(No Model.)

# E. DUMMER.

## PAPER FEEDING MACHINE.

No. 551,724. Patented Dec. 17, 1895.

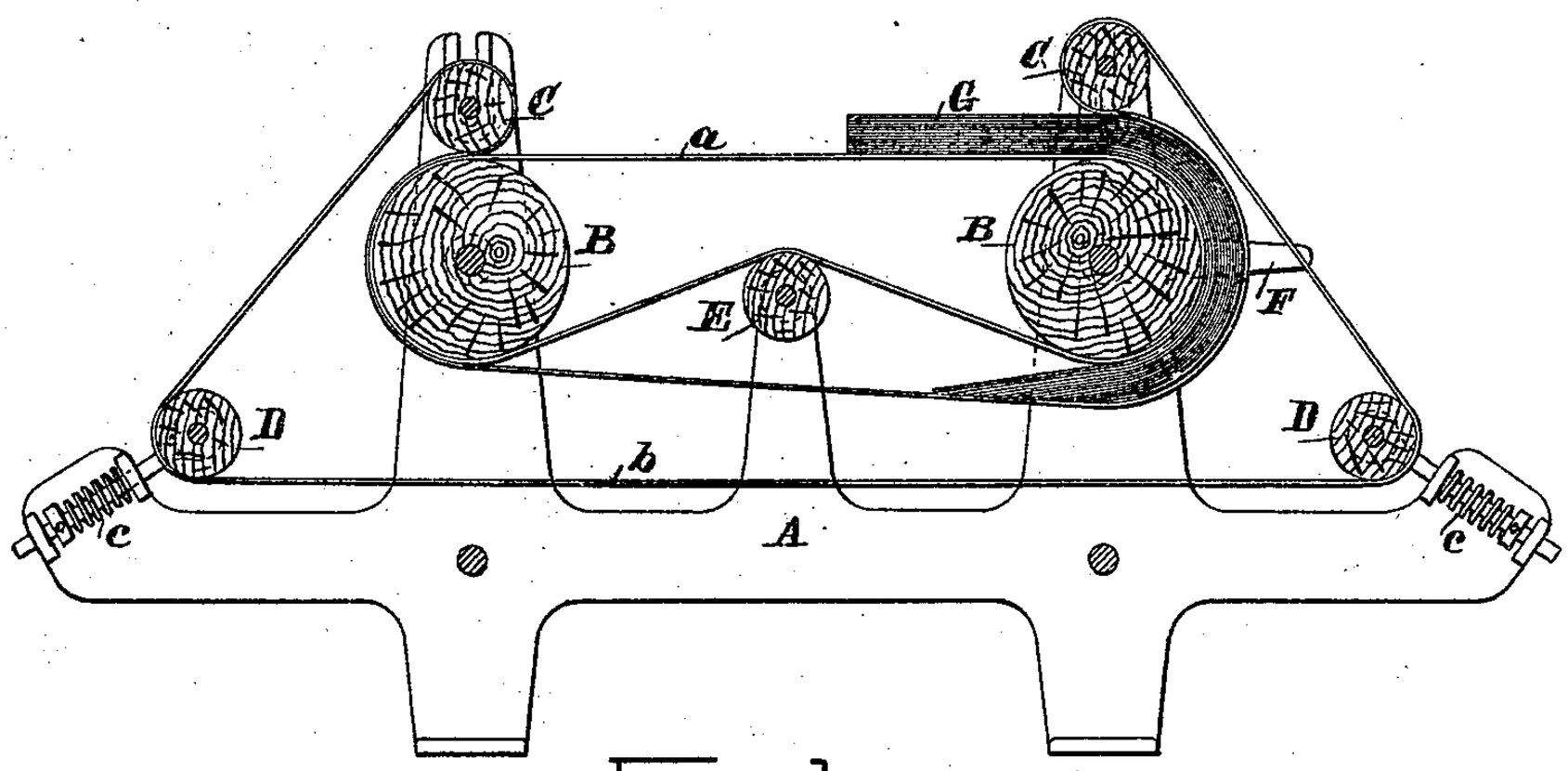


FIG. 1.

