

No. 630,631.

Patented Aug. 8, 1899.

R. J. ROUSAY & W. G. SINCLAIR.

PAPER CUTTING MACHINE.

(Application filed Dec. 27, 1897.)

(No Model.)

2 Sheets—Sheet 1.

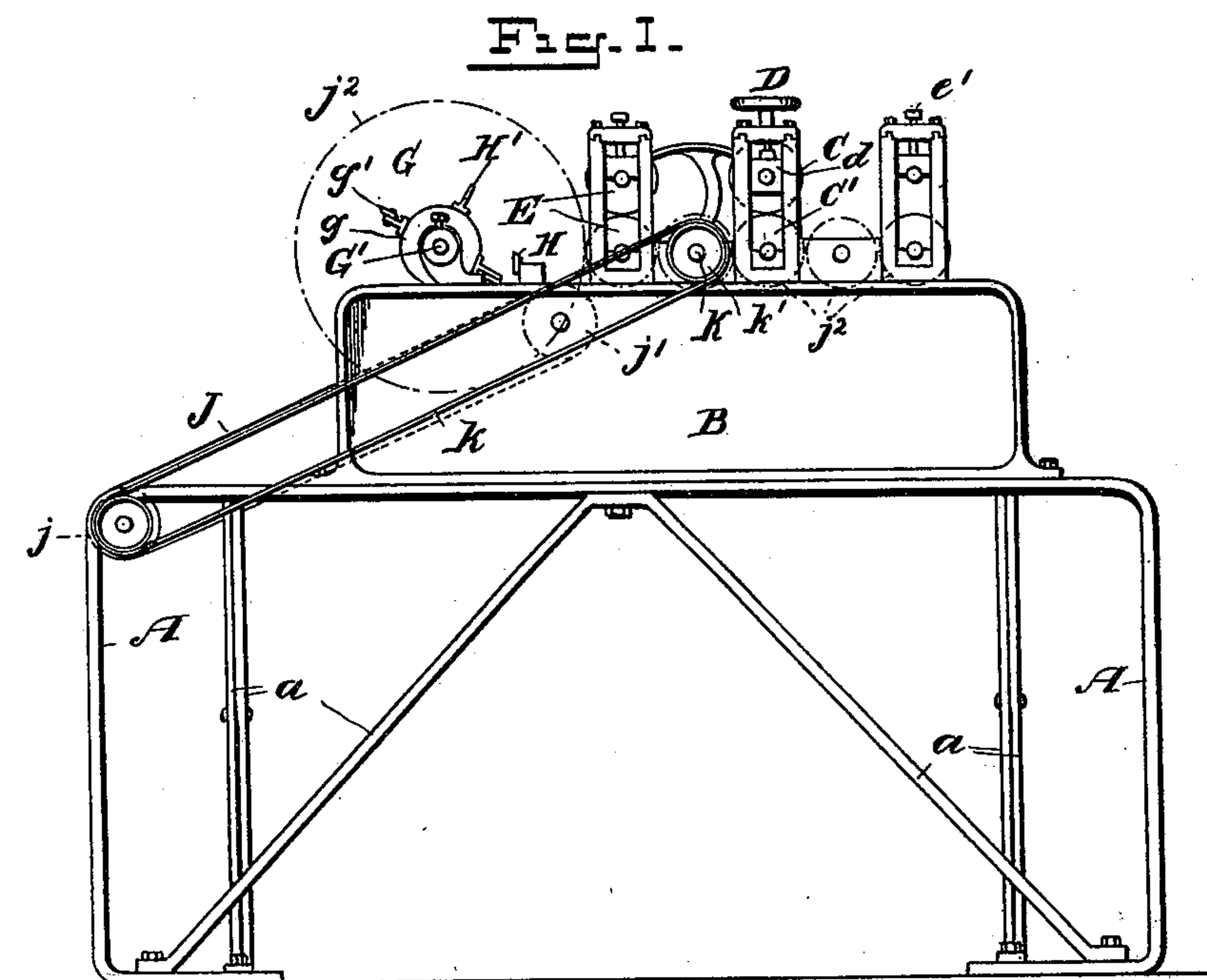
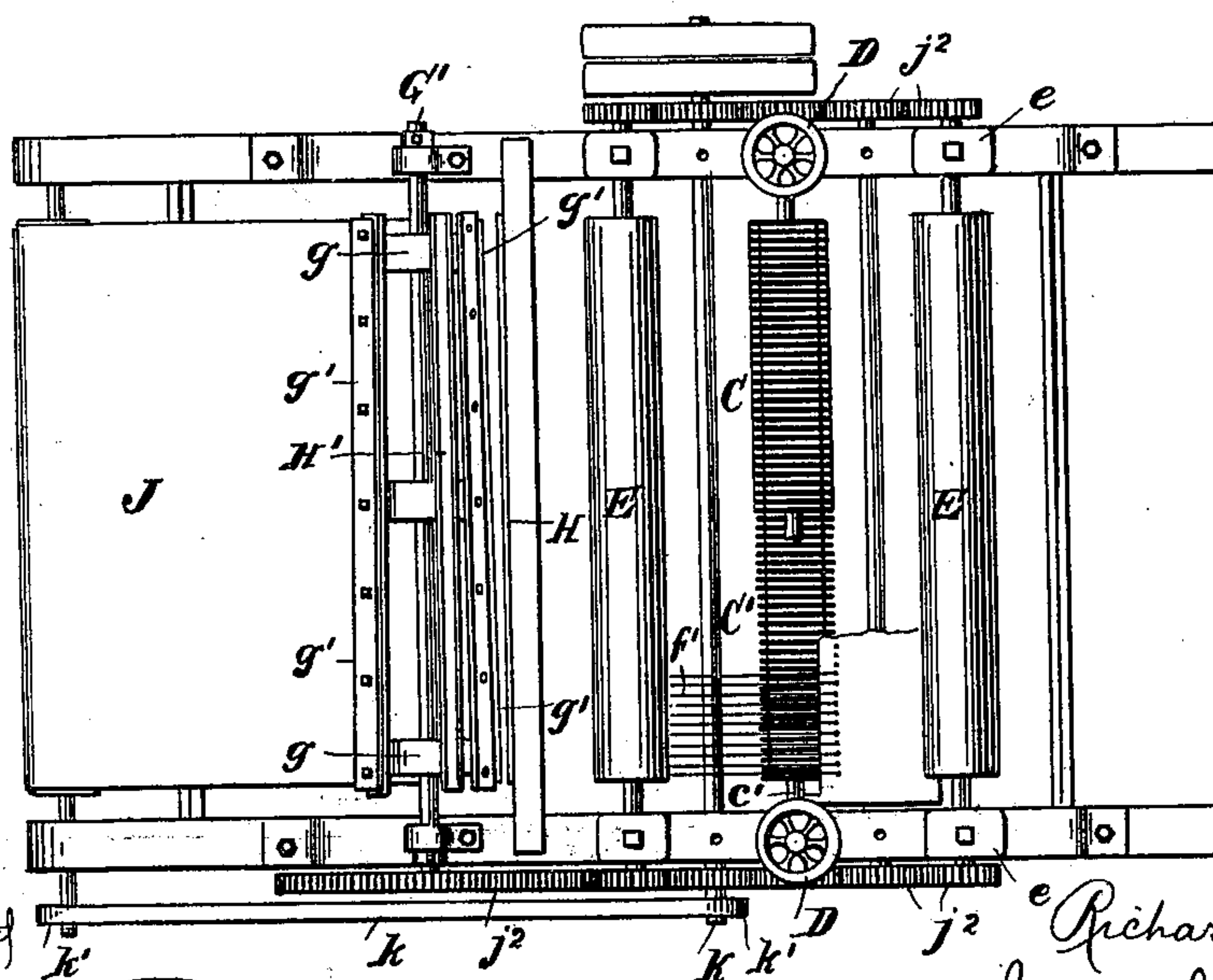


