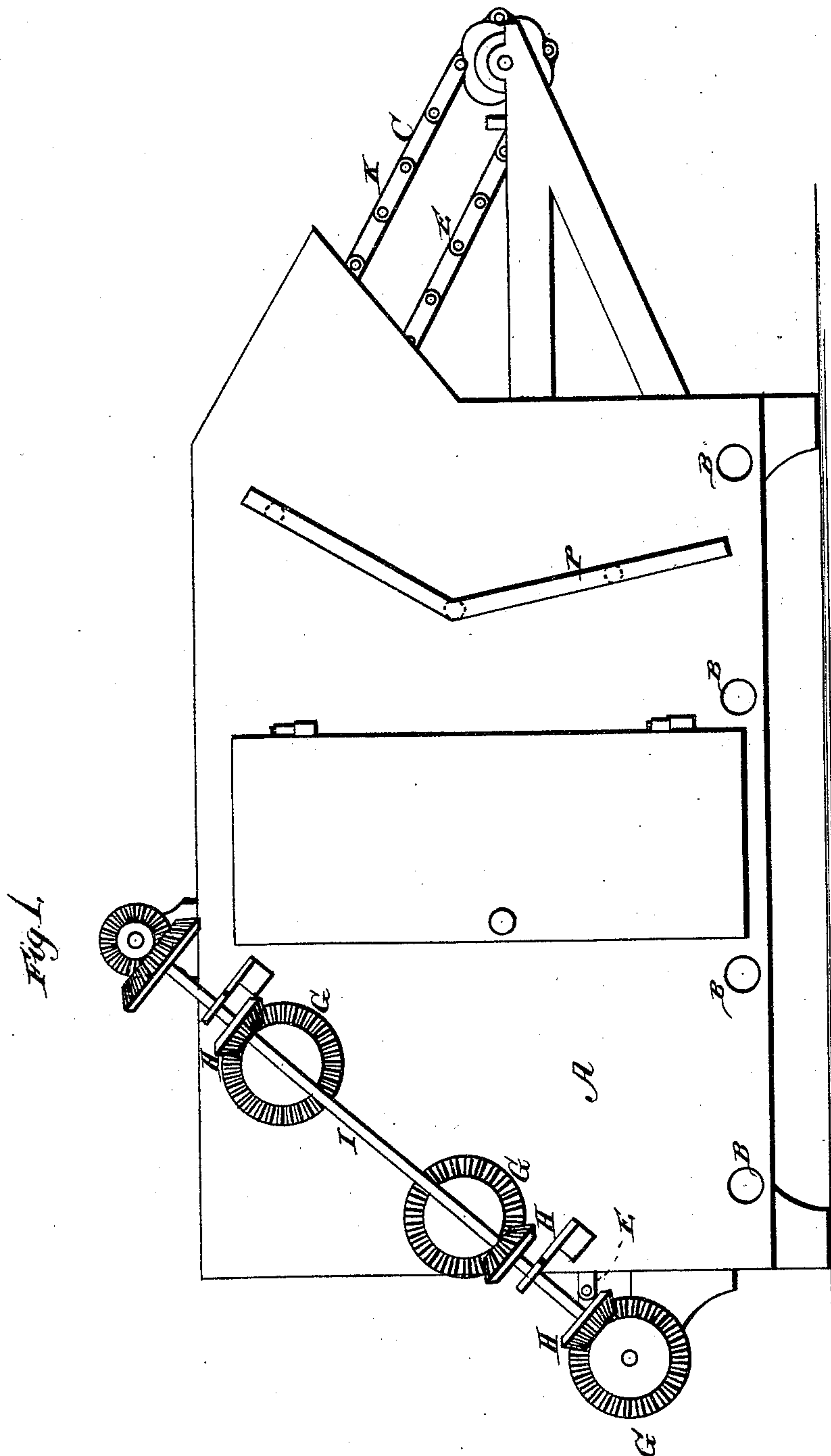


G. B. F. COOPER.
Tobacco Drying-Machine.

No. 223,319.

Patented Jan. 6, 1880.



