

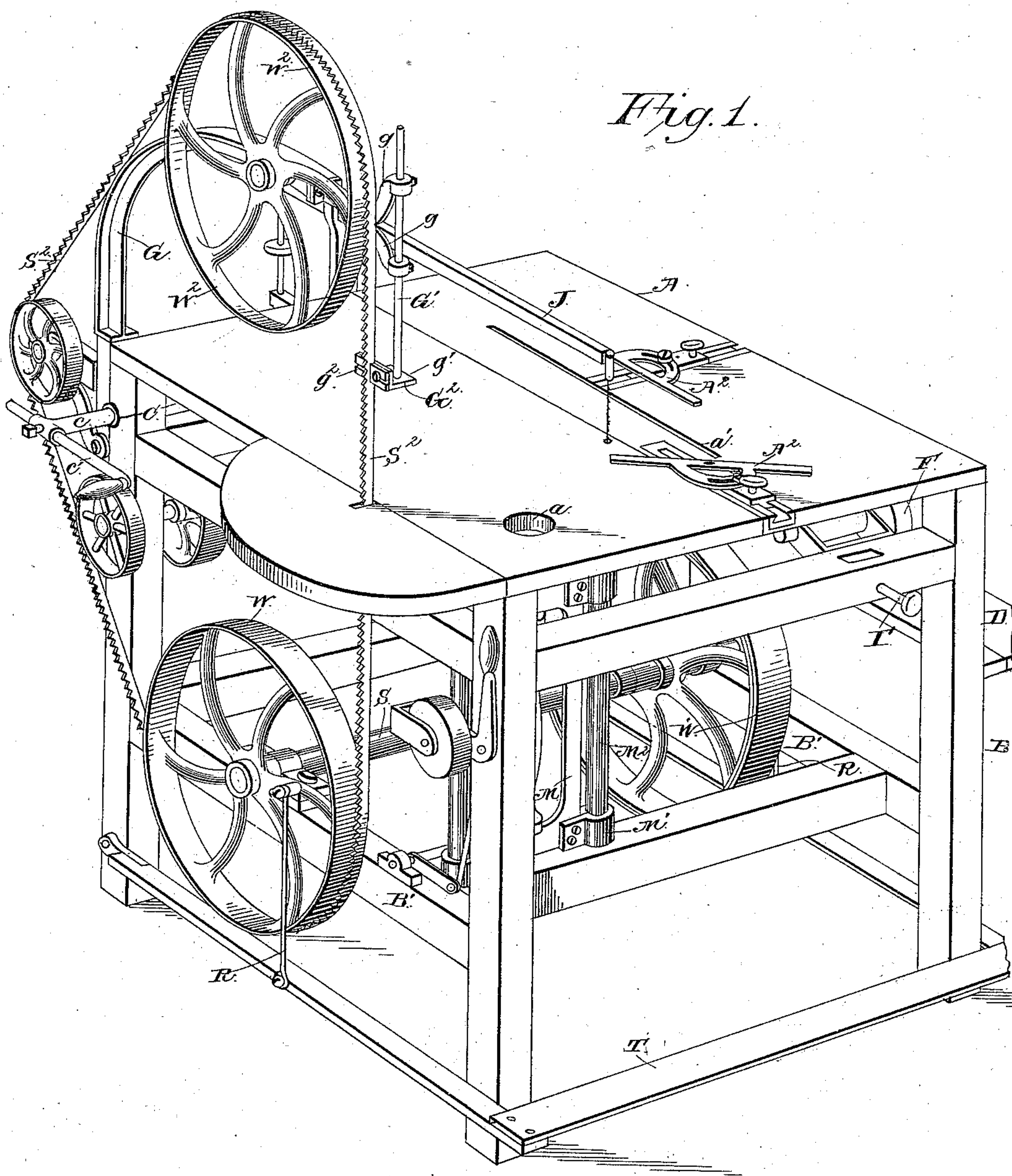
(No Model.)

4 Sheets—Sheet 1.

E. W. SNEDEKER.
WOOD WORKING MACHINE.

No. 382,330.

Patented May 8, 1888.



Witnesses.

