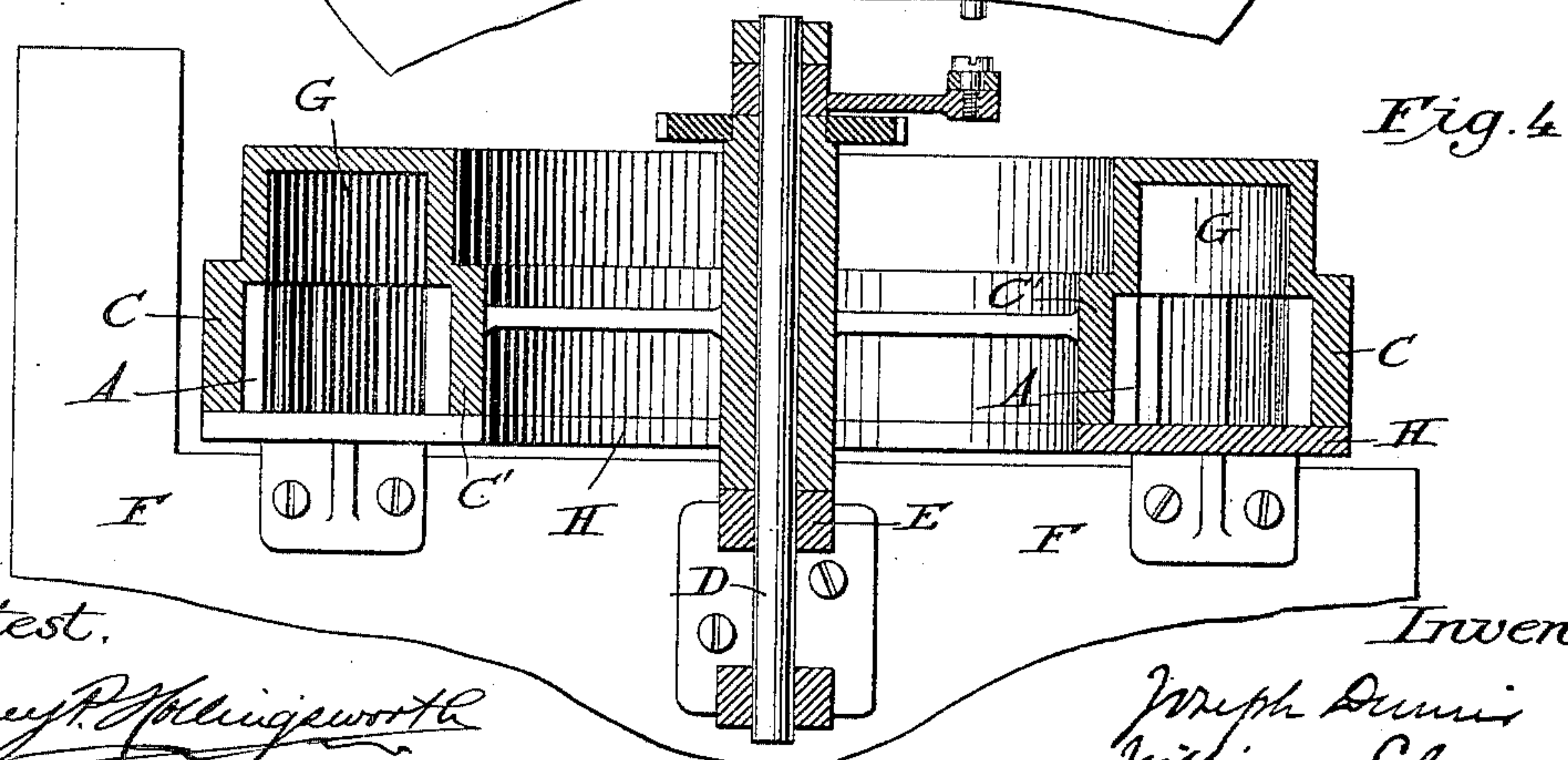
