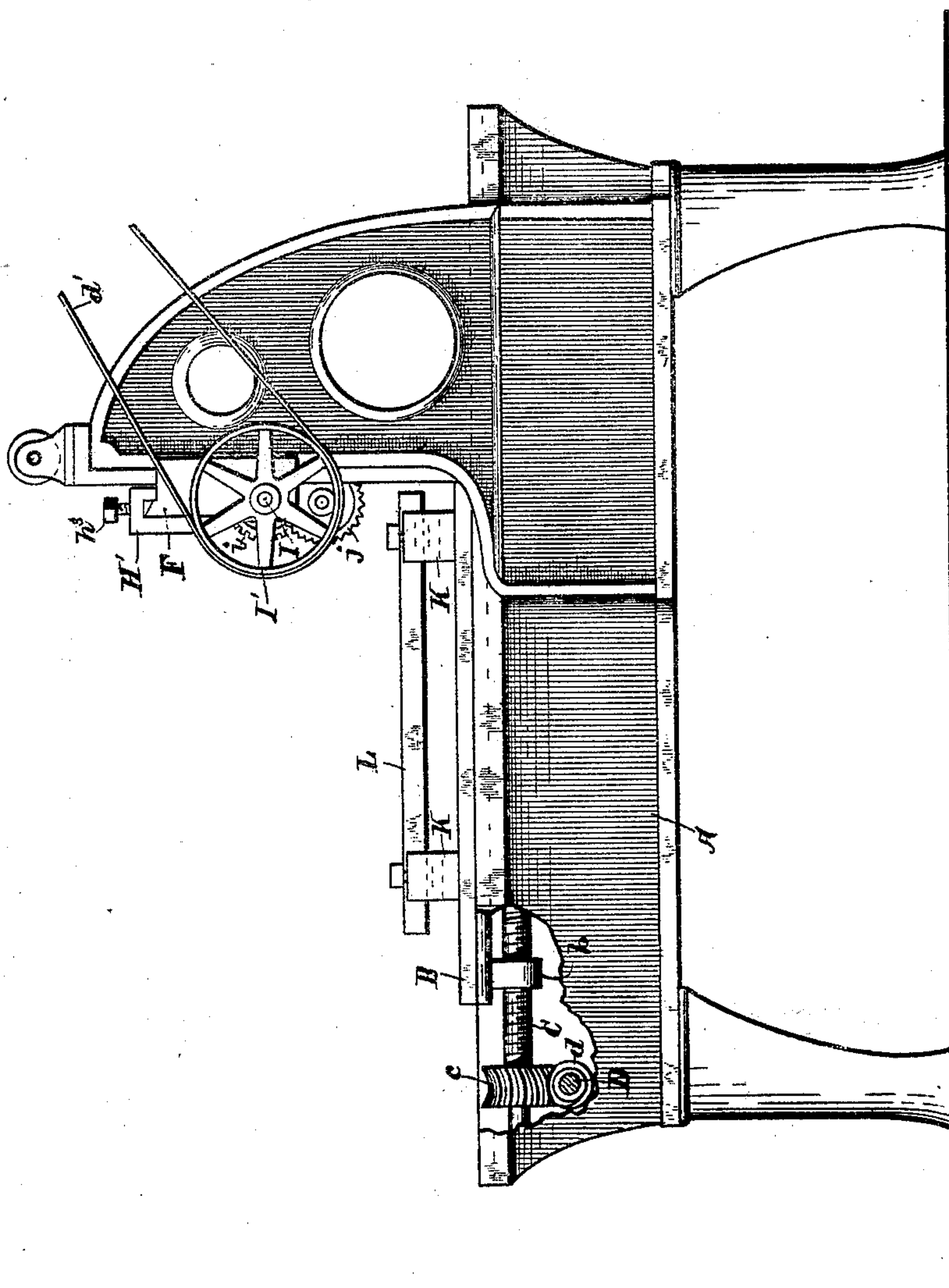


2 Sheets—Sheet 1.

MACHINE FOR DRESSING CHASES FOR PRINTING PRESSES.

No. 509,824.

Patented Nov. 28, 1893.



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(No Model.)