M. E. Fowler.
E. G. Siggers.

Inventor,

E. W. Snedeker.

By *his* Attorneys

C. A. Howarth.

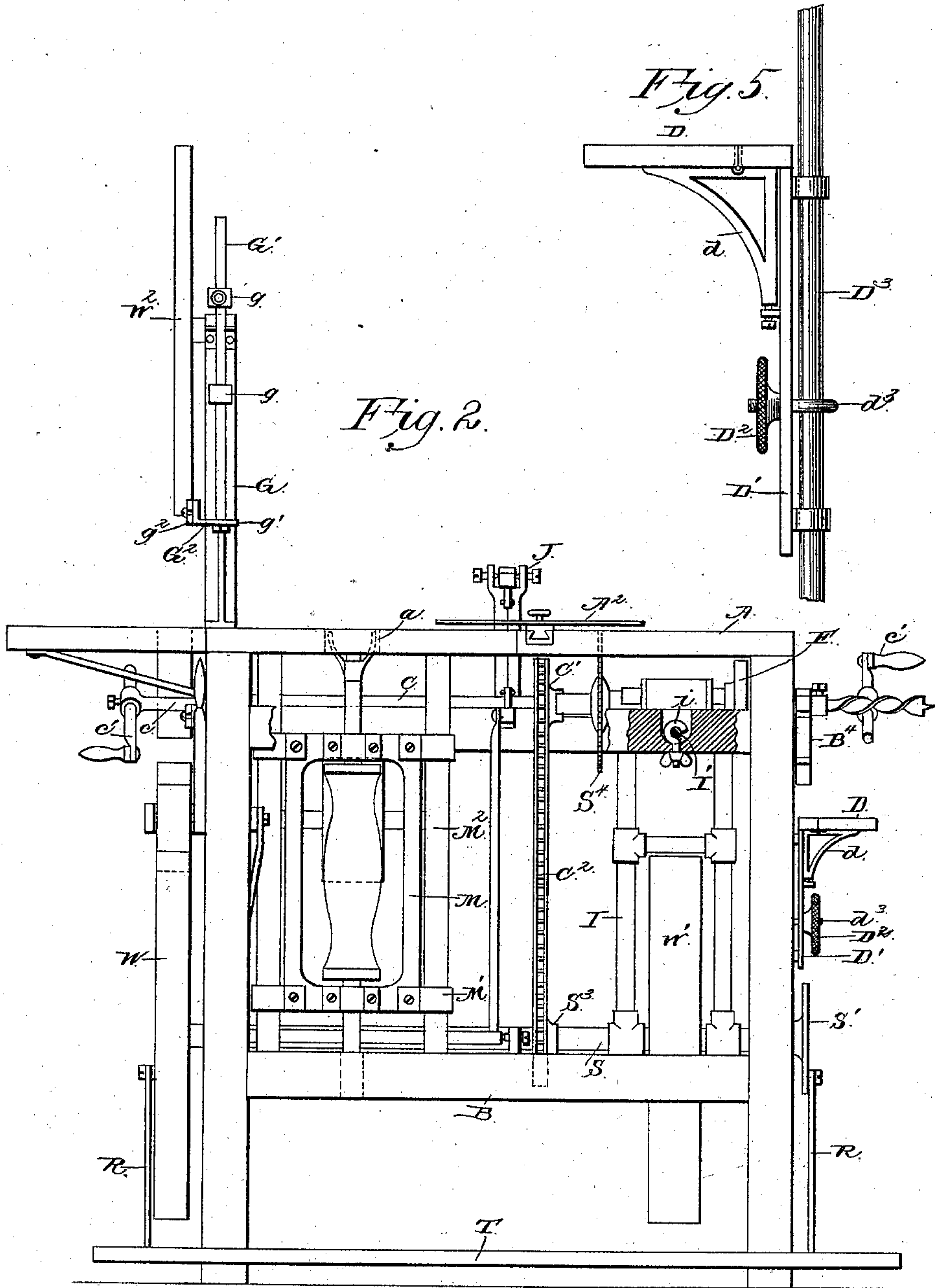
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Fig. 9.
E. W. Snedeker.
By his Attorneys
C. A. Howland

Inventor.