FIG. II.



Witnesses

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2 Sheets—Sheet 2.

Fig. 11.

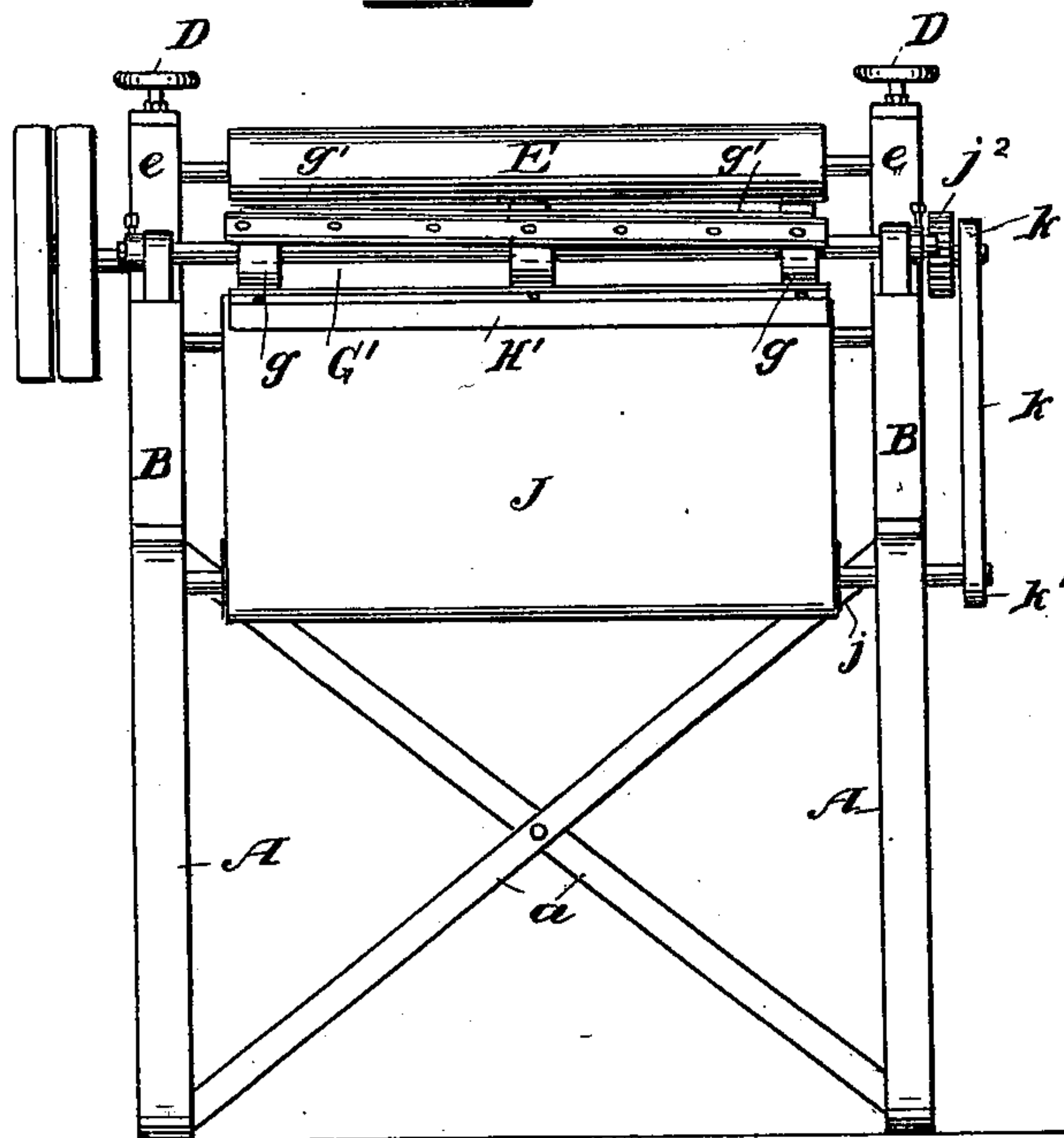


Fig. IV.