WITNESSES

Robert Everett
James J. Shuey

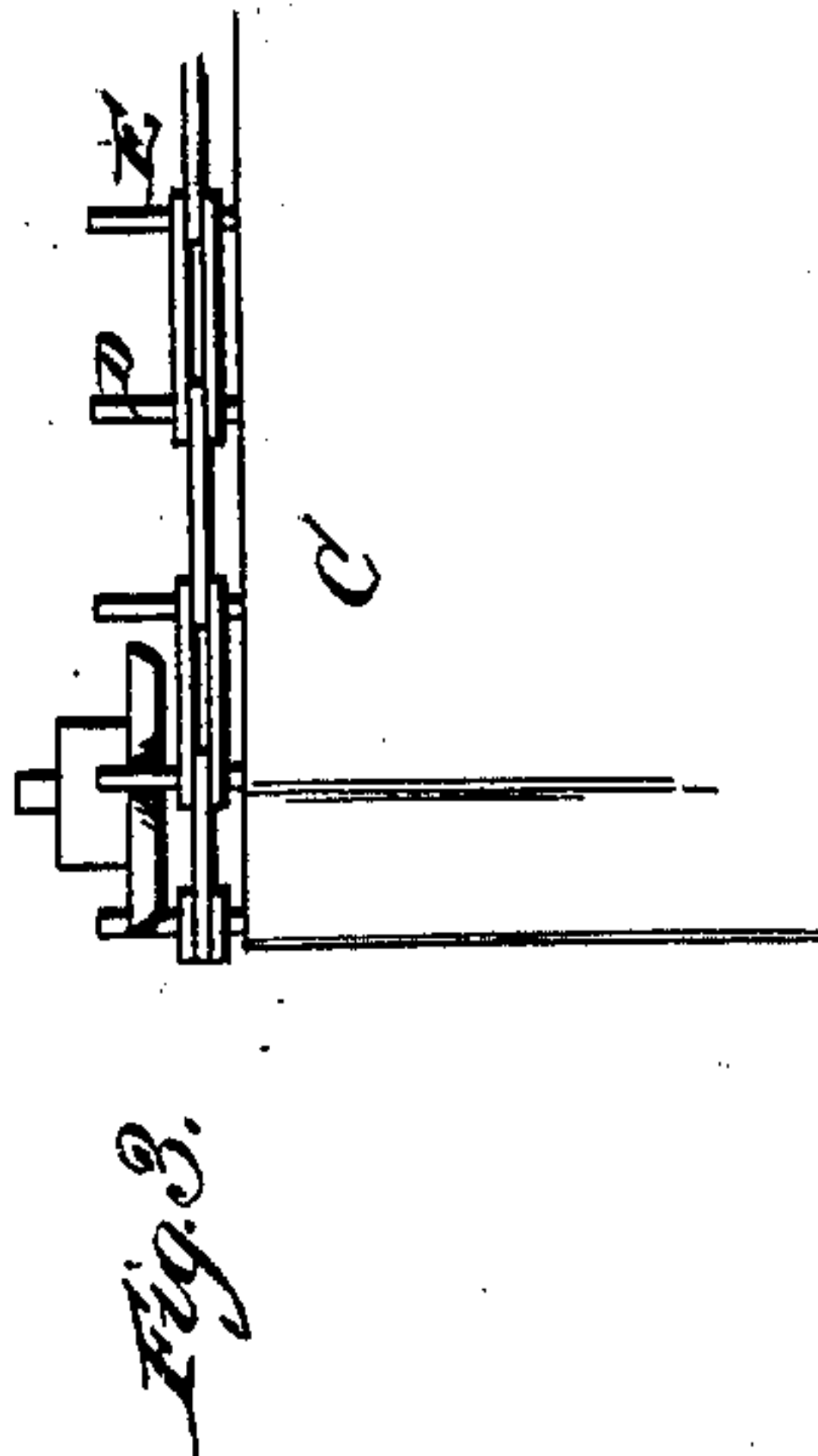
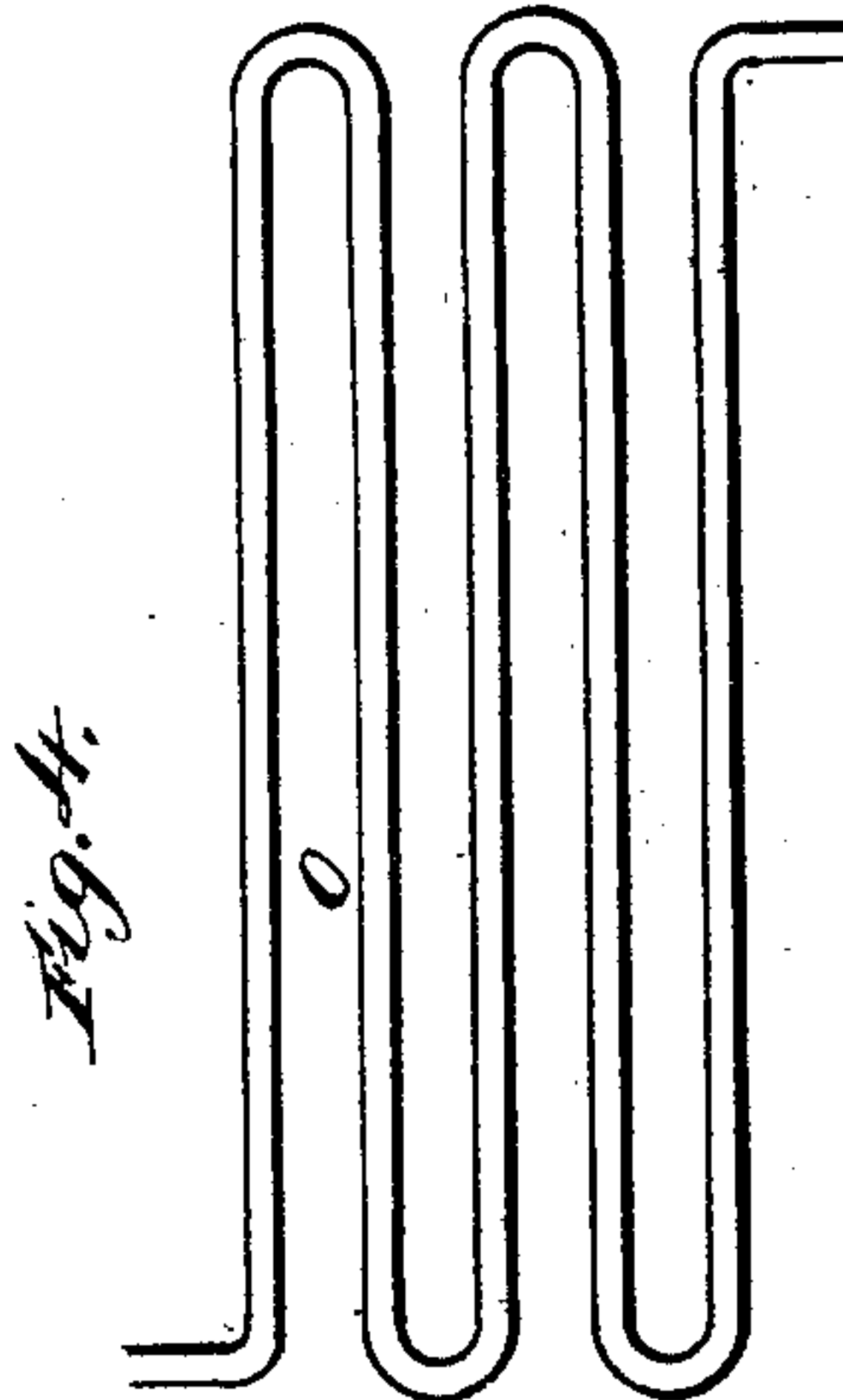