2 Sheets—Sheet 2.

W. H. PRICE, Jr.

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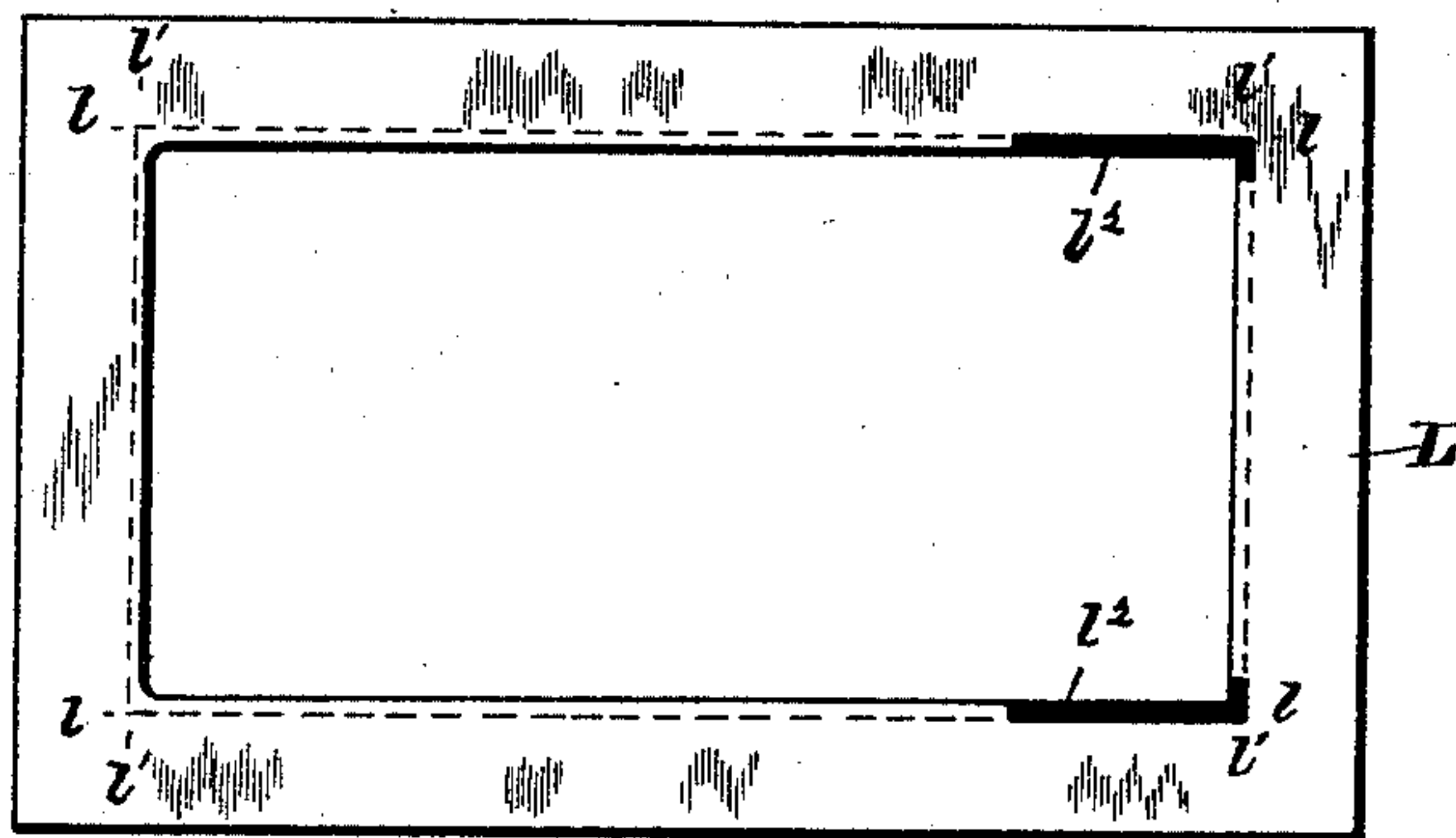
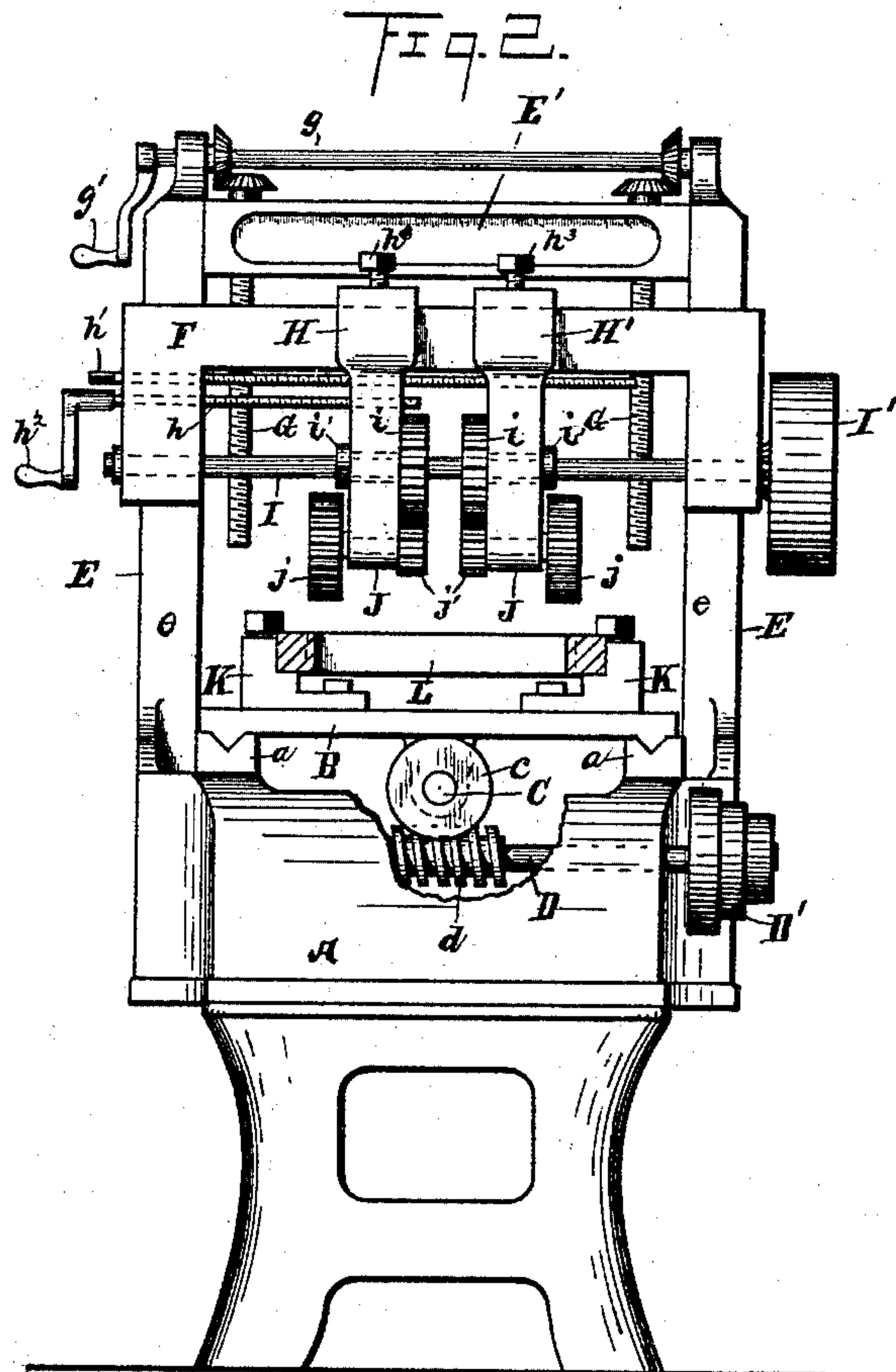