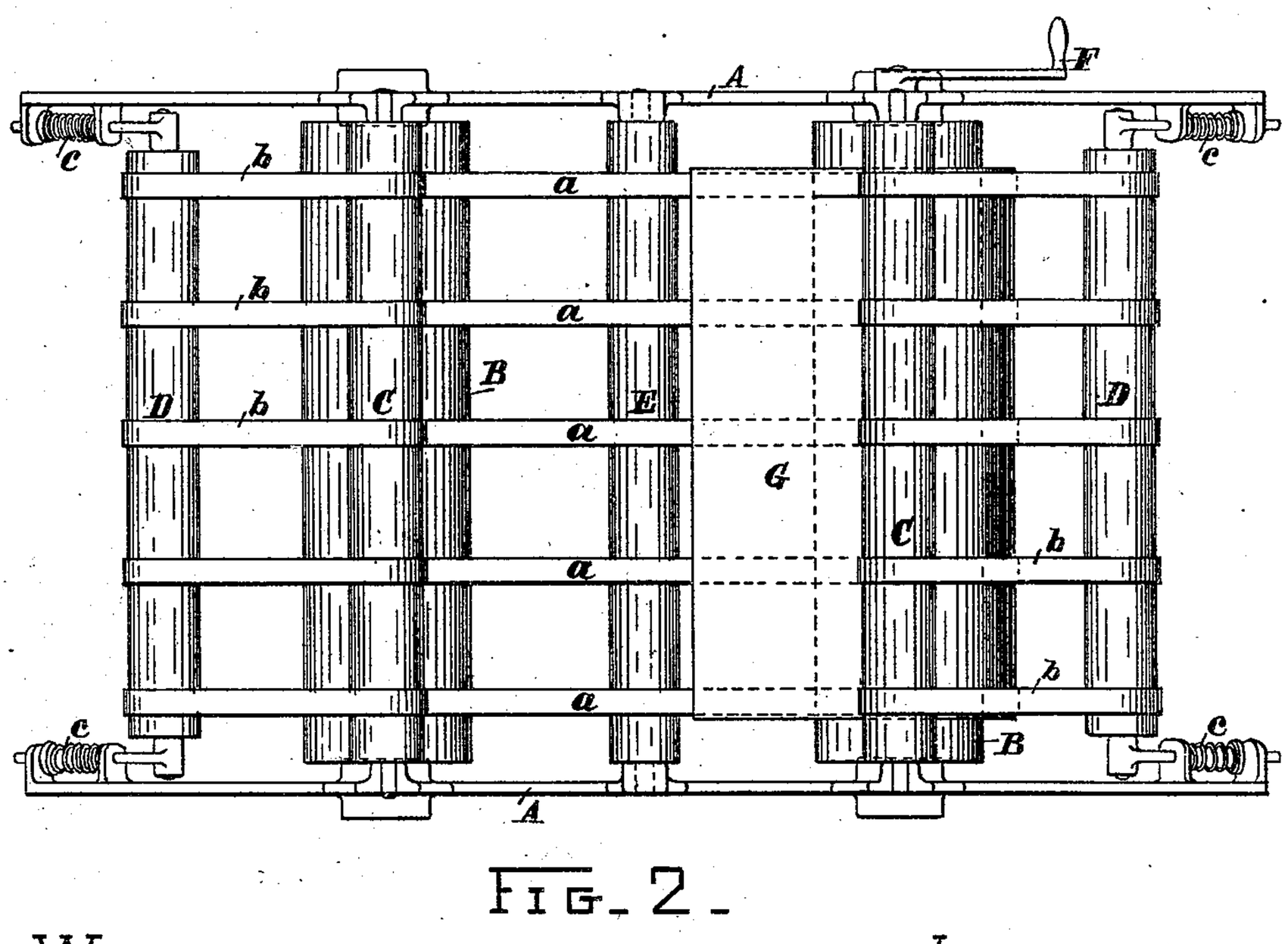


FIG. 2.