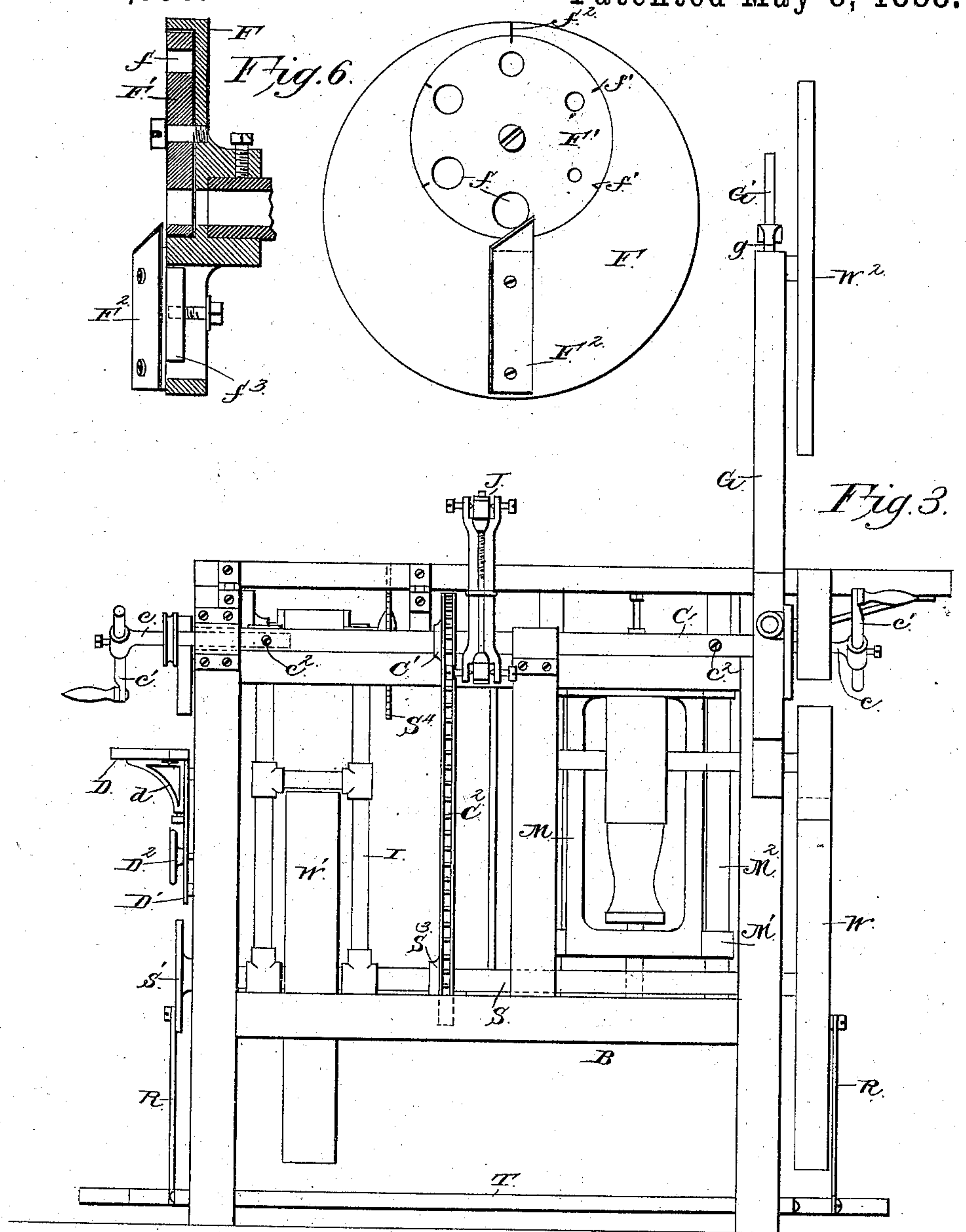
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