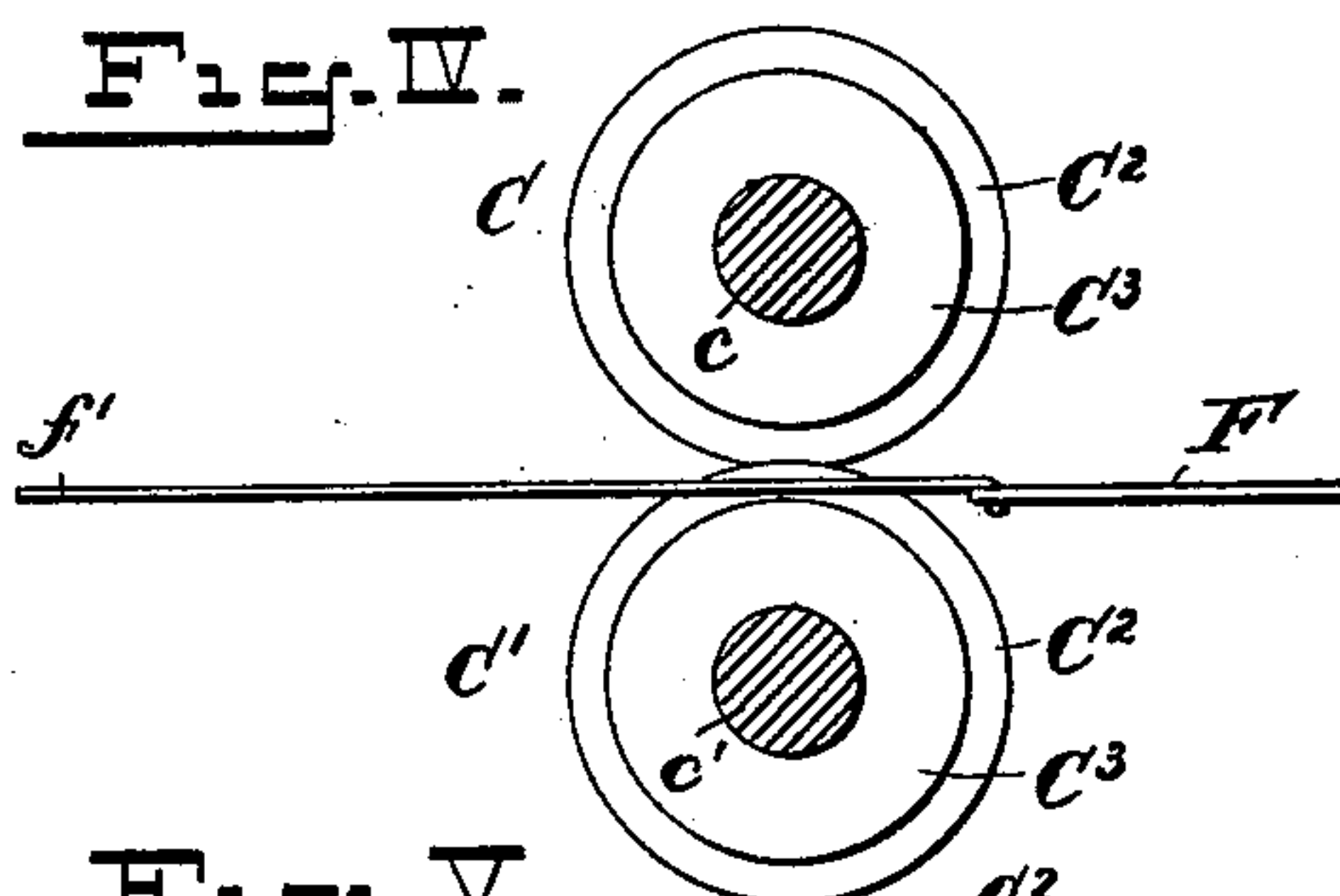
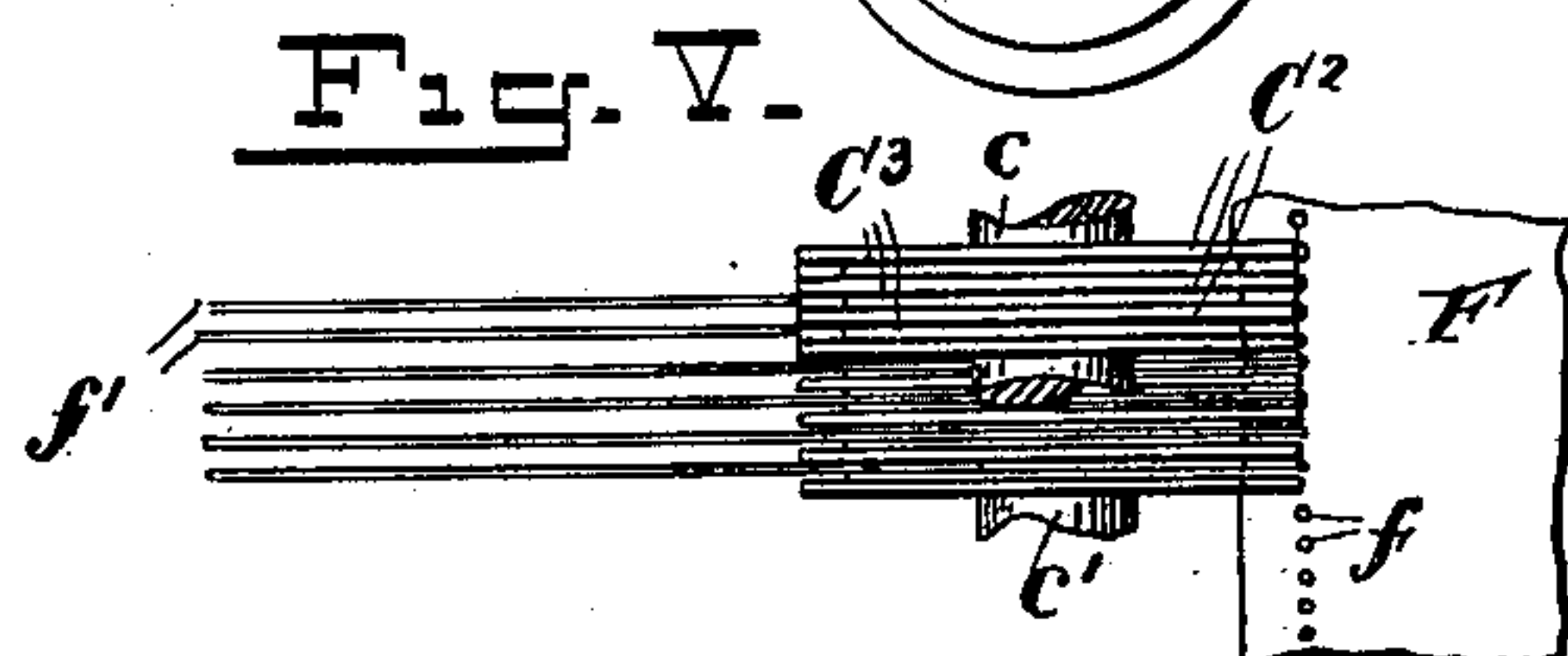