WITNESSES:

Edward Tyrrell

Richard T. Laffin

INVENTOR:

Edward Dummer.

# UNITED STATES PATENT OFFICE.

EDWARD DUMMER, OF AUBURNDALE, MASSACHUSETTS, ASSIGNOR TO THE DUMMER PAPER FEEDER COMPANY, OF PORTLAND, MAINE.

## PAPER-FEEDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 551,724, dated December 17, 1895.

Application filed May 12, 1894. Serial No. 511,037. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD DUMMER, a citizen of the United States, residing at Auburndale, in the city of Newton, county of Middlesex, and State of Massachusetts, have invented a new and useful Improvement in Paper-Feeding Machines, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to cause the edge of each sheet of a pile of sheets of paper to project beyond the corresponding edge of the adjacent sheet—that is, to "offset" the sheets of a pile—the invention consisting in mechanism for bending or curving a pile of sheets repeatedly in the same direction, as hereinafter set forth, and specifically pointed out in the claim.

In the drawings, Figure 1 is a vertical section, and Fig. 2 is a plan, of mechanism illustrating my invention.

Supported in suitable bearings on the frame A are two revoluble drums B, also two rollers C, two rollers D, and a roller E, the drums and rollers being parallel with each other. Extending around the drums B are endless bands *a*, the roller E serving as a binder to keep these bands taut and to prevent the lower part of the bands *a* between the drums B from coming in contact with the pile of sheets. Extending partially around the drums B, and around the rollers C and rollers D, as shown, are bands *b*. The bearings for each of the rollers C are such as to allow movement of these rollers toward and away from the corresponding drum. The bearings for each of the rollers D may move outward and inward, and, being pressed outward by means of springs *c*, the rollers D serve to keep the bands *b* taut, taking up considerable slack in these bands, which occurs in the operation of the machine.

In operation, the drums and rollers being revolved (as by means of a crank F) and a pile of sheets G having been placed on the uppermost surface of the bands *a* between the rollers C, the pile will be bent or curved first partially around one of the drums and then partially around the other drum, and thereupon brought to its former position on the upper surface of the bands *a*. After passing thus around once it may be carried around again, and as many times as desired, and then removed. On being bent or curved by passing partially around a drum the sheets of the pile will be offset to a certain degree, the offset being increased each time the pile is thus bent or curved, the bending or curving being always in the same direction.

A pile of paper placed in the machine in a cubical form will assume somewhat the shape illustrated in the drawings when passing around a drum for the first time. The diameters of the rollers C with reference to the depth of the pile, and the tension of the springs *c*, are such that the pile will be seized by a roller C and the corresponding drum so as not to disturb the previous position of the sheets with reference to each other, the pile while being bent around a drum showing the consequent offset only at the forward end of the pile. When the pile has passed onto the upper flat surface of the bands *b* it will show the resulting offset at both the forward and rear ends of the pile. Though both drums and all the rollers will revolve (on the revolution of one drum) on account of the contact of the bands with the drums and rollers, so that the pile will be readily drawn between each of the drums and corresponding roller C, yet when it is desirable to operate on a pile of considerable thickness—as, for instance, of the relative thickness shown in the drawings—that roller C, between which and the drum thereat the pile (being in a rectangular form) first enters, should be maintained by its bearings at a suitable distance from the drum.

I claim as my invention—

The combination of two revoluble drums parallel with each other, endless bands extending around said drums, a roller between and parallel with said drums over which said bands pass to keep the bands taut and the lower part of the bands above a direct line between the lower surfaces of the drums, a pair of rollers one roller above each of said drums and parallel therewith, these two rollers being at sufficient distance apart to receive a

pile of sheets between them, another pair of rollers, each roller of this pair being parallel with, opposite to and below a drum, springs for pressing each roller of the latter pair away from the corresponding drum, and endless bands extending partially around said drums and around each roller of each of said pairs of rollers, substantially as and for the purpose set forth.

EDWARD DUMMER.

Witnesses:
EDWARD WYMAN,
RICHARD T. LAFFIN.