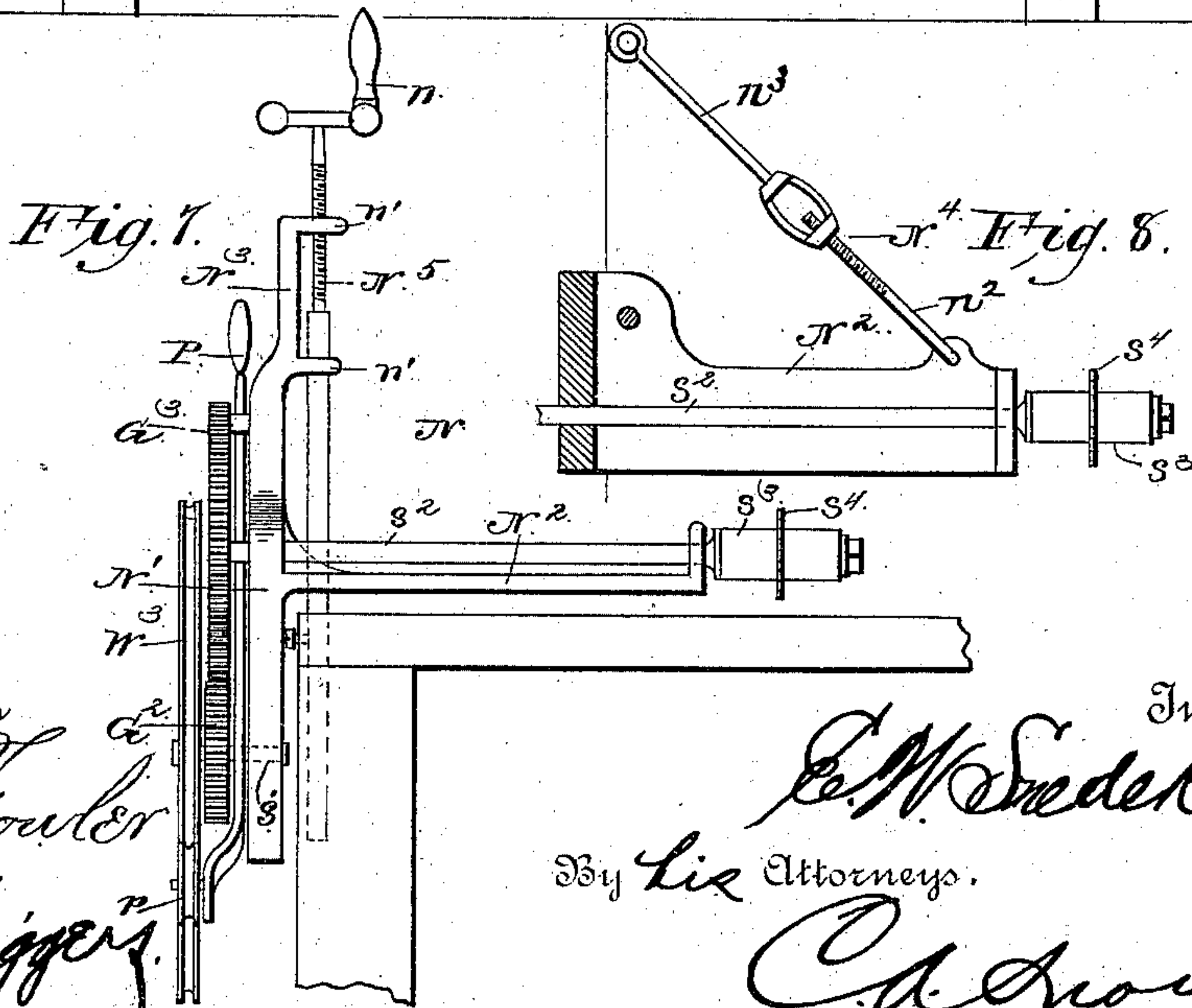
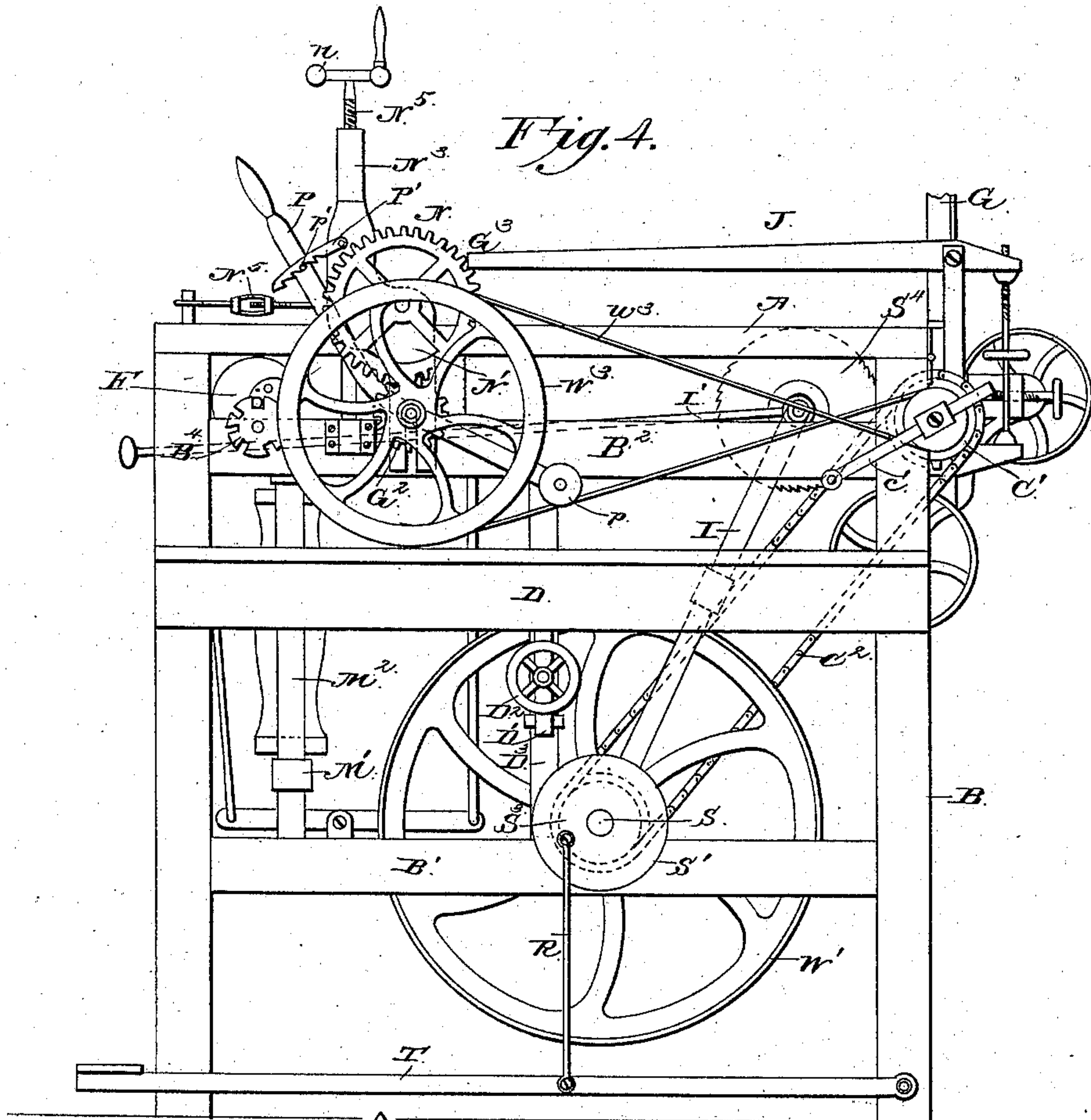
Inventor,

