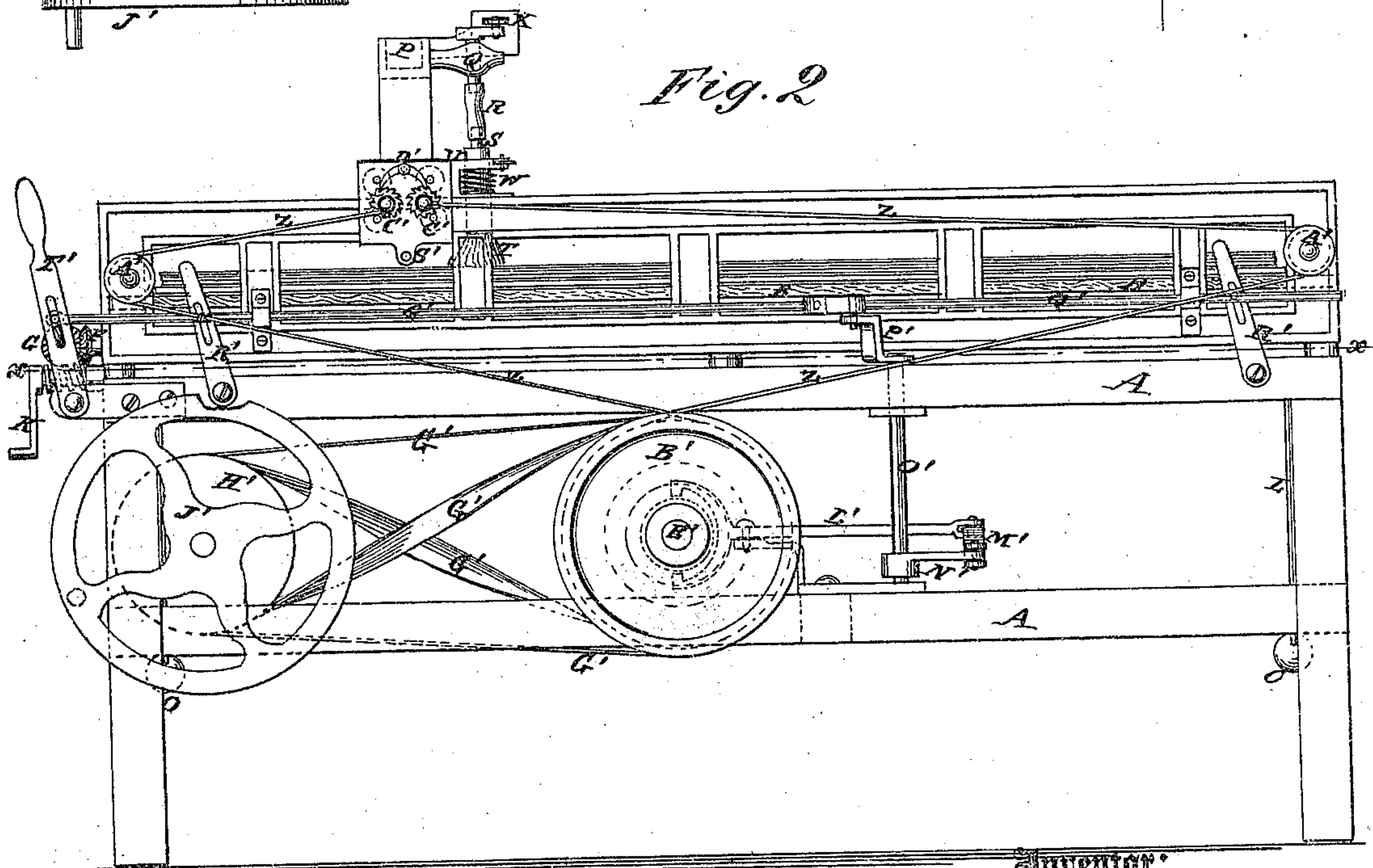