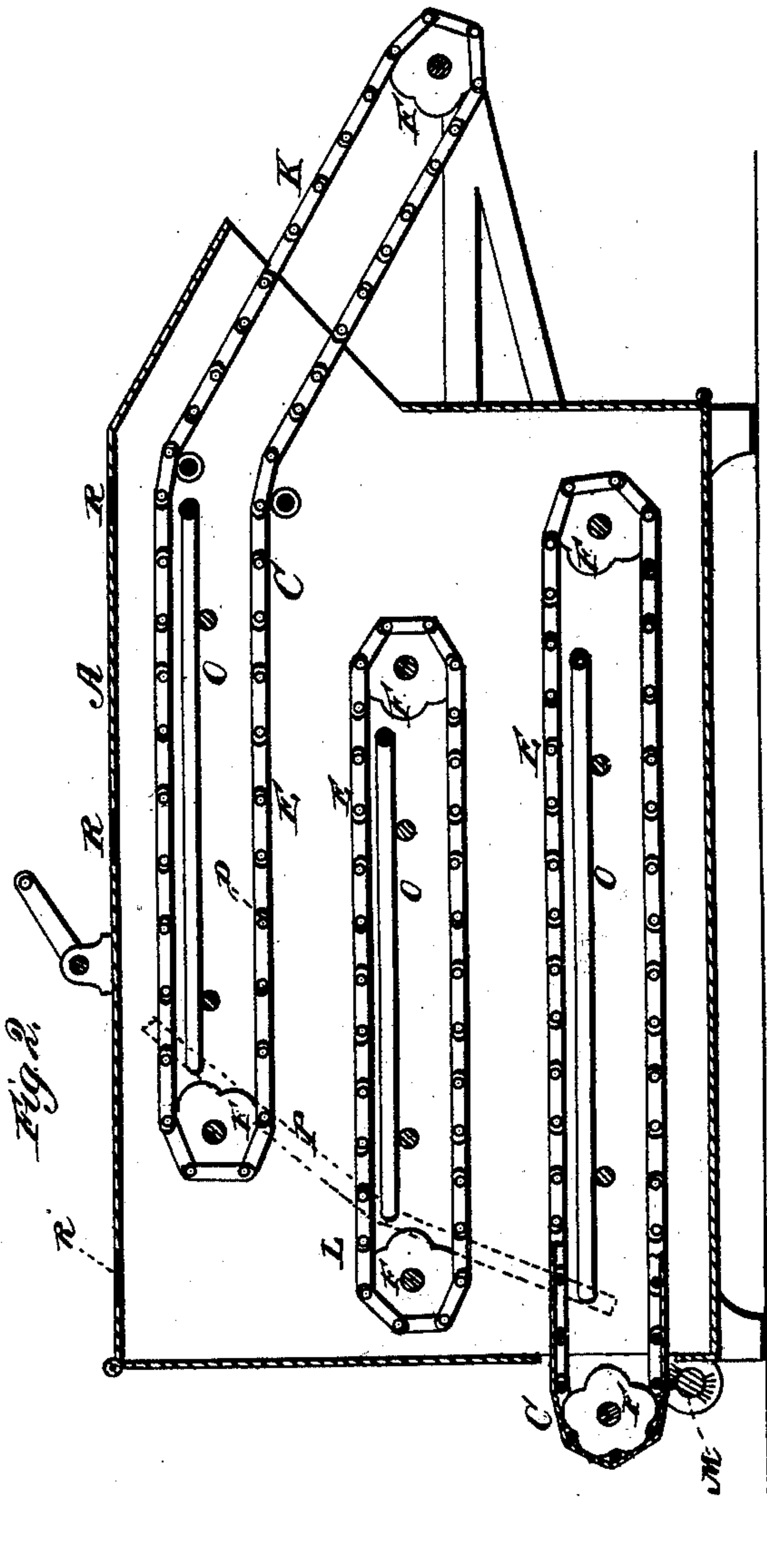
INVENTOR

