No. 660,726. Patented Oct. 30, 1900.

H. HARTT.

PROCESS OF LONGITUDINALLY FOLDING AND INSERTING PRINTED WEBS.

(Application filed Feb. 9, 1900.)

(No Model.)

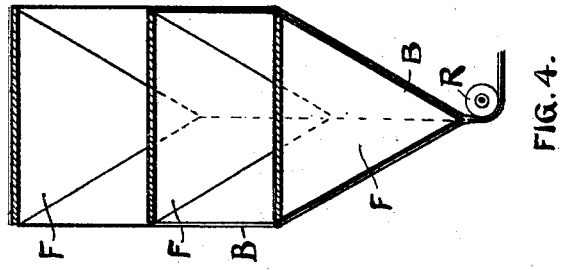


FIG. 4.

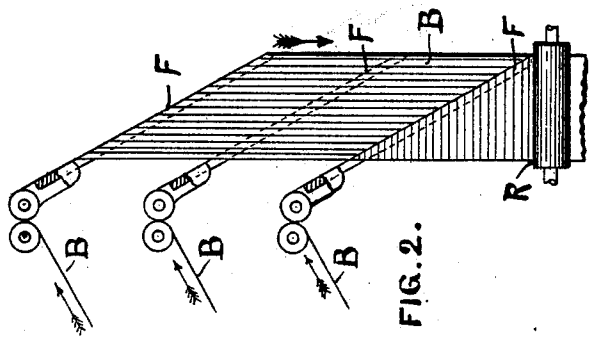


FIG. 2.

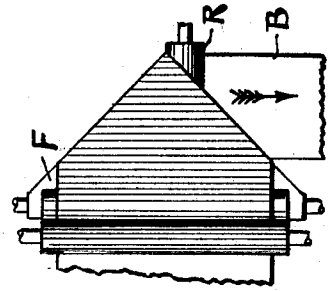


FIG. 3.

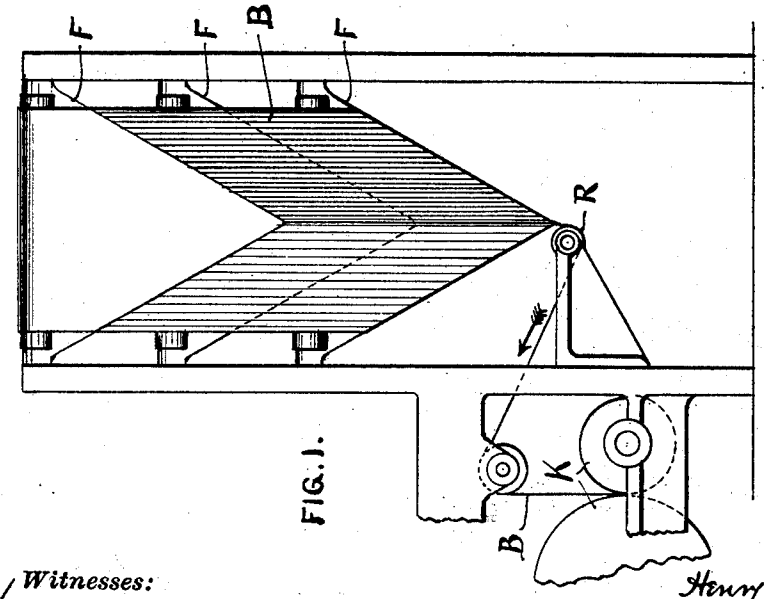


FIG. 1.

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UNITED STATES PATENT OFFICE.

HENRY HARTT, OF CHICAGO, ILLINOIS.

PROCESS OF LONGITUDINALLY FOLDING AND INSERTING PRINTED WEBS.

SPECIFICATION forming part of Letters Patent No. 660,726, dated October 30, 1900.

Application filed February 9, 1900. Serial No. 4,587. (No model.)

To all whom it may concern:

Be it known that I, HENRY HARTT, a citizen of the United States of America, and a resident of Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Processes of Longitudinally Folding and Inserting Printed Webs, of which the following is a specification.

My invention relates to a process or method of making longitudinal folds in a series of webs from printing-presses and in inserting one such longitudinally-folded web inside of another. Presses for many-paged papers are now ordinarily made so as to combine a number of presses in one machine. Each of these presses prints upon one web of paper and the different webs are assembled in proper order as they pass from the printing-rolls. The assembled and superimposed webs then pass over a former, which gives them a longitudinal fold, with one web inside of another. The longitudinally-folded webs then pass to the cutting-cylinders and folder in the manner which is well known.

It has been found by experience that where a series of superimposed webs pass over a former the paper cramps, wrinkles, offsets, smuts, and often tears as a result of running over the corners of the former. It is well known, however, that a single web will pass over a former without any trouble whatever. I take advantage of this latter fact to overcome the previously-mentioned difficulty by making the longitudinal fold of each web separately and in such a manner that the webs are inserted one within another in their proper order before they pass to the cutting-cylinders.

In the accompanying drawings I have illustrated the manner in which I make the longitudinal fold of each web separately and then assemble the webs with one folded web inside of another folded web.

In the said drawings, Figure 1 is a partial front elevation of a three-tiered press. Fig. 2 is a side elevation of the same, showing only those parts which are especially arranged for carrying out my process. Fig. 3 is a plan of the parts shown in Fig. 2, and Fig. 4 is a section on line 4 4 of Fig. 2.

In the said drawings, B represents three printed webs coming from three presses. Ordinarily these webs are first assembled in their proper order and then passed over a former, which gives them collectively a longitudinal fold. Instead, however, I provide a separate former F for each web and place these formers one over another, so that a lower former is within the V-shaped space partially inclosed by a web passing over an upper former. The webs are then caused to run each over its own former down to and under a guide-roller R, and thence to the cutting-cylinders K. It follows that by running webs over formers so placed the web from a lower former is inserted within the web from an upper former as the two have their longitudinal folds completed by running under the roller R. Stated otherwise, it will be apparent that the web running over a lower former has its longitudinal fold commenced within the V-shaped space formed by a previously partially folded web and that the two webs unite at the point where the folding of the lower web begins. It will also be apparent from a consideration of the manner in which a web runs over a former and joins a web from another former that the longitudinally-folded webs are inserted one within another in the required manner and that there is a total absence of the cramping action due to running superimposed webs over a single former, and it will be still further apparent that any number of webs coming from corresponding presses can be run over formers in the manner described, so as to give each a longitudinal fold and cause them to be regularly inserted one within another without encountering the difficulties of cramping, wrinkling, smutting, and tearing, hereinbefore mentioned.

The mechanism herein illustrated and described forms the subject-matter of an application filed by me December 23, 1899, and given Serial No. 741,387.

What I claim is—

1. The process of completely inserting one longitudinally-folded web within another, which consists in beginning the fold of an inner web within the V-shaped space formed by a previously partially folded outer web.

2. The process of assembling two longitudinally-folded webs, which consists in beginning the folds of the two webs at points re-

moved from each other, and in causing the outer and partially-folded web to join the inner web at the point where its folding begins.

3. The process of assembling by inserting a series of longitudinally-folded webs one within another, which consists in running said webs over a corresponding series of formers placed one above another, and in causing the webs from the upper formers to join the webs from the lower formers at the points where they bend over the corners of their respective formers.

Signed by me at Chicago, Illinois, this 7th day of February, 1900.

HENRY HARTT.

Witnesses:
R. E. SMALE,
CASPER L. REDFIELD.