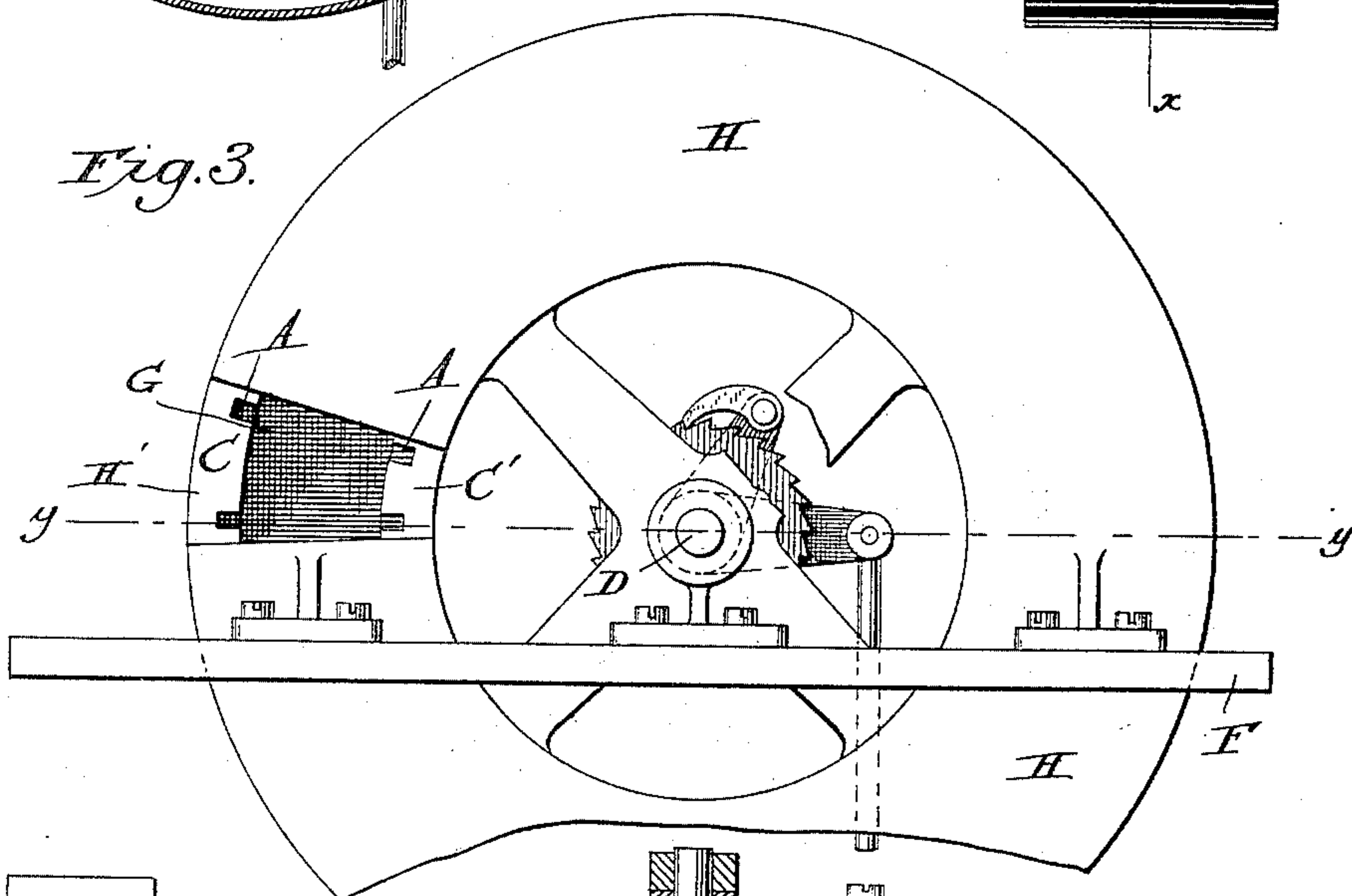