Fig. V.



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UNITED STATES PATENT OFFICE.

RICHARD JAMES ROUSAY AND WILLIAM GARDNER SINCLAIR, OF
EDINBURGH, SCOTLAND.

PAPER-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 630,631, dated August 8, 1899.

Application filed December 27, 1897. Serial No. 663,565. (No model.)

To all whom it may concern:

Be it known that we, RICHARD JAMES ROUSAY, assistant manager, and WILLIAM GARDNER SINCLAIR, manufacturing stationer, subjects of the Queen of the United Kingdom of Great Britain and Ireland, residing at St. Clair Works, Albert street, Edinburgh, in the county of Mid-Lothian, Scotland, have invented a new Machine for Cutting Paper into Strips or Shavings, of which the following is a specification.

This invention relates to a machine for cutting paper into strips or shavings constructed on the rotary principle, having two sets of circular cutters capable of being adjusted according to the width of shavings to be cut.

In order that our said invention may be more readily understood and easily carried into effect, we will proceed to describe the same with reference to the accompanying drawings, in which—

Figure 1 is an elevation, Fig. 2 a plan, and Fig. 3 an end view, of a machine constructed in accordance with our said invention. Fig. 4 is an elevation, and Fig. 5 a plan, to a larger scale, of the rotary cutters shown in Figs. 1 and 2.