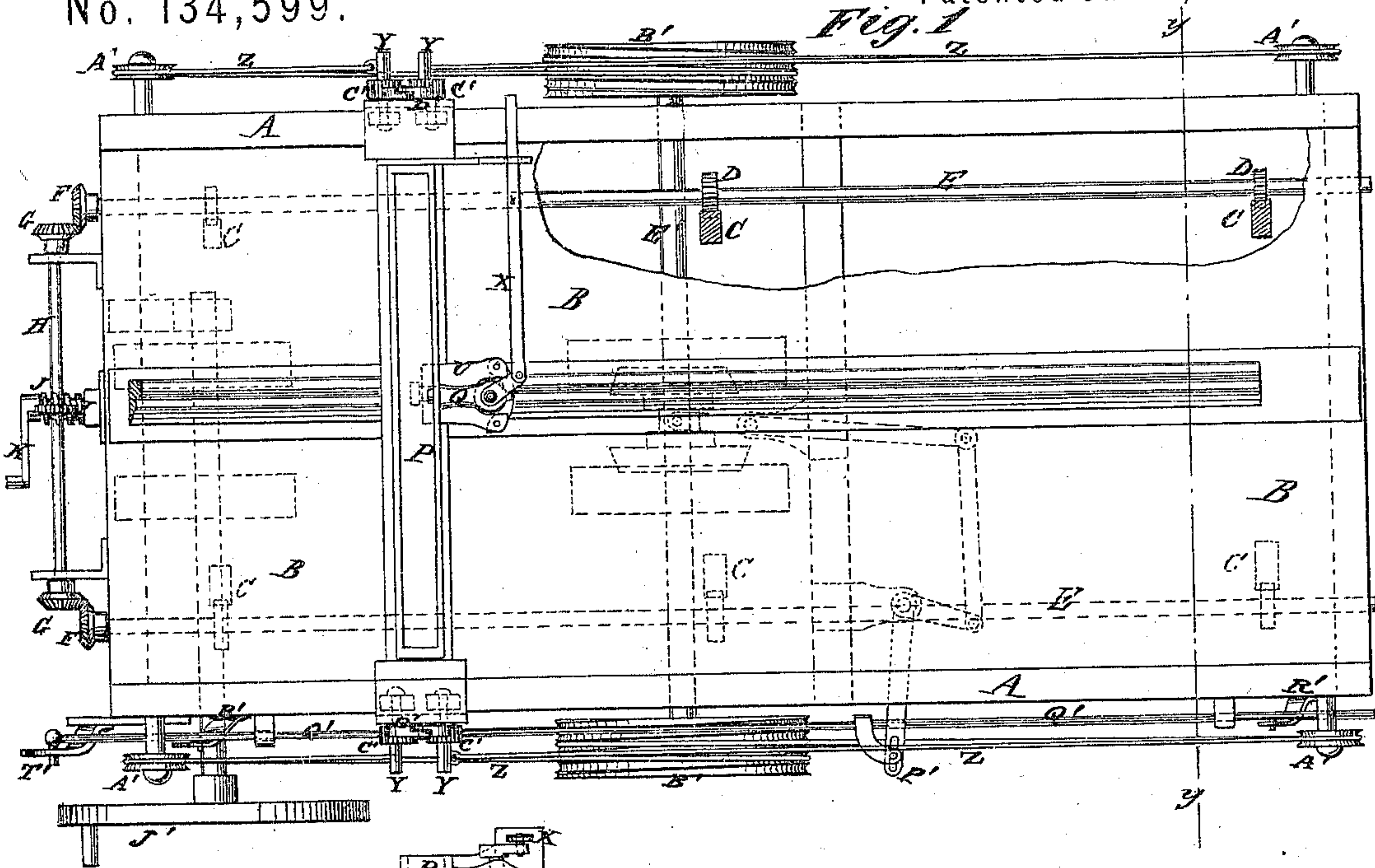