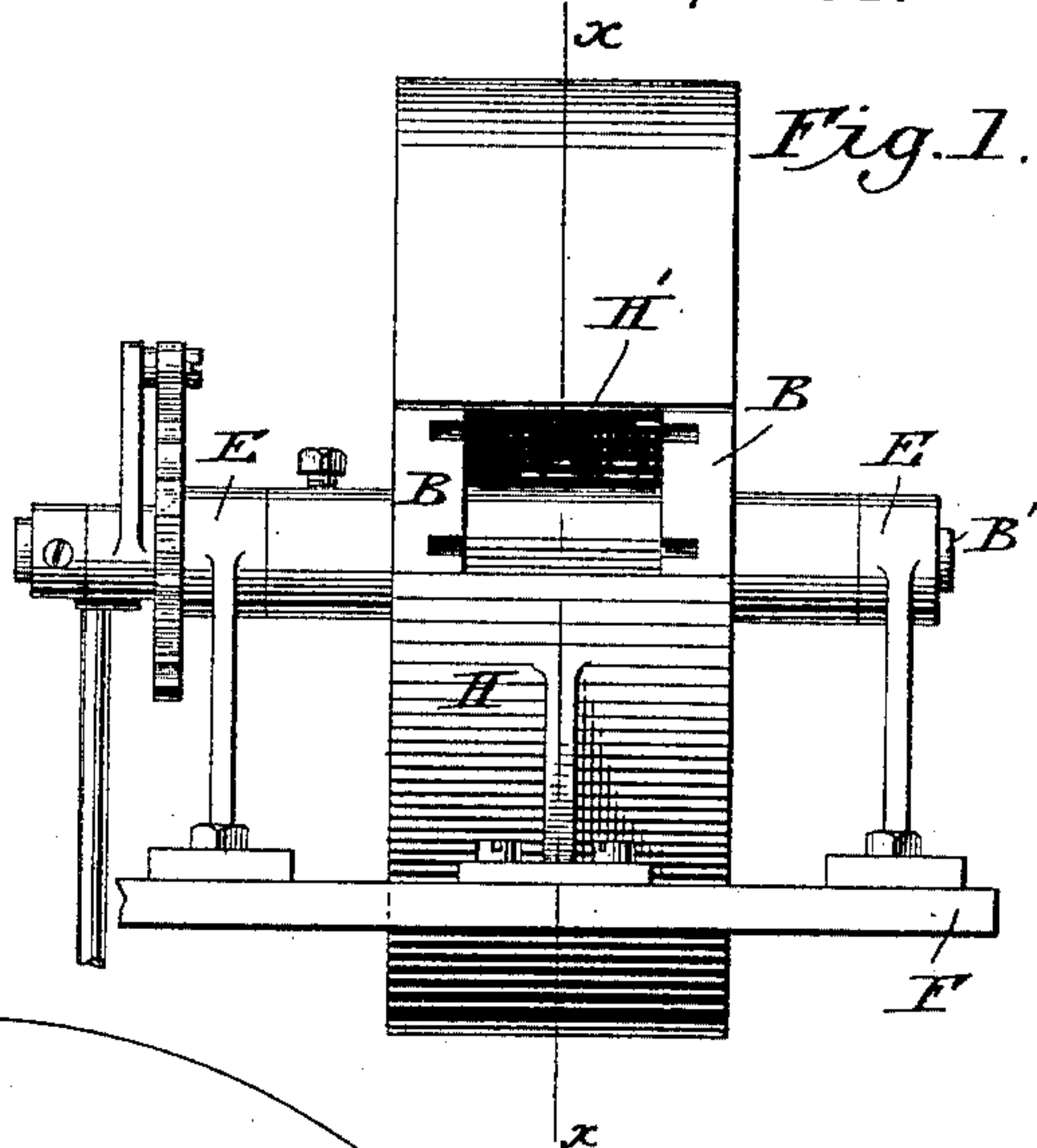
