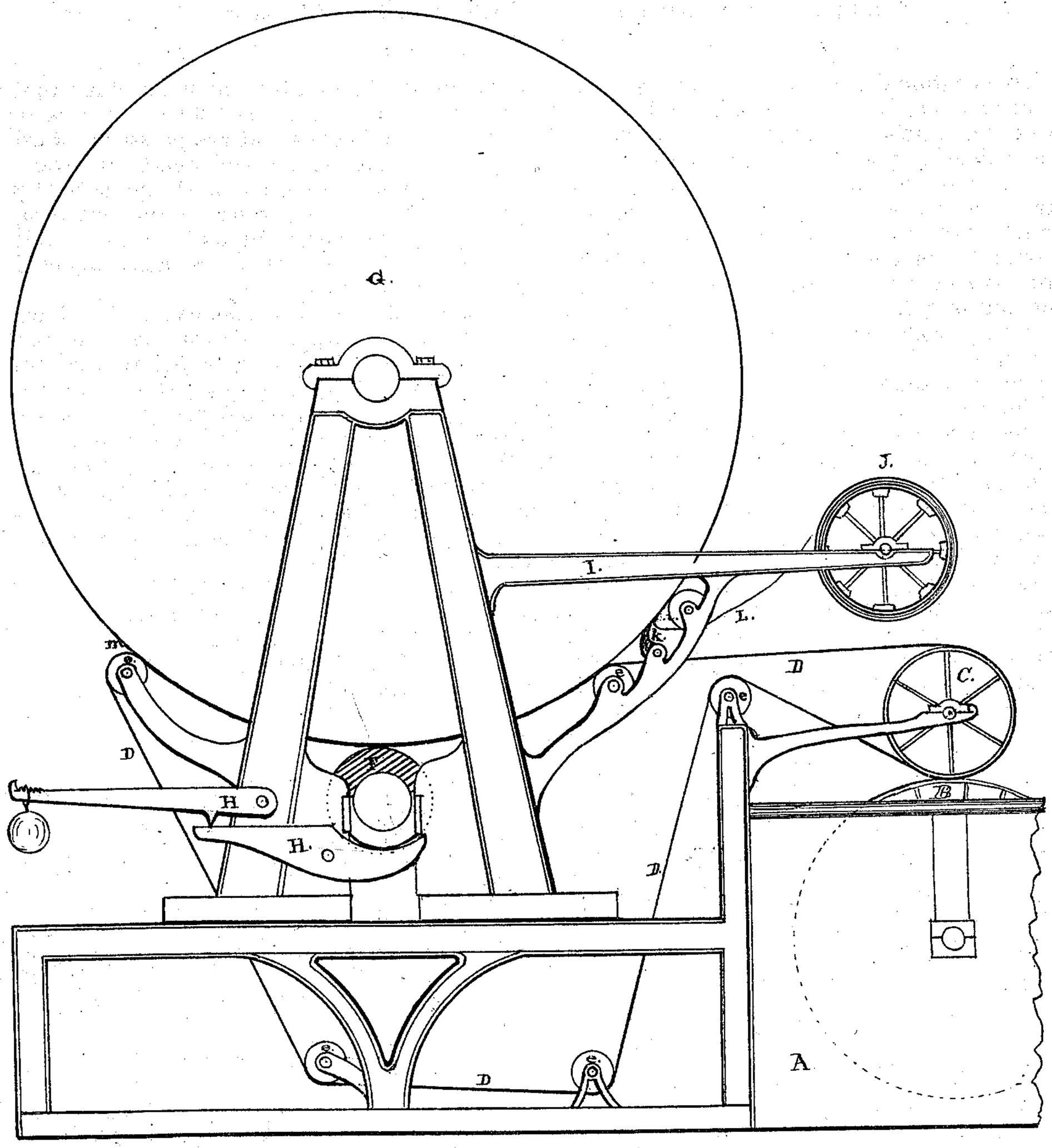
JOHN BURNS & JOHN CAMPBELL.

Improvement in Paper Making Machines.

No. 124,881. Patented March 26, 1872.



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124,881

UNITED STATES PATENT OFFICE.

JOHN BURNS AND JOHN CAMPBELL, OF BLOOMFIELD, NEW JERSEY.

IMPROVEMENT IN PAPER-MAKING MACHINES.

Specification forming part of Letters Patent No. 124,881, dated March 26, 1872.

Specification describing an Improvement in Paper-Making Machines, invented by JOHN BURNS and JOHN CAMPBELL, of the town of Bloomfield, in the State of New Jersey.

Our improvement consists in such a construction of press-rolls that receive the pulp on felt-cloth as it leaves the cylinder or the distributer as adapts them to completing the processes of pressing and drying in the use of one pair of rolls.

In the accompanying drawing, A designates a pulp-vat; B, the cylinder. C shows the coucher; D, the endless felt; *e*, the guide-rolls; F, the lower, G, the upper enlarged press-roll; H, the combined pressure-regulating levers; I, the arms, attached to the stand of the press-rolls to support the reel. J is the receiving-reel; *k*, the doctor or stripper; and L is the paper as it passes from the cylinder to the reel. The upper press-roll G is by us enlarged to the size required to give sufficient drying-surface for the kind of thin paper the machine is used for making, which is found to be ordinarily from ten to twelve times the diameter of ordinary lower press-rolls. This cylinder revolves in boxes on the top of the stand that confine it to its place. The lower roll F is in sliding journal-boxes that are pressed upward by the combined levers and weight H reversing the ordinary direction of the pressure by paper-rolls. The paper leaves the felt at *m*, adhering to the large roll, and leaves the roll at the doctor or stripper *k*. Steam is injected into the roll as usual.

By this means we economize the cost for and the room occupied by the machine, and prevent a great amount of waste that occurs from breaks in the paper, especially in tissue-paper, that is unavoidable where the paper passes over a series of rolls in its drying.

What we claim, and desire to secure, is—

The press-rolls F and G, constructed, combined, and arranged on a paper-making machine, as and for the purpose specified and shown.

JOHN BURNS.
JOHN CAMPBELL.

Attest:
W. M. GOODING,
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