E. W. Snedeker.
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By *Lie* Attorneys,
C. A. Howland

UNITED STATES PATENT OFFICE.

EDGAR WYVILL SNEDEKER, OF JAMESBURG, NEW JERSEY.

WOOD-WORKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 382,330, dated May 8, 1888.

Application filed June 11, 1887. Serial No. 241,029. (No model.)

To all whom it may concern:

Be it known that I, EDGAR WYVILL SNEDEKER, a citizen of the United States, residing at Jamesburg, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Wood-Working Machines, of which the following is a specification.

My invention relates to an improvement in wood-working machines, and relates to that class which combines several mechanisms in one machine adapted to be operated by foot-power; and it consists in the construction and arrangement of the parts of the same, which will be more fully set forth hereinafter, and particularly pointed out in the claims.

My present invention is an improvement in the machine for which Letters Patent No. 373,493 were granted to me on November 22, 1887.

The object of my present invention is to provide a wood-working machine combining a band-saw, jig-saw, molder, circular saw, and boring attachment, together with the mechanism for turning square or angular stock into circular form. I attain this object by the mechanism illustrated in the accompanying drawings, wherein like letters of reference indicate similar parts in the several views, and in which—

Figure 1 is a perspective view of my improved wood-working machine, showing the parts of improvement arranged in connection therewith. Fig. 2 is a front elevation thereof. Fig. 3 is a rear elevation of the same. Fig. 4 is a side elevation of the boring side of the machine. Fig. 5 is a detail elevation of the adjustable table used in connection with the boring mechanism. Fig. 6 is a detail view in elevation and section of the rounder mechanism. Fig. 7 is an elevation of my improved form of feeding mechanism. Fig. 8 is a detail view of a portion of said mechanism. Fig. 9 is a cross-sectional view through the molder-frame to show the arrangement of the clamping-boxes.