George B. F. Cooper
Gilmore Smith & Co.
ATTORNEYS

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Tobacco Drying-Machine.

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WITNESSES
Robert Smith
Chas. G. Page

INVENTOR
George B. F. Cooper
William Smith & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE B. F. COOPER, OF NEW ALBANY, INDIANA.

TOBACCO-DRYING MACHINE.

SPECIFICATION forming part of Letters Patent No. 223,319, dated January 6, 1880.

Application filed November 15, 1879.

To all whom it may concern:

Be it known that I, GEORGE B. F. COOPER, of New Albany, in the county of Floyd and State of Indiana, have invented certain new and useful Improvements in Tobacco-Drying Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation of my tobacco-drier. Fig. 2 is a longitudinal sectional view of the same, and Figs. 3 and 4 are detail views.

My present invention relates to that class of tobacco-drying machines in which a series of endless belts or aprons are so arranged that the leaves of tobacco placed upon the top apron of the series will be carried the length of the machine, and then, falling upon the next lower apron of the series, will be carried in a reverse direction, and so on throughout the entire series, means being employed for heating the air within the machine, and thus drying the tobacco.

In order to illustrate my improvement in a machine belonging to this class, I will first describe the same in connection with a tobacco-drying machine, and afterward point out by the claims the features which I regard as novel.

A designates the main casing of the machine, which is provided with openings or air-inlets B in its sides, these openings being arranged near its base to admit air below the lowest endless apron of the series.

The aprons C are formed of some open fabric, and are passed over the rods D, which extend through and pivot together the links E, thus forming continuous flexible platforms composed of links, cross-rods, and endless aprons. These platforms are actuated by sprocket-wheels F, which engage with the ends of the rods D, and upon each axis of the sprocket-wheels is secured a beveled gear-wheel, G. These beveled gear-wheels are in turn operated by pinions H upon an inclined shaft, I, under the arrangement herein shown, whereby the series of wheels G rotate alternately in reverse directions, for the purpose of imparting a corresponding movement to the

endless aprons, and thereby causing the tobacco-leaves upon the same to travel from end to end of the machine as they fall from one apron to another.

The main shaft drives the inclined shaft by means of suitable gearing, and is in turn rotated by a crank or belt.

The upper belt or platform extends out from the machine, as at K, so that the leaves of tobacco may be conveniently placed thereon. The platform next in the series below this extends in advance of the upper platform at the rear of the machine, as at L, to catch the tobacco which falls from the upper platform and reconvey it to the front end of the machine. The lowest platform is greater in length than the one next above it, and this platform carries the tobacco-leaves to the rear of the machine, where they are finally discharged.

A roller, M, below the lowest platform is provided with brushes, which effectively remove all tobacco from the fabric of the apron.

The air within the machine is heated by means of steam-pipes O. These pipes communicate with main external pipes, P, at the sides of the machine, one of the said pipes P being located near the rear and the other near the front end of the apparatus. The pipes O are arranged in sets within the platforms, and are bent to run back and forth lengthwise of the machine and to extend from side to side thereof. The air within the machine is heated by passing steam through the above-described pipes, and it circulates freely around the belts or aprons to dry the tobacco or other substance placed thereon and carried from belt to belt in the manner set forth.

The ports in the sides of the casing A admit a constant supply of fresh air, which passes upward around the pipes and belts, and thence out through openings R in the top of the casing.

I am aware that a series of endless belts running in alternate directions, and projecting alternately to receive the falling leaves from the next upper belt of the series, have been employed in drying-machines, and this I do not claim, broadly.

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

1. In a tobacco-drying machine provided

with a series of endless aprons or platforms arranged to carry the tobacco-leaves alternately back and forth the length of the machine, and also from the top to the bottom of the same, as set forth, the steam-pipes O, communicating with the external main pipes, P, and arranged in sets within the platforms, said pipes being also bent to run back and forth lengthwise of the machine, and to extend from side to side thereof, substantially as shown, and for the purposes set forth.

2. The casing A, with the air-inlets B near its base and outlets R at its top, the herein-described endless aprons or platforms, and the sets of steam-pipes O and P, all arranged as set forth.

3. The continuous platforms comprising the belts C, of open fabric, the cross-rods D, for supporting the belts, the links E, pivoted together by the said rods, and the sprocket-wheels F, arranged to engage with the rods, all arranged as set forth, and operated by means of exterior gearing, substantially in the manner specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEO. B. F. COOPER.

Witnesses:

N. W. QUEEN,
H. M. COOPER.