2 Sheets--Sheet 1.

M. HAMBURGER, I. J. SISKIND, & A. KLEIN.
Apparatus for Filling, Polishing, and Varnishing
Moldings.

No. 134,599.

Patented Jan. 7, 1873.



Witnesses:

A. W. Almqvist
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Inventor:

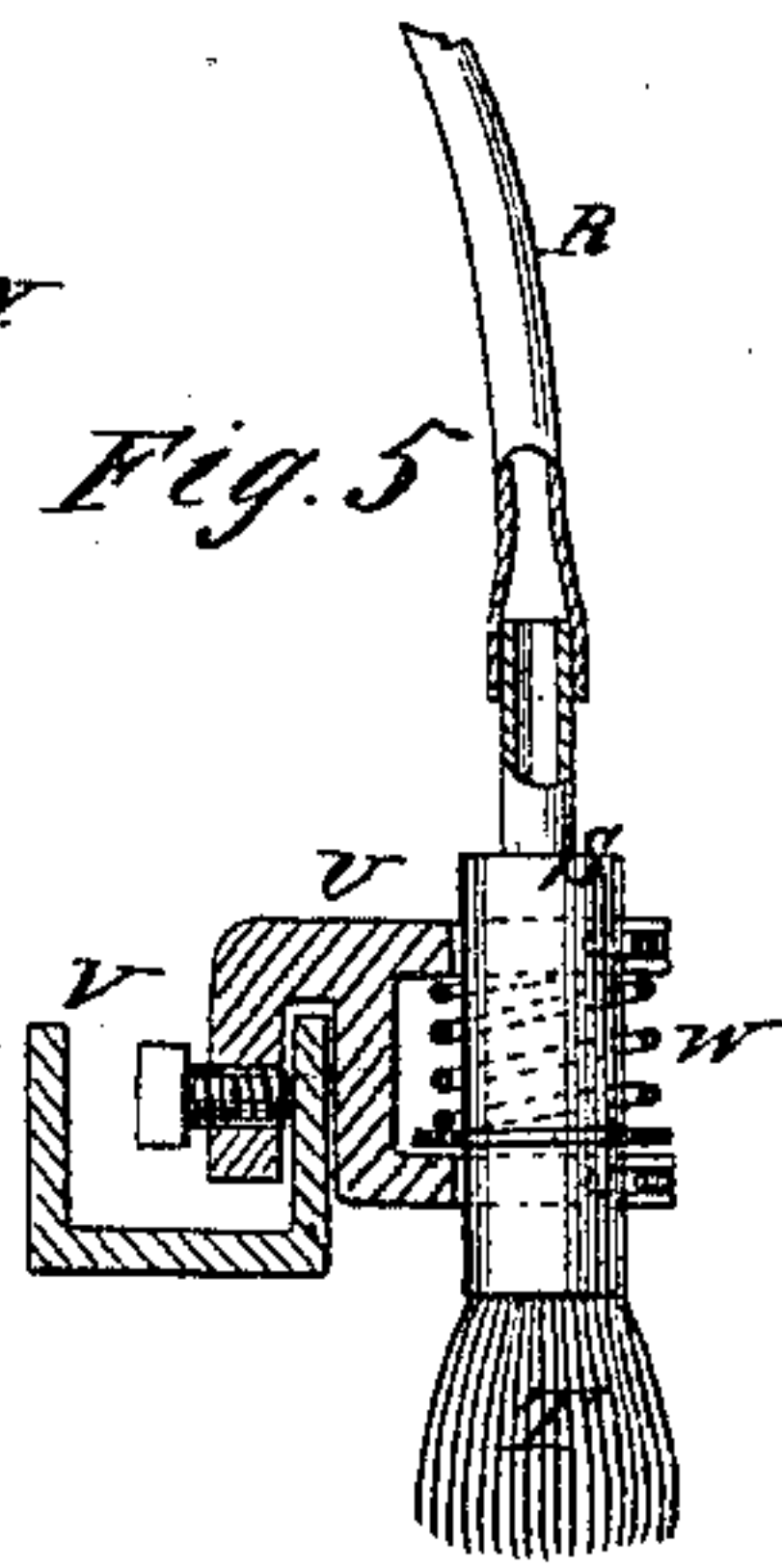
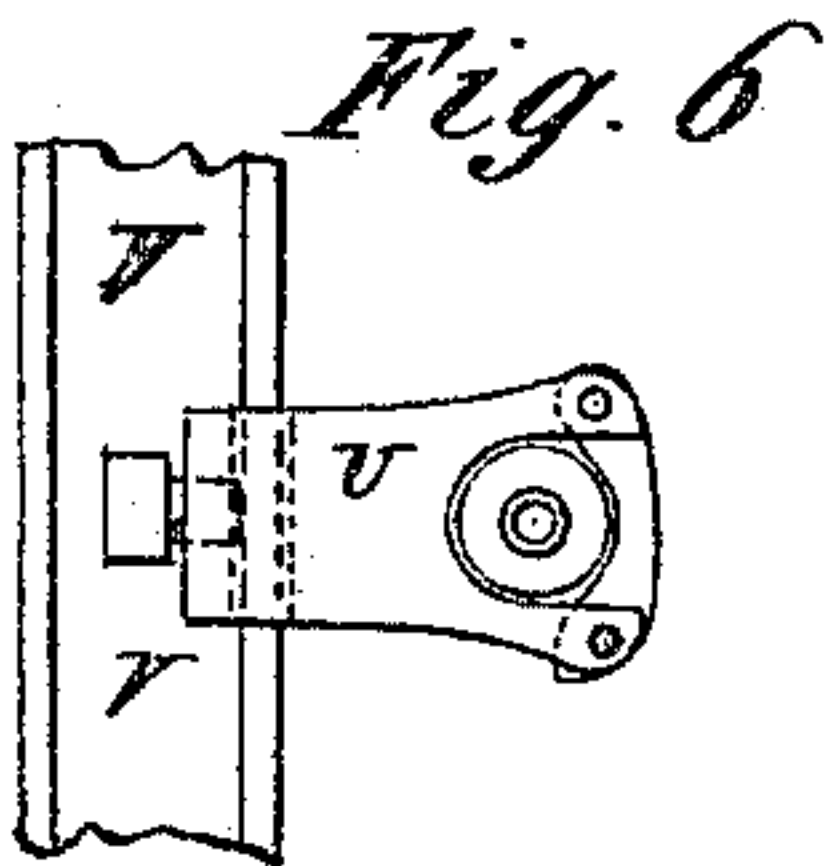