A indicates the table of the machine, which is supported by a suitable frame-work, B, constructed with cross-beams, which are arranged in such a manner as to accommodate the reception of the mechanism to be mounted under the table of the machine. On two beams, B',

in the lower portion of the frame-work B, the main shaft S is mounted, which carries the band-wheel W at one end thereof, situated on the outer side of the beam B' at this point. On the opposite end of the said shaft S, and on the inner side of the beam B' adjacent thereto, a band-wheel, W', is mounted, and on the outer end of the said shaft at this point a face plate or disk, S', is mounted. Secured to one of the spokes of the band-wheel W, and also eccentrically mounted in connection with the face-plate S', are rods R, which at their lower ends are connected to the treadle T. To the rear upper portion of the frame-work and of the table A a goose-neck, G, is secured, which projects over the table, and has a band-wheel, W², which is mounted upon a stub-shaft secured to one side of the goose neck G, to the rear portion of the frame B. The forward portion of the goose-neck G is formed with two arms, g, having apertured collars formed at their outer ends, in which a vertical standard, G', is secured, on the lower end of which an adjustable saw-guide, G², is attached. This adjustable saw-guide G² consists, essentially, of an angle-plate, g', having a slotted vertically-apertured strip, g², secured on the face thereof and adjustable in connection with said angle-plate g' for slightly adjusting the position of the saw S², when necessary, with relation to the hole through which it passes in table A.

In the rear of the frame B, adjacent to the point of securement of the goose-neck G, a tightener is mounted, which is adapted to be shoved rearwardly from the frame, and when the band-saw S² is mounted on the band-wheels W and W² it is also passed around the said tightener, and through the medium of which the required tension is exerted thereupon. In the rear portion of the frame B a collar, C, is mounted adjacent to the side to which the goose-neck G is secured, the said collar C extending across the entire width of the machine. In each end of this collar or hollow shaft C short shafts c are inserted, which are adapted to receive handles c', and are secured in the collar C by means of set-screws c². The shaft C is constructed hollow, as just described, for the reception and adjustability in its ends of the short shafts c, to attain lightness of construction and at the same time strength and

durability. Upon the central portion of the said collar C a sprocket-wheel, C', is secured, over which a chain belt, C², is adapted to pass, and which engages with a sprocket-wheel, S³, mounted on the main shaft S, and through the medium of this construction this portion of the machine may be operated by hand-power.

Adjacent to the boring side of the machine an adjustable boring-table, D, is mounted, having a standard secured thereto, said standard D' being provided with suitable slotted collars secured to the same, which slide upon a cylindrical standard, D³, of the frame D. An eyebolt, d³, is mounted on the standard D³, and a clamping-nut, D², adapted to engage with the depending portion of the said table, engages with the eyebolt and clamps the standard upon which the bracket is secured, and holds the said table in a raised or lowered position thereby. The said table is provided with a hinged bracket, d, which is adapted to be folded to one side and under the said table D, and the table of itself is provided with hinges and formed with a drop-leaf, whereby the several parts forming the said table are constructed to fold up, and thereby take up no space when not required for use. In this instance, also, the rounder F is of a different form of construction, in that the countersunk disk F', in addition to the series of varying-sized holes therein, is provided with a series of notches, f', which are adapted to align with the like notch or groove f², formed in the main body of the rounder F. These notches lie in a radial line drawn through the centers of the head and the apertures in the disk, and are adapted to register or coincide with the notch f² on the head, to indicate when an aperture in the disk F' properly aligns with the central opening of the head and the passage of the shaft. The knife F² is mounted in a similar manner, as set forth in my application aforesaid, with the exception that a slot is cut in the body of the head F, in which a rib, f³, projects, said rib being engaged by a screw and clamping-nut from the reverse side of the head. By this means the said knife F² is adapted to be adjusted to or from the central portion of the head F, so as to be regulated and engaged in relation to the varying-sized apertures f formed in the disk F'. The operation and function of the said varying-sized apertures in the disk F' being fully set forth and described in my application hereinbefore set forth, it is unnecessary to enter into further details upon the same herein.