Fig. 3.

WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM H. PRICE, JR., OF CLEVELAND, OHIO, ASSIGNOR TO CHANDLER & PRICE, OF SAME PLACE.

MACHINE FOR DRESSING CHASES FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 509,824, dated November 28, 1893.

Application filed April 18, 1892. Serial No. 429,631. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. PRICE, Jr., of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Mechanism for and Methods of Dressing the Insides of Chases for Printing-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improved mechanism for dressing or finishing chases for printing presses, and it has for its objects to provide a machine by means of which the work of dressing or finishing may be accurately, expeditiously and economically effected, as more fully hereinafter set forth.

The above-mentioned objects are obtained by the means illustrated in the accompanying drawings, in which—

Figures 1 and 2 are respectively side and end elevations of a machine embodying my invention. Fig. 3 is an enlarged plan of a chase showing the work at the end of the first stage and showing, in dotted lines, what is to be the completed work or finish, on the inside of the chase.

I have chosen to illustrate my invention as applied to a machine closely resembling a small planer for metal work.

A represents the supporting-frame, having ways, *a*, and on these ways operate the reciprocating bed B. C represents the feed screw that engages a nut *b*, this nut being an attachment of the bed. The screw C is provided with the usual journal boxes connected with frame A this screw at one end bearing a worm gear *c*. Member *c* is engaged by the worm *d* of shaft D. The shaft extends laterally, and outside of the frame, is provided with a driving-cone D'. Any suitable means may be provided for stopping, starting and reversing the belt that drives this cone, and the machine is supposed to do its work while the bed is being fed in either direction, the work being removed and supplied at either end of the stroke of the bed.