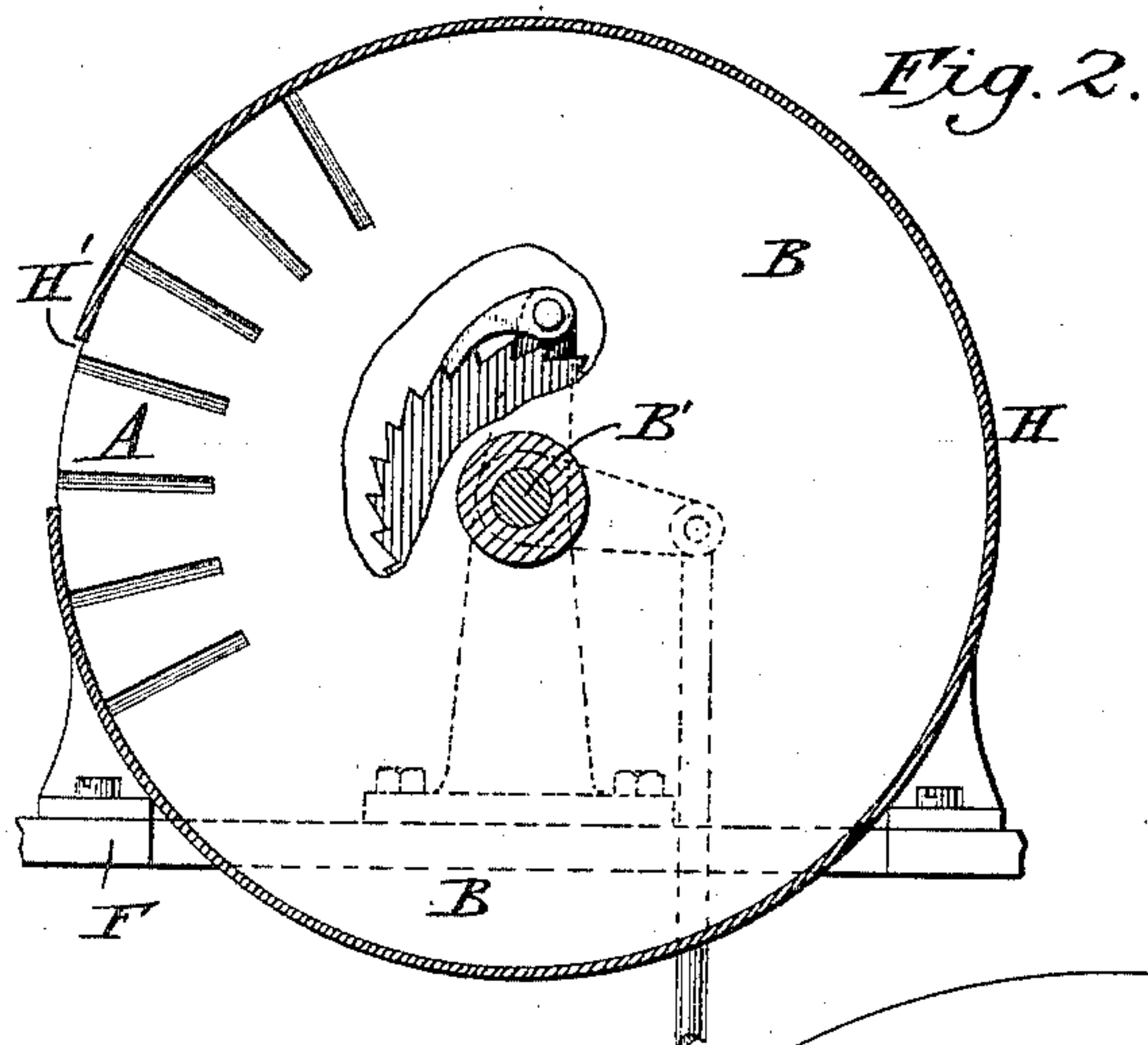


