

No. 667,679.

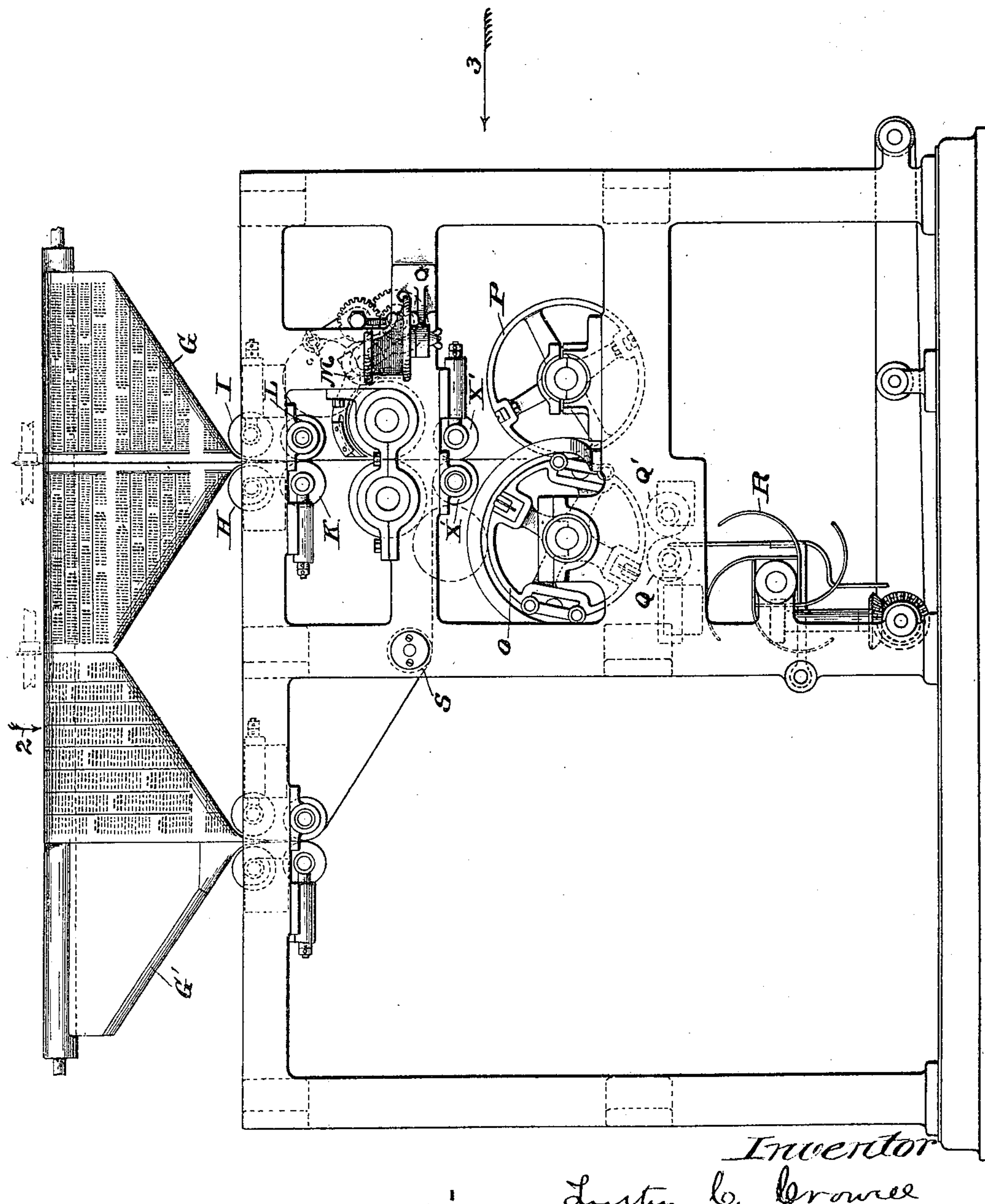
Patented Feb. 12, 1901.

L. C. CROWELL.
PRINTING PRESS.

(Application filed Dec. 31, 1897.)

(No Model.)

3 Sheets—Sheet 1.



Attest
Geo. Botts
T. P. Kehoe.