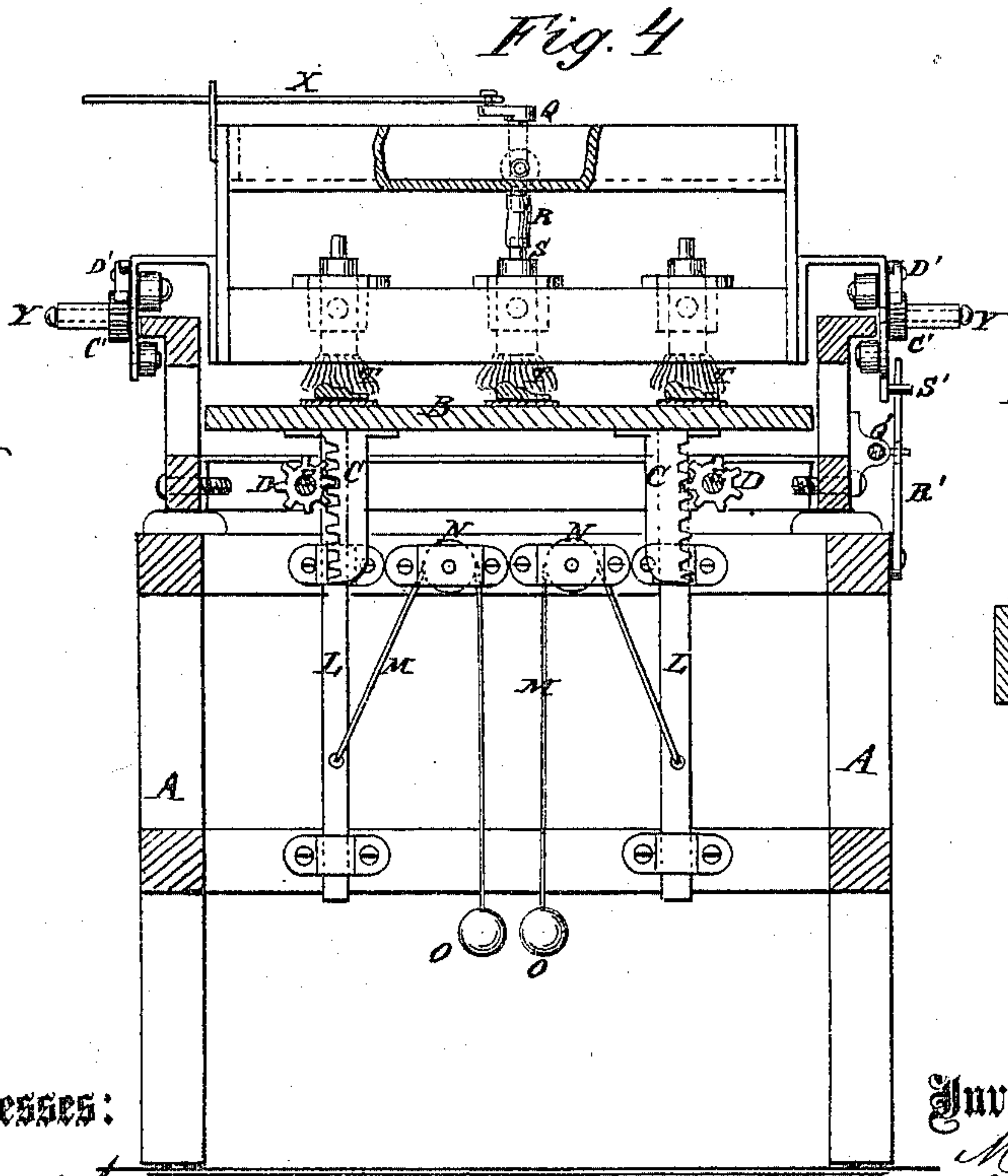
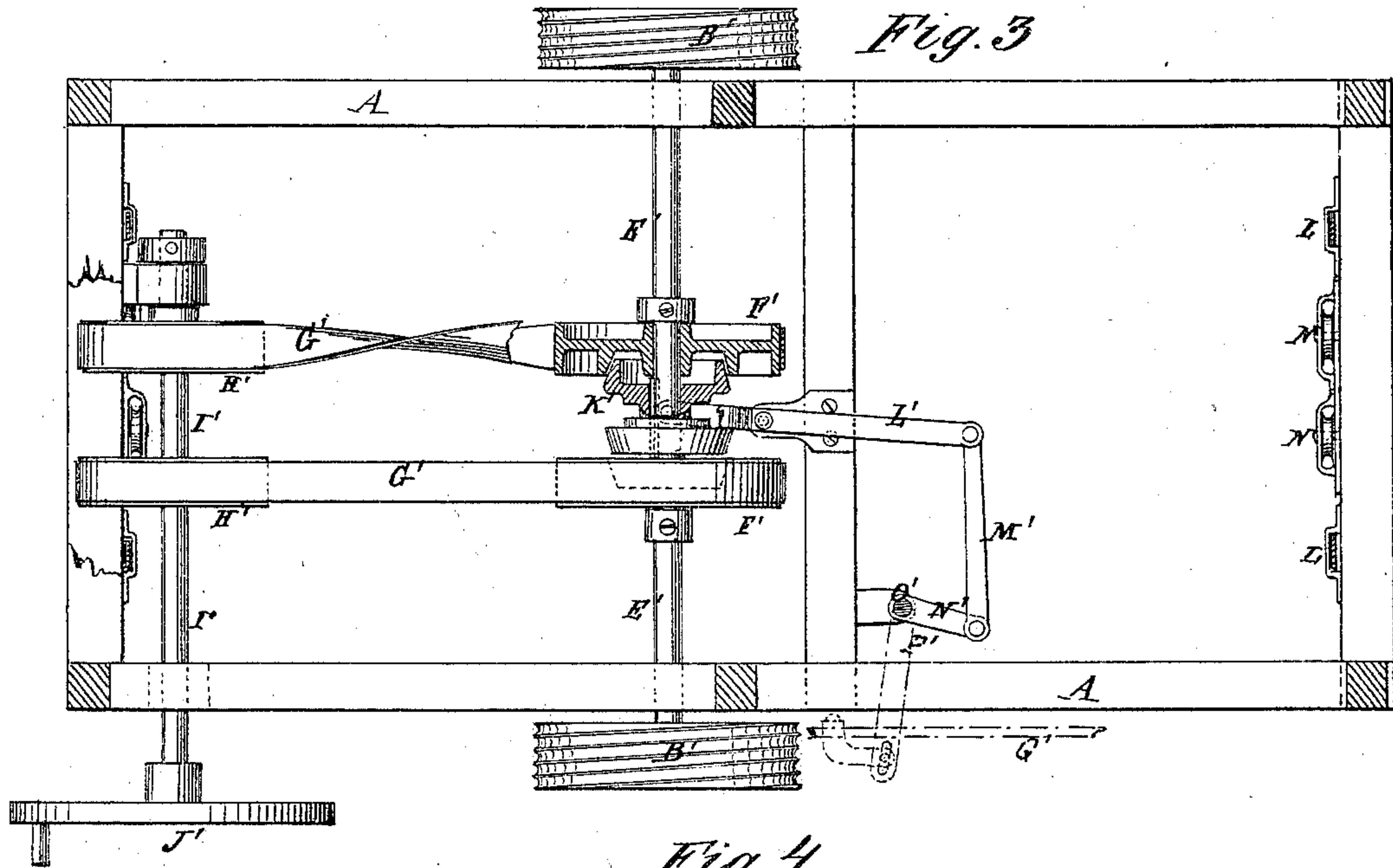
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2 Sheets--Sheet 2.

