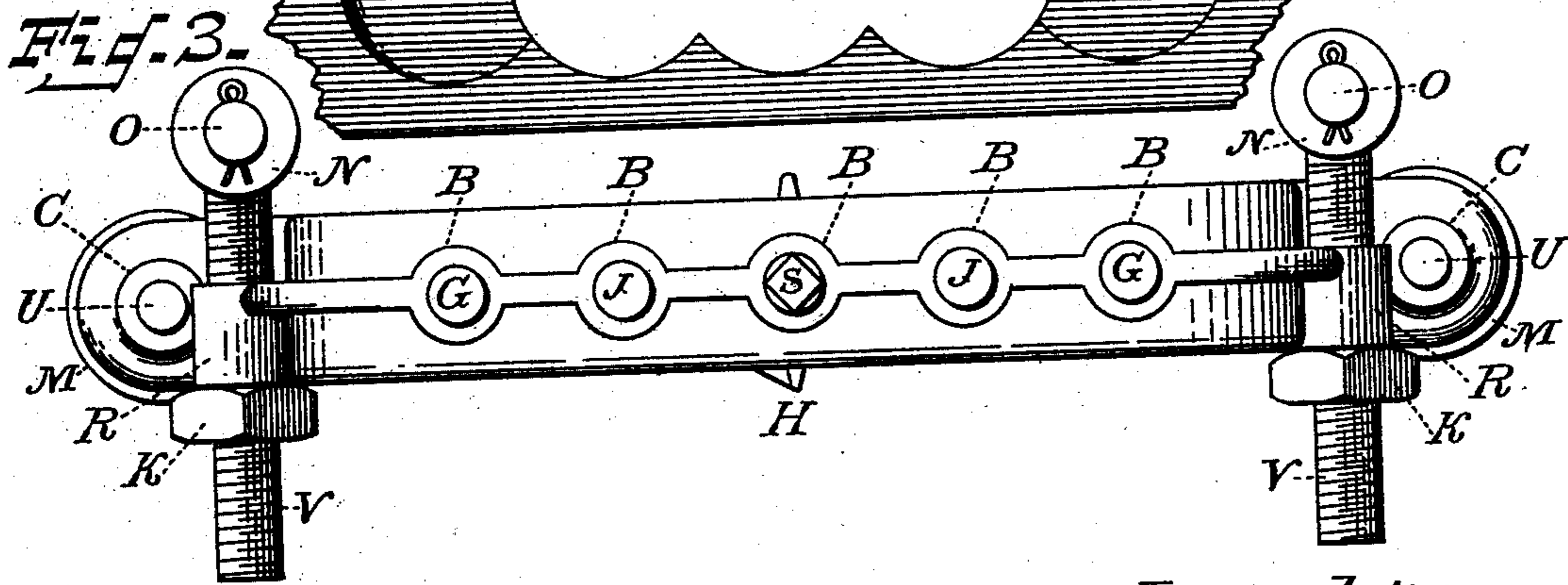
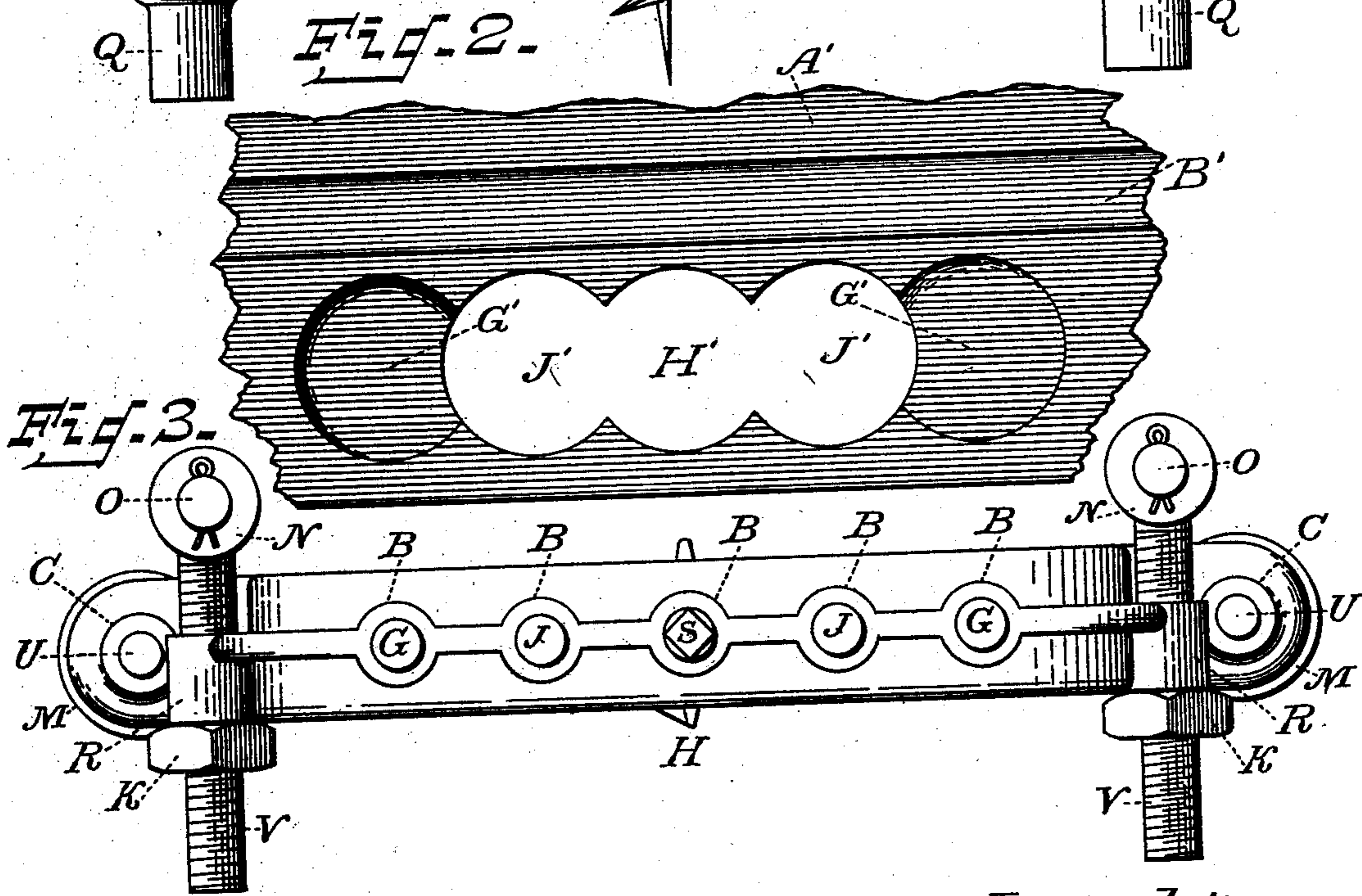