Feb 12

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Lester C. Crowell
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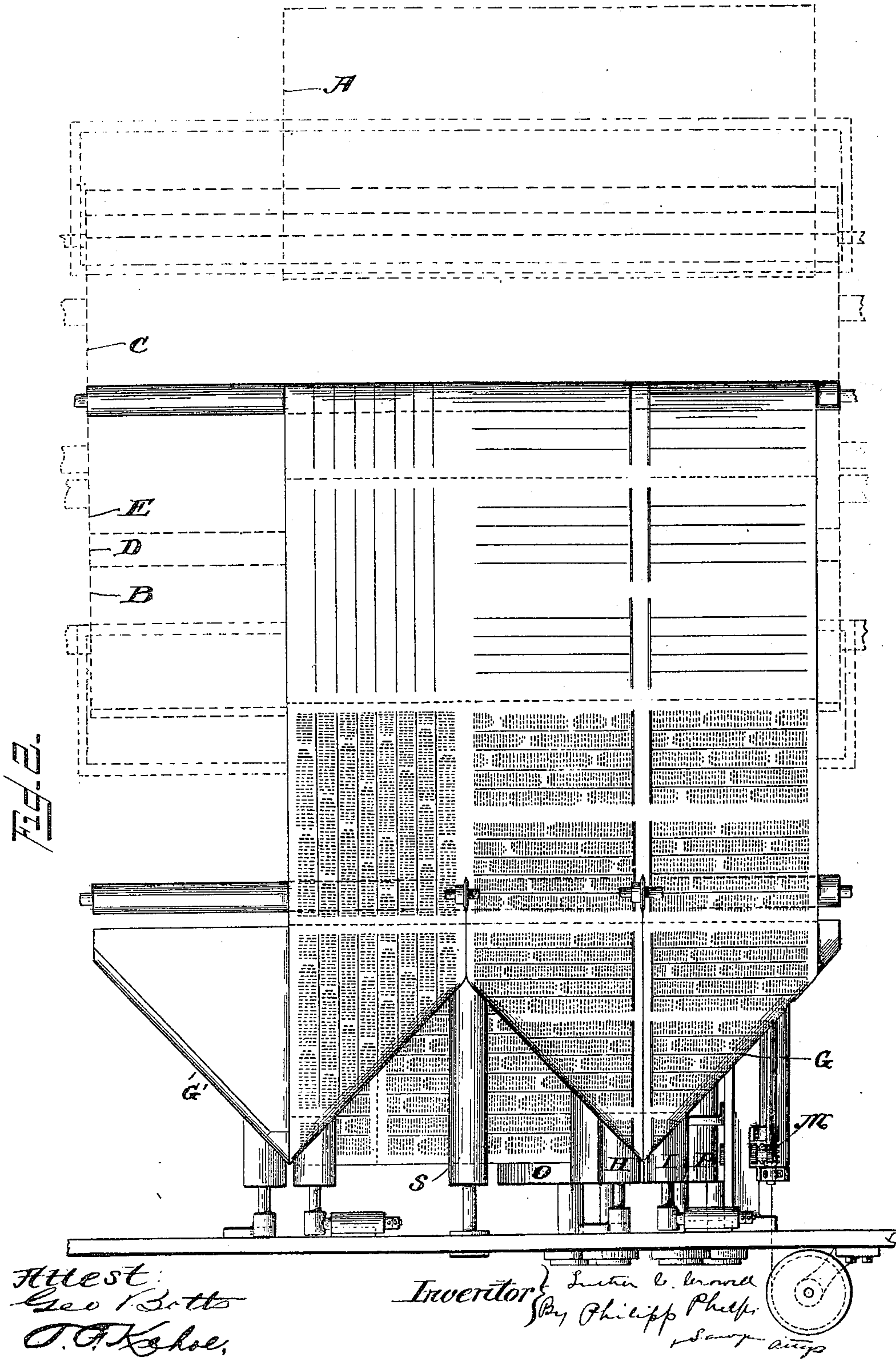
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3 Sheets—Sheet 2.