Referring to the said drawings, we employ a frame, of iron or other suitable metal, consisting of standards A, bound together by stays a. Secured firmly upon the top of this frame, by bolts or otherwise, are two cast-iron portions B for supporting the revolving cutters C C' and rollers.

The before-mentioned revolving cutters C C' consist of circular disks or knives C², Figs. 4 and 5, of about four and one-half inches diameter, more or less, having the edges turned dead-square and the sides polished. The said knives C² are arranged on two shafts or spindles c c', intersected with washers C³ of a smaller diameter, but of the same thickness as the knives. The shaft c, carrying the one set of knives C, is mounted above the lower shaft c', thus allowing the upper knives to work into the lower, the correct adjustment of the said knives being obtained by raising or lowering the sliding bush d through the medium of the hand-wheel D.

For the purpose of preventing the paper from being carried around the spindles after

being cut and for leading the shavings to the front rollers E a plate F is employed, provided with a number of holes f corresponding to the number of washers upon the lower spindle c', within which are secured brass, copper, or other wires f', passing close to and between the knives, thus leading the shavings away and keeping the top and bottom cutters always clear, the said wires being either left free toward their forward ends or supported in any convenient manner.

The paper, which may be fed into the machine in sheets or from the reel, is conveyed to the cutters by means of two rollers E', mounted in the bearings e in such a manner that the distance between them can be regulated by a screw e'. After passing through the cutters the strips or shavings are again conveyed, by the roller E, onto the back table of the machine, on which there is erected a dead-knife H, with gearing for another circular cutter G, for the purpose of cutting the strips or shavings from the web into any length required. This latter consists of a shaft or spindle G', provided with disks g, upon which are secured T, angle, or other shaped strips of metal. To these metal strips are secured the knife-blades g', which are made adjustable. The said knife-blades are secured at an angle, so as to act as a shear when in contact with the dead-knife H. Smoothers H', consisting of strips of angle, T, or other iron, may also be secured upon the disks g to fold or crease the shavings prior to being cut. The shavings or strips then drop onto an endless canvas sheet J, mounted upon rollers j j', and are thus conveyed to a receptacle ready to be packed up.

The foregoing knives and rollers are operated by means of spur-wheels j², driven from the main shaft K, the rollers of the endless canvas band being rotated by a belt k and pulleys k', also driven from the main shaft. It will be seen from the foregoing that in order to cut, say, a sheet of paper thirty inches wide into strips or shavings one-eighth of an inch in breadth one hundred and twenty knives would be required on the top and one hundred and twenty knives on the bottom shaft or spindle, the number varying according to the width of shavings required.

The washers C may be of cardboard, rubber, metal, or other substance.

The reel or reels of paper may be attached behind in the machine or retained in position
5 apart from it, the machine being constructed to cut a single or any number of sheets up to twenty or more at one time.

The machine may be made adjustable, so as to cut any width of strip or shaving.

10 The machine may also be conveniently employed for the cutting of recording-tapes used in telegraphic apparatus.

We claim—

1. In a machine for cutting paper into strips
15 or shavings, the combination of the upper and lower cutter-shafts, the two series of spaced cutter-disks mounted upon the said shafts, the spacing-washers upon the shafts separating the cutter-disks, adjustable bearings sup-
20 porting the upper cutter-shaft, the upper series of cutters coacting with the lower series of cutters, a dead-knife mounted upon the machine-frame, a circular cutter comprising a suitably-journaled shaft and two knife-
25 blades mounted at an angle upon said shaft,

and means operating the circular cutter from the rotary cutters, substantially as set forth.

2. In a machine for cutting paper into strips or shavings, the combination of the upper and lower cutter-shafts, the two series of spaced
3 cutter-disks mounted upon the said shafts, the spacing-washers upon the shafts separating the cutter-disks, adjustable bearings supporting the upper cutter-shaft, the upper series
4 of cutters coacting with the lower series of cutters, a plate supported adjacent to the lower series of cutters, holes in the plate corresponding in number and position to the
spacing-washers upon the cutter-shaft, and wires secured in the holes of said plate and
extending forwardly between the cutter-disks to keep the cutters clear and feed the strips or shavings in the desired direction, substantially as set forth.

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Witnesses:

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