which rides on rollers M, fitted in the frame of the machine.

The troughs and dusting-box may be divided into sections, so that more than one colored powder can be applied and dusted at the same time, the dusting-trough being in register with the other troughs.

In the machine shown, and which forms no part of this invention, each sheet of paper to be bronzed is held by grippers on a cylinder and carried round under the vibrating powder-troughs A to take up the powder. The paper is then passed over the vibrating dusting-box to remove the surplus powder, and when the front edge of the paper reaches the roller N the gripper releases it and paper passes away from the cylinder to a collecting apparatus, the cylinder making another complete revolution before taking up a fresh sheet.

What we claim, and desire to secure by Letters Patent, is—

1. In a bronzing-machine, the combination with oscillating or vibrating mechanism, of troughs for containing the bronzing material and coöperating with said mechanism, said troughs having bottoms of chamois-leather, flannel, or the like through which the bronzing material is adapted to pass, the paper or other substance to receive the bronzing material being fed against the said trough-bottoms.

2. In a bronzing-machine, the combination with oscillating or vibrating mechanism, of means for removing the surplus bronze from the material treated, consisting of a body having a top covering of flannel, chamois-leather, or the like, which has contact with the material treated.

3. In a bronzing-machine, the combination with oscillating or vibrating mechanism, of a trough having bottom coverings of chamois-leather, flannel, or the like, and against

which the material to be bronzed is passed,
the bronzing-powder passing through the said
trough-bottom, and a box having a top cov-
ering of chamois-leather, flannel or the like,
5 for removing the surplus bronze-powder from
the material treated.

In testimony whereof we have hereunto set

our hands in presence of two subscribing wit-
nesses.

DOUGLAS GARDNER.
JOHN OLIVER NEWTON.

Witnesses:

PERCY E. MATTOCKS,
WM. O. BROWN.