(No Model.)

J. DENNIS, W. S. METCALFE & J. A. SHERMAN.  
DRIER FOR ENVELOPE MACHINES.

No. 462,208.

Patented Oct. 27, 1891.



Attest.

*Sidney P. Hulingsworth*  
*Baltus DeLong.*

Inventors

*Joseph Dennis*  
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*John A. Sherman*  
*by George O. G. Cook, Attorney*



# UNITED STATES PATENT OFFICE.

JOSEPH DENNIS, WILLIAM SHERRAN METCALFE, AND JOHN AMES SHERMAN,  
OF WORCESTER, MASSACHUSETTS, ASSIGNORS TO THE WHITCOMB EN-  
VELOPE COMPANY, OF SAME PLACE.

## DRIER FOR ENVELOPE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 462,208, dated October 27, 1891.

Application filed April 7, 1890. Serial No. 347,005. (No model.)

*To all whom it may concern:*

Be it known that we, JOSEPH DENNIS, WIL-  
LIAM SHERRAN METCALFE, and JOHN AMES  
SHERMAN, all of Worcester, county of Worces-  
ter, and State of Massachusetts, have invented  
a new and useful Improvement in Driers for  
Envelope-Machines, of which the following is  
a specification.

So far as we know, all driers heretofore  
made have consisted of what has been termed  
"fingers" mounted upon either an endless  
flexible belt or apron or upon the periphery  
or face of a drum, these fingers forming pock-  
ets into which the envelope drops or is placed,  
and from which it is withdrawn at the proper  
time.

Our invention consists of a drier having  
two plates of suitable shape located opposite  
each other, these plates being provided with  
grooves or slots, the grooves or slots of one  
plate being located opposite the grooves or  
slots in the other, the grooves being of suffi-  
cient size and proper shape to hold the edges  
of the envelope to be dried and the distance  
of the plates apart corresponding with the  
size of the envelope to be dried, said plates  
being permanently connected together and  
mounted on one or more shafts capable of  
such intermittent movement that each envel-  
ope may be automatically introduced and  
withdrawn at predetermined points by mech-  
anism provided for that purpose.

In the drawings are shown two forms of our  
invention.

In Figure 1 there is shown an elevation of  
a drier constructed to receive envelopes mov-  
ing in a line at right angles to the axis of the  
drier, Fig. 2 being a section on line  $xx$ , show-  
ing the face of one of the disks of which this  
form of drier is made. Fig. 3 shows another  
form of drier constructed to receive envelopes  
moving in a line parallel with its axis, Fig. 4  
being a section on a line  $yy$ .

In each of the figures, A represents grooves,  
made preferably of the shape shown, and each  
sufficiently wide and sufficiently deep to hold  
the edge or end of the envelope to be dried.  
In the device shown in Figs. 1 and 2 these  
grooves are located opposite to each other in

the two opposing disks B, mounted upon a  
shaft B'; their depth and width being gov-  
erned by the size of the envelope for which  
they are to be used.

In the drier shown in Figs. 3 and 4 the  
grooves A are placed opposite each other in  
two concentric rings C C', one set of grooves  
being located in the inner part of ring C and  
the other set of grooves being located oppo-  
site the first set in the periphery of ring C',  
both rings being mounted by suitable means  
upon the shaft D.

In the device shown in Figs. 1 and 2 the  
shaft B' rotates and carries the disks with it.  
In the device shown in Figs. 3 and 4 the shaft  
is stationary, the drier being mounted upon  
a sleeve and rotated upon the shaft. In each  
of the devices, however, the shaft is mounted  
in bearings E upon the table F, the drier be-  
ing conveniently located in reference to the  
mechanism for the delivery and withdrawal  
of the envelopes and being rotated by means  
of a pawl-and-ratchet mechanism of a kind  
well known in envelope-machines or in some  
other convenient way.

Dry air for drying the envelopes may be  
supplied to the drier, if thought best, and in  
order to make such dry air more effective the  
drier is best inclosed in a casing H, of suit-  
able shape, having an opening H', through  
which the envelopes may be introduced and  
withdrawn. In this case, however, provision  
should be made for the introduction of a suit-  
able mechanism for feeding the envelope to  
the drier and withdrawing it therefrom—such,  
for example, as the recess shown at G in Figs.  
3 and 4.

It is evident that the grooves A may be  
formed by the addition to the rings or disks  
of blocks, pins, or strips projecting from the  
opposing surfaces instead of by cutting away  
any portions thereof, thus practically forming  
opposing grooves into which the ends of the  
envelope may be slid.

It is obvious that while a circular drier is  
more convenient in most cases than one of  
any other shape; yet our invention may be  
applied to a drier of any form where it is pos-  
sible to locate grooves opposite each other in

plates of convenient shape located at a proper distance apart so that they shall hold the envelope and shall be moved in such a manner as to accomplish the desired end.

5 What we claim as our invention is—

An envelope-drier consisting of two opposing plates permanently connected and of suitable shape, each provided with a set of grooves, each groove of one set being located opposite  
10 a corresponding groove in the other set, said plates being suitably located and capable of an intermittent motion, and each pair of grooves being fitted to receive a freshly-

gummed envelope, in combination with mechanism, substantially as described, whereby 15 the drier is given an intermittent motion, substantially as described.

In testimony whereof we have hereunto subscribed our names this 28th day of March, 1890.

JOSEPH DENNIS.

WILLIAM SHERRAN METCALFE.

JOHN AMES SHERMAN.

Witnesses:

PHILIP COLLINS SMITH,

WILLIAM ALBERT WARDEN.