Attest:
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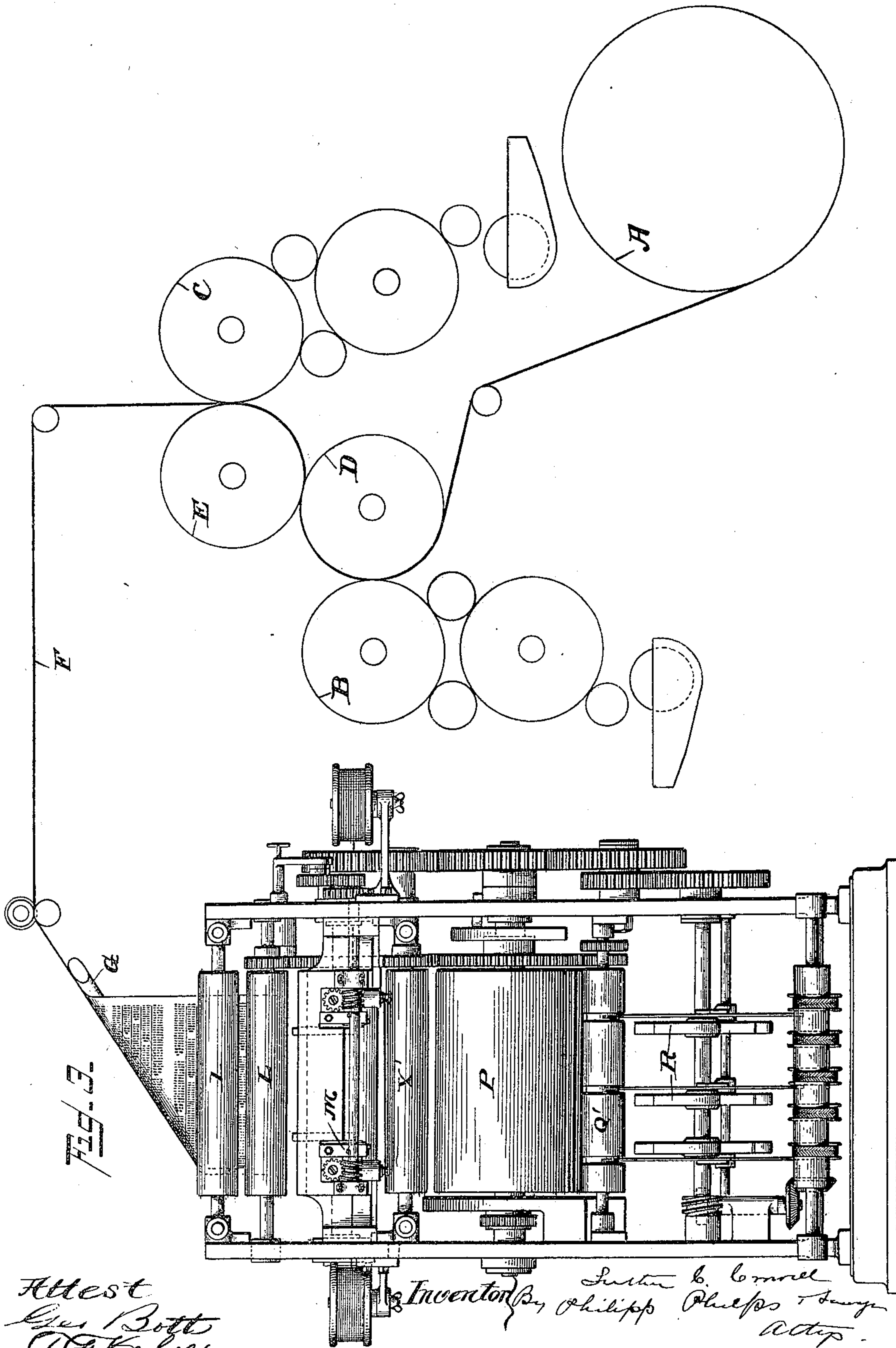
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(No Model.)

3 Sheets—Sheet 3.



Attest
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UNITED STATES PATENT OFFICE.

LUTHER C. CROWELL, OF NEW YORK, N. Y., ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO ROBERT HOE AND CHARLES W. CARPENTER, OF SAME PLACE.

PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 667,679, dated February 12, 1901.

Application filed December 31, 1897. Serial No. 665,164. (No model.)

To all whom it may concern:

Be it known that I, LUTHER C. CROWELL, a citizen of the United States, residing at New York, (Brooklyn,) county of Kings, and State of New York, have invented certain new and useful Improvements in Printing-Presses, fully described and represented in the following specification and the accompanying drawings, forming part of the same.