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Apparatus for Filling, Polishing, and Varnishing
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Witnesses:
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UNITED STATES PATENT OFFICE.

MAX HAMBURGER, ISAAC J. SISKIND, AND ACHILLE KLEIN, OF NEW YORK, N. Y.

IMPROVEMENT IN APPARATUS FOR FILLING, POLISHING, AND VARNISHING MOLDINGS.

Specification forming part of Letters Patent No. 134,599, dated January 7, 1873.

To all whom it may concern:

Be it known that we, MAX HAMBURGER, ISAAC J. SISKIND, and ACHILLE KLEIN, of the city, county, and State of New York, have invented a new and useful Improvement in Machine for Filling, French Polishing, Finishing, and Varnishing, of which the following is a specification:

Figure 1, Sheet I, is a top view of our improved machine, part of the table being broken away. Fig. 2, Sheet I, is a side view of the same. Fig. 3, Sheet II, is a horizontal section of the same taken through the line *xx*, Fig. 2. Fig. 4, Sheet II, is a vertical cross-section of the same taken through the line *yy*, Fig. 1. Fig. 5, Sheet II, is a detail sectional view of one of the brush-holders, showing a brush in place. Fig. 6, Sheet II, is a top view of the same.

Similar letters of reference indicate corresponding parts.

Our invention has for its object to furnish an improved machine for filling, French polishing, finishing, varnishing, and sand-papering wood moldings, &c., and which shall be simple in construction, convenient in use, and effective in operation; and it consists in the toothed arms, gear-wheels, long shafts, short cross shaft, bevel-gear wheels, screw-wheel, and endless screw, with each other and with the table and frame of the machine; in the combination of the sliding bars, cords, pulleys, and weights with the adjustable table; in the moving bar provided with brackets or holders for receiving and carrying the brushes or rubbers, in combination with the adjustable table; in the hollow stem and its spring for conveying the liquid to the brush or rubber, and for holding the said brush or rubber down to its work with an elastic pressure, in combination with the bracket or holder; in the combination of the trough provided with stop-cocks with the moving bar, hollow stems, and brushes or rubbers; in the arrangement of the cords, chains, or cables, guide-pulleys, wheels, or drums, shaft, loose pulleys, clutch, straight and crossed belts, pulleys, and driving-shaft; in the combination of the connecting-rod, armed shaft, sliding rod, levers, and arm with the moving bar, frame of the machine, clutch-lever, clutch, and loose pulleys; and in the

combination of the hand-lever with the sliding rod, armed shaft, connecting-rod, clutch-lever, clutch, and loose pulleys, as hereinafter more fully described.