E E are the upright side-frames rigidly secured to frame A, these side frames being rigidly connected at the top by cross-bar E'.

The front faces of members E are dressed and constitute ways *e*, on which the yoke F is adapted to reciprocate vertically. Screws G G are provided for moving the yoke up and down, these screws being intergeared as shown with shaft *g* the latter having a hand crank *g'*. By manipulating this crank, the yoke F and attachments, are raised and lowered as required. The yoke between its bearings is dressed so that the top and bottom thereof constitute ways on which the hangers H H' may slide laterally, or endwise the yoke. Screw rods *h h'* are provided for respectively adjusting the hangers laterally. The outer ends of these screw rods are squared to fit the socket of crank *h²* and by using this crank on the one screw rod or the other, the hangers are adjusted to the desired positions and distances apart, after which, by tightening set-screws *h³*, the hangers are rigidly held in adjustment.

I is a lateral shaft that extends through, and is journaled in lateral holes in the legs of yoke F, and outside the yoke, at one end, this shaft is provided with a driving-pulley L'. This shaft also extends through lateral holes in the hangers H H' these holes being considerably larger than the shaft, to accommodate and furnish journal bearings for the hubs of spur gears *i i*, these gears being mounted on shaft I between, and abutting the hangers. The hubs of these gears, on the outside of the hangers are provided respectively with collars *i'* by which arrangement these gears are held laterally. The gears, and shaft I, are provided with the well-known devices of splines and grooves, so, that these gears always turn with the shaft, but may be adjusted endwise the shaft, by shifting the hangers laterally.

J J are short shafts journaled in lateral holes in the respective hangers, the outer ends of these shafts bearing the cutters or milling wheels *j*. On the inner ends of shaft J are mounted pinions *j'* engaging gears *i* aforesaid.

From the foregoing it will be readily understood that by manipulating screw rods *h h'* the cutters may be adjusted the desired distance apart, and that by means of crank *g'* the cutters may be fed downward to, and

engaging the work, and by setting the bed in motion the work may be fed to the cutters, meantime the cutters are being rotated by means of a belt d' applied to pulley I'.

5 In Fig. 3, L represents a chase. The dotted lines ll along the sides, and the dotted lines $l' l'$ along the ends thereof are supposed to represent the inner edges of the chase when finished, and if the work were to be done by
10 hand, such lines would be laid out on either side of the chase. When the work is done on my improved machine, these lines are not wanted, and are only used in the drawings for illustration. The chase is clamped upon the
15 bed B, but by means of being arranged to clamp a chase crosswise, the bed, using of course, the finished edges of the chase in resetting the work.

The blocks K with the clamping mechanism
20 attached, are preferably provided with dowel pins, at the bottom, that fit in holes drilled in the bed, such holes being provided to accommodate blocks K in the different positions for all standard sizes of chases; hence the resetting of the blocks is quickly done, and with
25 accuracy, and a boy of ordinary intelligence can successfully operate this machine and can turn out better work and many times as much work as a skilled workman can turn
30 out by hand.

The general construction of the machine to which my invention may be applied may be modified in many particulars. For instance in building my first machine, and which I
35 have still in successful operation, I used an ordinary double-headed milling-machine, each head having a horizontal spindle for attaching a cutter. The two spindles were in a line with each other, and the two heads bearing
40 these spindles were adjustable in the di-

rection from and toward each other. These spindles however, had no vertical movement, but instead, the bed was constructed to move up and down and also to feed endwise.

This former machine I consider a perfect
45 success, but it is more complicated and expensive to build, than the machine illustrated in the accompanying drawings, in the manufacture of which a small sized planer is utilized. Hence I prefer the construction shown.
50 Sometimes this work is partially done on an ordinary milling machine, but in such case, the cutter-spindle is in the way so that the cutter cannot be fed down through the inside of the chase, far enough to finish the corners
55 thereof, but, instead, leave concaved sections that have to be dressed by hand.

With my improved construction, the cutter, being located on the outer end of, and overhanging the spindles, the cutters may be fed
60 down through the inside of a chase so as to finish the corners perfectly.

What I claim is—

The combination in a machine for dressing printers' chases, of the movable bed which
65 carries the chase, the mechanism for operating the same, the laterally-adjustable hangers carrying the cutters, the mechanism for rotating said cutters, and the vertically-movable yoke carrying the adjustable hangers,
70 and mechanism for adjusting the same above the movable bed, substantially as specified.

In testimony whereof I sign this specification, in the presence of two witnesses, this 14th day of April, 1892.

WILLIAM H. PRICE, JR.

Witnesses:

J. T. MORTON,

M. H. MCGARVIN.