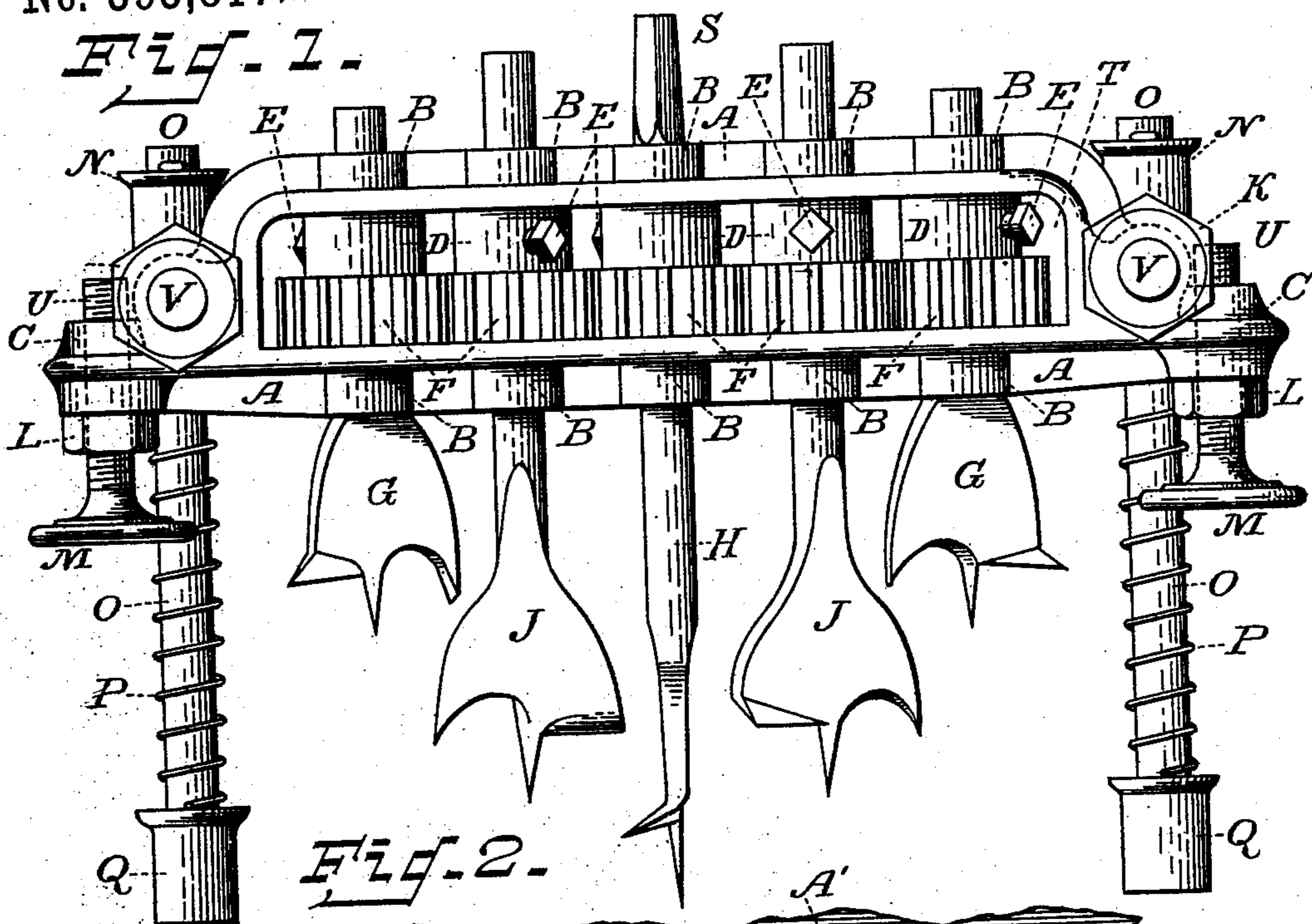