The vertically-arranged molder in this instance is constructed in the same manner as in my application aforesaid, having a frame, M, secured, to which are boxes M', which are vertically adjustable on cylindrical standards or vertically-arranged shafts M². The frame M can be readily adjusted in a vertical plane upon the said standards and retained in its adjusted position by tightening the connection of the boxes to the frame, which will produce a clamping effect in connection with the ver-

tical cylindrical standards M². The arrangement and construction of the boxes to effect this purpose are shown more clearly in the sectional view, Fig. 9. As will be seen, the tubular boxes M' are made sectional and the sections connected by screws, so that by turning the screws the sections of the boxes may be tightened or loosened, as desired. The tightening of the boxes clamps the standards M², while the loosening thereof allows the sliding frame to be moved to any point desired. This arrangement also allows wear to be taken up by adjusting the boxes. Under certain conditions I may provide a supplemental set-screw, as shown, on one of the boxes to engage one of the standards and hold the sliding frame at any desired position. The cutter-head, mounted in connection with the molder-frame, may be also constructed adjustable in any suitable manner, so as to project the same through the aperture a, formed with the table A. On the other side of the band-saw S² and its connections a jig-saw, J, is mounted, and is operated by the mechanism arranged under the frame in the ordinary manner. Adjacent to the position of the jig-saw J an elongated narrow aperture, a', is formed in the table A, through which the circular saw S⁴ is adapted to play, as will be readily understood. Adjacent to this aperture a' suitable clamp-guides, A², may be secured, as shown in Fig. 1, and in connection with the circular saw a feed mechanism, N, as shown in Figs. 4 and 7, is mounted, which will be presently described.

The circular saw S⁴ is mounted in connection with a swinging frame, I, and the shaft upon which the said saw is mounted is provided with a sprocket-wheel encircled by a chain belt, which is run from the main shaft. The swinging frame I is of such length as to clear the top beam, B², of the frame B, and when the saw is thrown to one side it rests against one of the vertical standards thereof through the medium of its bearing, as will be readily understood, and for the purpose of providing a steady rest for the saw. The bearing of the said saw S⁴ passes above the beam B², and is not fixedly retained in connection therewith, as in my previous application. A draw-rod, I', is connected to the frame I, by the medium of which the said circular saw may be adjusted from one side to the other, as may be desired, and as will be readily understood. When, however, the said saw is adjusted in any desired position, and it is necessary to fix the same in said position, a clamping hook-bolt, i, is provided, which engages with the said rod in connection with one of the transverse beams of frame-work of the machine, the said hook-bolt being engaged by a winged clamping-nut, by which the draw-rod I' may be clamped, as will be readily understood.

On the outer side of the beam B², and in position with respect to the rounder, is a peripherally-slotted disk, B⁴, which has slots cut therein equal in width to the diameter of the

openings in the disk of the rounder. When the said disk of the rounder is turned to a hole therein of the proper diameter, and as required, the disk B^4 is also turned so as to bring the slot therein corresponding with the hole turned in position in the disk of the rounder in direct alignment therewith. When the stop is placed in position with respect to the rounder, it rests in the slot of the disk B^4 , and is retained thereby, which disk B^4 acts as a support therefor while being operated upon, and until finished.

Upon one side of the machine, adjacent to the circular-saw slot in the top of the table A, I mount a feed, N. This feed consists, essentially, of the frame or casting N' , consisting of a horizontal portion, N^2 , which projects over the table A, and a vertical portion, N^3 , situated parallel with one side of the machine. This feed is adjustable longitudinally by means of a link-connection, N^4 —one portion, n^2 , of which is screw-threaded and in connection with the horizontal portion N^2 of the feed entire, and the other portion, n^3 , of the link N^4 is rigidly secured to the top of the table A, and when adjusted will be drawn toward said point of securement, as will be understood—and vertically through the medium of a screw-rod, N^5 , having an operating-handle, n , which passes through ears n' , formed integrally with the vertical portion N^3 of the frame N' . In the lower depending portion of the vertical part N^3 of the frame a short shaft, s' , is mounted, and upon the end of this shaft a belt-wheel, W^3 , is secured, which is adapted to be engaged by a suitable cross-belt, w^3 , passing over the mechanism hereinbefore set forth. In the rear of the wheel W^3 a small gear-wheel, G^2 , is mounted, which meshes with a larger gear-wheel, G^3 , mounted upon the outer end of a shaft having bearing in the outer portion of the frame at one end, and in the inner end of the frame N^2 , which is in position over the table A. The inner end of the shaft s^2 is provided with a cylinder, s^3 , upon which a serrated feeding-disk, s^4 , is mounted, which engages with the stock being operated upon in the line of the saw cut or kerf, so that the stock operated upon will not be injured or defaced by the engagement therewith of the serrated disk s^4 . The frame N' , at that point where the shaft s^2 is mounted and passes therethrough, is curved and formed with a downward projection from an elbow formed at this point. By this means the mechanism is accommodated without any interference of the parts with each other. Inside of the gear-wheel G^2 , and pivotally swung on the shaft s' , is a curved handle, P, which has a belt-pulley, p , secured to its lower end, which engages with the belt passing over the large belt-wheel W^3 , and is adapted to tighten said belt, as will be readily understood. The upper portion of the handle P is provided with a pin, p' , which engages with a curved ratchet-bar, P' , secured at one end to the frame N' , and by means of which the belt-tightener is held in an adjusted position.