My invention relates to presses in which a delivery is employed which staples the product, such as is shown in a general sense in my Patent No. 510,528. In these deliveries a number of plies of paper are fastened together by staples, and it is frequently desirable in such products to associate with the stapled plies one or more additional plies of unstapled paper which may, if desired, be folded with the stapled plies. This is desirable for the purpose of combining with the stapled product a sheet printed with a cut of a size larger than a single page of the stapled product and which cut it is undesirable to fold and staple. This is also desirable for the purpose of permitting the utilization of one or both surfaces of the whole sheet as an unbroken printed surface to be occupied by a single advertisement or other matter which it is undesirable to separate by a marginal and stapled line.

My present invention has for its object the meeting of these requirements by providing means for associating stapled and unstapled plies and when desired for cutting and folding these plies. It is to be understood that the plies to be associated, part of which are stapled, may be either in the form of webs or of sheets.

An important application of my invention may be made where papers are printed with the columns transverse to the run of the webs. It is convenient to print in this manner papers having the full sheet of a size equal to that of the ordinary newspaper - page, such sheets being folded once on a center marginal line. When arranged to print in this manner, a press such as is now ordinarily employed to print with the columns parallel with the run of the webs has an increased adaptability as regards the number of pages

in the product. Such a product is, moreover, of a size more convenient for manipulation by the reader, and is therefore preferable. Objection is made to it, however, on the ground that it does not afford a sufficiently- large unbroken space for purposes of advertisement, illustration, &c., as intimated above. My present invention is adapted to overcome this objection by associating with the stapled product one or more unstapled plies of paper of the full ordinary page size. Thus the ordinary web-press now in use may be employed to print a usual product having the page of half the present ordinary size, and when it is desired a page or pages of the full present ordinary size may be associated therewith and delivered as a part of the completed product.

In the drawings annexed to this specification, Figure 1 is a front elevation, Fig. 2 a plan view, and Fig. 3 a side elevation, of a press embodying my invention.

A is the paper-supply roll; B and C, the plate-cylinders; D and E, the impression-cylinders, and F the web of paper. Any associating device for bringing the webs of paper together, or where the web is severed into sheets before the stapling operation, the sheets, for stapling, is employed. The mechanism shown herein consists of the folder of my Patent No. 331,280, which is used herein as an associating device. In this folder the V-shaped former is shown at G, the external turners at H I, and the nipping-rolls at K L. The web is slit on the center line of the former. The stapling mechanism shown is indicated at M. This mechanism may be of any suitable or desired form—such, for instance, as that shown in my Patent No. 510,840.

The paper passes from the stapling mechanism to the guide and feeding rolls X' X', thence to the cutting and folding cylinders O P, folding-rolls Q Q', and the rotary fly R. Provision is made for printing a web or webs to be associated with the stapled product by providing a separate press for the purpose or by making the cylinders above mentioned long enough to print an additional web or webs of paper. The machine shown is what is known as "double-width," the cylinders being of a length corresponding to the width

of two ordinary newspapers. The web shown is three-quarters width and is slit at the point corresponding to the center of the cylinders, as well as at the center line of former G, and the column-rules of that portion of the cylinders to the left of the center are arranged around the cylinders instead of along the same.

As many webs may be provided for association with the stapled product as may be desired. In the present instance a single web of the width of the ordinary newspaper-page, or a width representing one-fourth of the length of the cylinders, is shown, this web passing over one-half of the V-shaped former G', between the external turners and nipping-rolls, around guide-roller S, and between guide and feed rollers X X', where it is associated with the stapled webs, and thence passes with them to the cutting and folding cylinders O P and the fly R.

In the arrangement shown the unstapled ply is folded within the stapled product. If the unstapled ply were brought up to the opposite side of the stapled plies, it would be folded on the outside of the same, as might be desired for a cover.

What I claim is—

1. The combination of means for associating a number of webs of paper, means for uniting them by staples, means for associating

with said stapled product another web or webs of paper unstapled, and means for severing the webs and folding the resulting sheets, substantially as described.

2. The combination of printing-surfaces having the columns running transversely of the run of the paper, means for associating page-width webs printed thereon, means for uniting them by staples, printing-surfaces having the columns running parallel with the run of the paper, means for associating a web or webs of paper printed on the last-mentioned printing-surfaces with the stapled webs printed upon by the first-mentioned printing-surfaces, and means for severing the webs and folding the resulting sheets, substantially as described.

3. The combination of means for associating a number of plies of paper, means for uniting them by staples, means for associating with said stapled plies another ply or plies of paper unstapled, and means for folding the associated plies, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LUTHER C. CROWELL.

Witnesses:

T. F. KEHOE,
J. A. GRAVES.