(No Model.)

W. H. CLAPP.
MORTISING MACHINE.

No. 393,817.

Patented Dec. 4, 1888.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM H. CLAPP, OF AUBURN, NEW YORK.

MORTISING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 393,817, dated December 4, 1888.

Application filed February 20, 1888. Serial No. 265,022. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CLAPP, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented a new and useful Mortising-Machine, of which the following is a specification.

My invention relates to improvements in mortising-machines for cutting the mortise in window-jamb, wherein is inserted the sash-pulley, and at the same time forming the seats for the ends of the sash-pulley face-plate, whereby the same is secured to the window-jamb; and the object of my invention is to provide means whereby the mortise and seats may be formed at a single operation by means of an ordinary bit-brace.

My improved mortising-machine is especially designed for the forming of the mortise and seats wherein is inserted the so-called "common-sense" sash-pulley, which has a face-plate formed of a series of disks, each of the same diameter, the end ones being centrally perforated and the middle ones having one common slot, said sash-pulley face-plate being covered by Letters Patent issued to Amos Halliday, of Westfield, Massachusetts, assignor, &c., and dated February 10, 1874, being No. 147,322.

In the drawings, Figure 1 is an elevation of my invention. Fig. 2 is a section of window-jamb, showing the form of the mortise and seats produced by my invention; and Fig. 3 is a top plan view of Fig. 1.

A is a metal frame-work having an open space, T, threaded bosses C C and R R at either end, and solid boxes B B B, &c., above and below said open space T of the frame-work A. In the space T are placed spur-gears F F F, &c., of uniform size, said pinions or spur-gears being provided with hubs D D D. Through the hubs and spur-gears are passed the shanks of the right-hand spur-bits, G G and H, and the left-hand spur-bits, J J, all of said spur-bits being so adjusted as to cut in each other's periphery, and held in such adjustment by means of the set-screws E E E, which are so arranged as not to interfere with each other when the machine is being operated.