A represents the frame-work of the machine. B is the table upon which the moldings are placed to be operated upon, and which is so arranged that it may be raised and lowered to adjust it to the thickness of the moldings to be operated upon. To the under side of the table B, at or near its side edges, are attached the upper ends of a series of rack-arms, C, the teeth of which mesh into the teeth of a series of small gear-wheels, D, attached to rods or shafts E, which extend longitudinally across the frame A, and work in bearings attached to said frame. Enough racks and gear-wheels C D should be used to cause the said table to be raised and lowered steadily and without getting out of level. To one end of each of the rods or shafts E is attached a small bevel-gear wheel, F, the teeth of which mesh into the teeth of a small gear-wheel, G, attached to the end of the cross-shaft H. The shaft H revolves in bearings attached to the end of the frame A, and to its center is attached a screw-wheel, I, the teeth of which mesh into the threads of an endless screw, J, which revolves in bearings attached to the end of the frame A, and which is operated by a crank, K, attached to its outer end. By this construction, by turning the crank K in one or the other direction, the table B may be raised and lowered to adjust it to the thickness of the molding or other work to be operated upon. L are bars which slide up and down in keepers attached to the end parts of the frame A, and the upper ends of which rest against the lower side of the table B. To each of the sliding bars L is attached a cord, M, which passes over a guide-pulley, N, attached to the upper part of the ends of the frame A. To the other ends of the cords M are attached weights O, which hold the ends of the bars L up firmly against the under side of the table to relieve the rack-teeth from having to support the entire weight of said table. P is a trough, in which the material to be used upon the moldings is placed, and from which it flows through the stop-cocks Q, flexible or other pipe R, and hollow stem S to the brush cotton-waste, or

other rubber T, by which it is applied to the molding. The brush or rubber T and hollow stem S are supported by a bracket, U, attached to the bar or trough V, by which the trough P is supported. The forward parts of the brackets U are hinged, and are secured when closed by a pin or other fastening, so that the rubber may be readily detached and exchanged when desired. The rubber is held down to its work by a coiled spring, W, the lower end of which rests upon a flange or shoulder upon the hollow stem S, and its upper end rests against the lower side of the upper part of the bracket U, as shown in Fig. 5. This arrangement allows the brush or rubber to adjust itself to any inequality or unevenness in the moldings. The brush or rubber T must be varied in construction, according as the purpose for which the machine to be used may require. The trough P and bar V may be provided with any desired number of stop-cocks Q and brackets U, according to the width of the machine. With the handles of the stop-cocks Q is connected a bar, X, extending out to the side of the machine, to enable them to be conveniently opened and closed, as desired. By detaching a pin any one or any desired number of the stop-cocks Q may be disconnected, and allowed to stand closed while the others are operating. The ends of the bar V are provided with friction-rollers, which roll along the side rails of the frame A, or upon ways or rails attached to said frame. To each end of the bar V are pivoted two pins, Y, to which are attached the ends of the cords Z which pass around guide-pulleys A', pivoted to the upper end parts of the sides of the frame A. The middle part of the cords Z makes one, two, or more turns around the wheel or drum B', so that the bar V and its attachments may be moved back and forth by turning the said wheel B' in one or the other direction. The pivoted pins Y are provided with ratchet-wheels C' and pawls D', so that the cords Z may be tightened and loosened by adjusting the said pins Y. The wheels or drums B' are attached to the ends of the shaft E', which revolves in bearings in the lower middle part of the frame A, and upon its middle part, at a little distance from each other, are placed two loose pulleys, F', around which pass the belts G', one of which is straight and the other crossed. The belts G' pass around pulleys H' attached to the shaft I', which revolves in bearings attached to the frame A at or near one end of said frame. To one end of the shaft I' is attached a pulley, J', to receive the belt by which the machine is driven. Upon the shaft E', between the two loose pulleys F', is placed a double friction-clutch, K', which may be thrown into gear with either of said pulleys F' to revolve the shaft E' in either direction, as required. Upon the central part of the clutch K' is formed a ring-groove to receive the forked end of the lever L', which is pivoted to a support attached to a cross-bar of the frame A. To the other end of the lever L' is pivoted the