This improved form of feeder is adapted to be used in connection with any style of wood-working machine, and is supplemented by a corrugated roller, as will be readily understood, having the same function as the said serrated disk s^4 . The feeder is adjustable rearwardly, as hereinbefore set forth, or vertically to and from the table A, to accommodate various thicknesses of timber or stock, as will be very readily understood.

Having thus described my invention, I claim—

1. In a wood-working machine, the combination of the hollow sleeve or shaft C, extending transversely across the machine, with the short shafts c , adjustably mounted in connection with said sleeve or shaft C, the handles c' , adjustably connected to the short shafts c , and the sprocket-wheel C' on the sleeve or shaft C, and chain belt C^2 , adapted to be connected to the sprocket-wheel C, and also to the main shaft of the machine, whereby hand or foot power may be employed for operating the parts, as may be desired, substantially as described.

2. In a wood-working machine, the standards M^2 , the molder-frame M, and the sectional boxes M' , encircling the standards and having the sections connected by screws, whereby, when the screws are tightened, the boxes are brought closer together to produce a clamping effect and clamp the boxes at any point of the standards, as set forth.

3. The combination, with the main shaft S, of the swinging frame I, the circular saw S^4 , mounted in the upper end of said frame above the beam B, as herein set forth, the draw-rod I', connected to the upper part of the frame I, and the clamping device i , whereby, when the saw is not in use and in a position of rest, it is thrown back and supported on the top portion of the beam B^2 , and when drawn into position for use is permanently held by the device i clamping the draw-rod I', substantially as described.

4. The combination of the hinged table D, the folding bracket d , said parts being mounted in connection with an independent standard, D', the standard D^3 , the bolt d^3 , passing through the standard D' and encircling the standard D^3 , and the clamping-nut D^2 , engaging the bolt d^3 , substantially as described.

5. In combination with the rounder F, having the apertured disk F', the disk B^4 , entirely separate from the rounder, and attached to the frame on the side opposite the rounder and adjusted to correspond with the rounder, as set forth.

6. The combination, with the beam B^2 , of the disk F, having the apertured disk F', held within a circular recess formed in said disk F, and the disk B^4 , mounted in the beam B^2 , on the side opposite to the disk F, and having peripheral slots constructed therein of varying sizes, which, when adjusted, are in alignment with the varying-sized apertures in the disk F, substantially as described.

7. In the feed herein described, the combination of the vertical frame N^1 , having the horizontal extension N^2 , the screw-threaded standard N^3 , by means of which the frame entire is vertically adjustable, and the adjustable link N^4 , connected at one end to the horizontal extension N^2 and at the other end to the top of the table A, substantially as described.
- 10 8. In combination with the shaft S^1 , the handle or lever P, pivoted at an intermediate point on the said shaft, a pulley, p , at one end of the handle or lever, the stud or pin p' , carried by the other end of the lever, and the serrated retaining-sector P' , pivoted upon the frame of the machine and engaging the pin p' of the handle or lever, as set forth.
- 15 9. In combination with the main shaft S, the swinging arm I, sleeved thereon, and adapted to swing from one side to the other, and carrying the saw S^4 , the draw-rod I' , connected to the frame I, to swing the frame from

side to side, and the hook-bolt i , encircling the draw-rod and clamping the same, as set forth.

10. In combination with the horizontal shaft S^2 , receiving motion from the main shaft and carrying the feeding-disk S^4 , the supporting-frame for the shaft comprising the vertical portion N^3 and the horizontal portion N^2 , the former being vertically adjustable and the latter being also adjustable, so as to raise or lower the feeding-disk, as set forth.

11. In combination with the standard D^3 , the standard D^4 , the hinged table carried by the latter, and the clamping-bolt d^3 , encircling the standard D^3 and locked to the standard D^4 by the nut D^2 , as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

EDGAR WYVILL SNEDEKER.

Witnesses:

F. WILTON HILL,
C. E. WESTERVELT.