The spur-bits J J and H are for forming the mortises J' J' and H', Fig. 2, and the spur-

bits G G are for forming the seats G' G', in which the end disks of the sash-pulley face-plate are secured, all of said spur-bits being of a diameter to conform to that of the disks of the sash-pulley face-plate.

A', Fig. 2, is a section of the window-jamb, and B' is the check-stop slot, which is formed in the window-jamb.

To regulate the depth to which the seats G' G' shall be cut, I provide gage-stops M M, which are extended into threaded shanks U U, which said shanks screw into the threaded bosses C C and are held in any desired adjustment by means of the jam-nuts L L.

To regulate the distance from the check-stop slot to the center of the mortise, I provide vertical guideways N N, through which freely pass spindles O O, said spindles being provided with hubs Q Q, which are of a diameter equal to the width of the check-stop slot B'. The spindles O O are provided, also, with springs P P, which serve to assure the position of the hubs Q Q in the check-stop slot B' while the machine is being operated. The vertical guideways N N are extended at right angles thereto into threaded shanks, which screw into the threaded bosses R R and are secured in any desired adjustment by means of the jam-nuts K K. It will thus be seen that the distance between the center of the hubs Q Q of the freely-moving spindles O O and the center of the mortise in the window-jamb may be adjusted and maintained as the exigencies of the case may require.

Having thus described the several parts of my invention, I will now describe its operation.

The three central bits are adjusted so as to cut in each other's periphery and entirely through the window-jamb. The two outer bits are adjusted with relation to the gage-stops M M, or vice versa, so as to cut in the periphery of their immediate fellows and sufficiently deep into the jamb of the window-frame to form a seat for the perforated ends of the sash-pulley face-plate. The distance of the center of the mortise from the center of the check-stop slot being regulated as already described, a single line is squared off on the jamb, which represents the center of the longer diameter of the mortise. The hubs Q Q of the spindles O O are placed in the

check-stop slot, and the point of the bit II set on the line. The shank of the bit II being extended into a tapered square form, as shown at S, I place thereon the bit of a common brace 5 and begin the forming of the slot in the jamb. As the bits are pressed to their cutting into the jamb, the tension on the spiral springs P P is increased, which serves to keep the device from jumping, and assures its proper position. 10 The bits G G can pass no farther into the wood than the gage-stops will allow. As the faces of the latter come in contact with the jamb, no further cutting of the bits G G can be performed, and thus, after the mortise has been 15 cut by the three central bits, the seats are formed by the two outer ones and of such depth as may be required. Thus at a single operation the mortise for the sash-pulley box and central disks and the seats for the perforated disks of the sash-pulley face-plate 20 are neatly and quickly formed.

I claim as my invention—

1. The combination of a series of spur-bits arranged in line and cutting in each other's periphery, a frame-work having a space wherein 25 are placed as many spur-gears of equal size provided with hubs, threaded bosses at either end of said frame-work, into which screw the threaded shanks U U of the gage-stops M M, 30 and jam-nuts for securing the same to a vertical adjustment, as and for the purpose herein described and set forth.

2. The combination of a series of spur-bits arranged in line and cutting in each other's 35 path, a frame-work having a space wherein are placed as many spur-gears of equal size

provided with hubs, threaded bosses at either end of said frame-work, into which screw the threaded shanks U U of the gage-stops M M, jam-nuts for assuring and securing the vertical 40 adjustment of the same, and movable spindles having hubs Q Q, spiral springs P P, threaded shanks at right angles to said spindles, which said shanks screw into threaded bosses R R, with jam-nuts on said threaded 45 shanks for assuring and securing a lateral adjustment of the same, as and for the purpose herein described and set forth.

3. The combination of five spur-bits arranged in line in a frame-work constructed as 50 described, the points and width of said bits corresponding to the centers and diameters of the several disks of the sash-pulley face-plate, the shank of the central bit extended into a square tapered form, the three central bits 55 forming the mortise for the box and central disks of the sash-pulley and face-plate, the two outer bits forming the seats for the end disks of the sash-pulley face-plate, the movable spindles provided with springs, hubs, 60 jam-nuts, and a threaded shank at right angles thereto, gage-stops provided with threaded shanks and jam-nuts, and spur-gears of equal size provided with hubs secured to the shanks of said bits, substantially constructed 65 as and for the purpose herein specified and described.

WILLIAM H. CLAPP.

Witnesses:

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