inner end of a connecting-rod, M', the other or outer end of which is pivoted to the end of an arm, N', formed upon or rigidly attached to a vertical shaft, O', which works in bearings attached to the frame A, and upon the upper end of which is formed or to it is rigidly attached an arm, P', the armed shaft N' O' P' thus operating as a bent lever. The arm P' projects at the side of the frame A, and is connected, by a pin and slot or other simple and convenient means, with a rod, Q', extending horizontally along the side of the frame A and sliding longitudinally in bearings attached to said frame. R' are levers, the lower ends of which are pivoted to the side of the frame A near each end and below the rod Q'. The middle parts of the levers R' are slotted to receive pins attached to the rod Q', so that the said rod can move in a straight line while the slotted parts of said levers move in the arcs of circles. The upper ends of the levers R' project above the rod Q', so that they may be struck by an arm, S', attached to the end of the bar V, as the said bar approaches the end of the machine. T' is a lever the lower end of which is pivoted to a support attached to the frame A below the rod Q'. The middle part of the lever T' is slotted to receive a pin attached to the end of the rod Q'. The upper end of the lever T' projects so that the rod Q' may be conveniently operated by hand.

In using the machine the molding or other work to be operated upon is secured to the table B, which table B is then raised to bring the work against the brushes or rubbers S T with the necessary pressure. The lever T' is then operated to bring the clutch K' in contact with the wheel F', that will carry the brushes or rubbers in the proper direction. As the brushes or rubbers approach the end of the table the arm S' strikes the lever R', which moves the rod Q' and throws the clutch K' into gear with the other wheel F', causing the brushes or rubbers to move toward the other end of the table. The motion of the brushes or rubbers may be reversed at any time, and as often as desired, by means of the hand-lever T', so that a short strip of molding or a part of a long strip may be operated upon, as required.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of the toothed arms C, gear-wheels D, shafts E, short cross-shaft H, bevel-gear wheels F G, screw-wheel I, and endless screw J with each other and with the table B and frame A, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the sliding bars L, cords M, pulleys N, and weights O with the adjustable table B, substantially as herein shown and described, and for the purpose set forth.

3. The moving bar V provided with brackets or holders U for receiving and carrying the brushes or rubbers S T, in combination with the adjustable table B, substantially as herein

shown and described, and for the purpose set forth.

4. The hollow stem S and spring W for conveying the liquid to the brush or rubber, and for holding the said brush or rubber down to its work with an elastic pressure, in combination with the bracket or holder U, substantially as herein shown and described.

5. The combination of the trough P, provided with stop-cocks Q, with the moving bar V, hollow stems S, and brushes or rubbers T, substantially as herein shown and described, and for the purpose set forth.

6. The arrangement of the cords Z, guide-pulleys A', wheels or drums B', shaft E', loose pulleys F', clutch K', straight and crossed belts G', pulleys H', and driving-shaft I', with respect to each other, to the moving bar V and

frame A, substantially as herein shown and described, and for the purpose set forth.

7. The combination of the connecting-rod M', armed shaft O' N' P', sliding rod Q', levers R', and arm S' with the moving bar V, frame A, clutch-lever L', clutch K', and loose pulleys F', substantially as herein shown and described, and for the purpose set forth.

8. The combination of the hand-lever T' with the sliding rod Q', armed shaft O' N' P', connecting-rod M', clutch-lever L', clutch K', and loose pulleys F', substantially as herein shown and described, and for the purpose set forth.

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