(No Model.) 6 Sheets—Sheet 1.

E. J. MULLER.

GANG EDGER.

No. 406,458. Patented July 9, 1889.

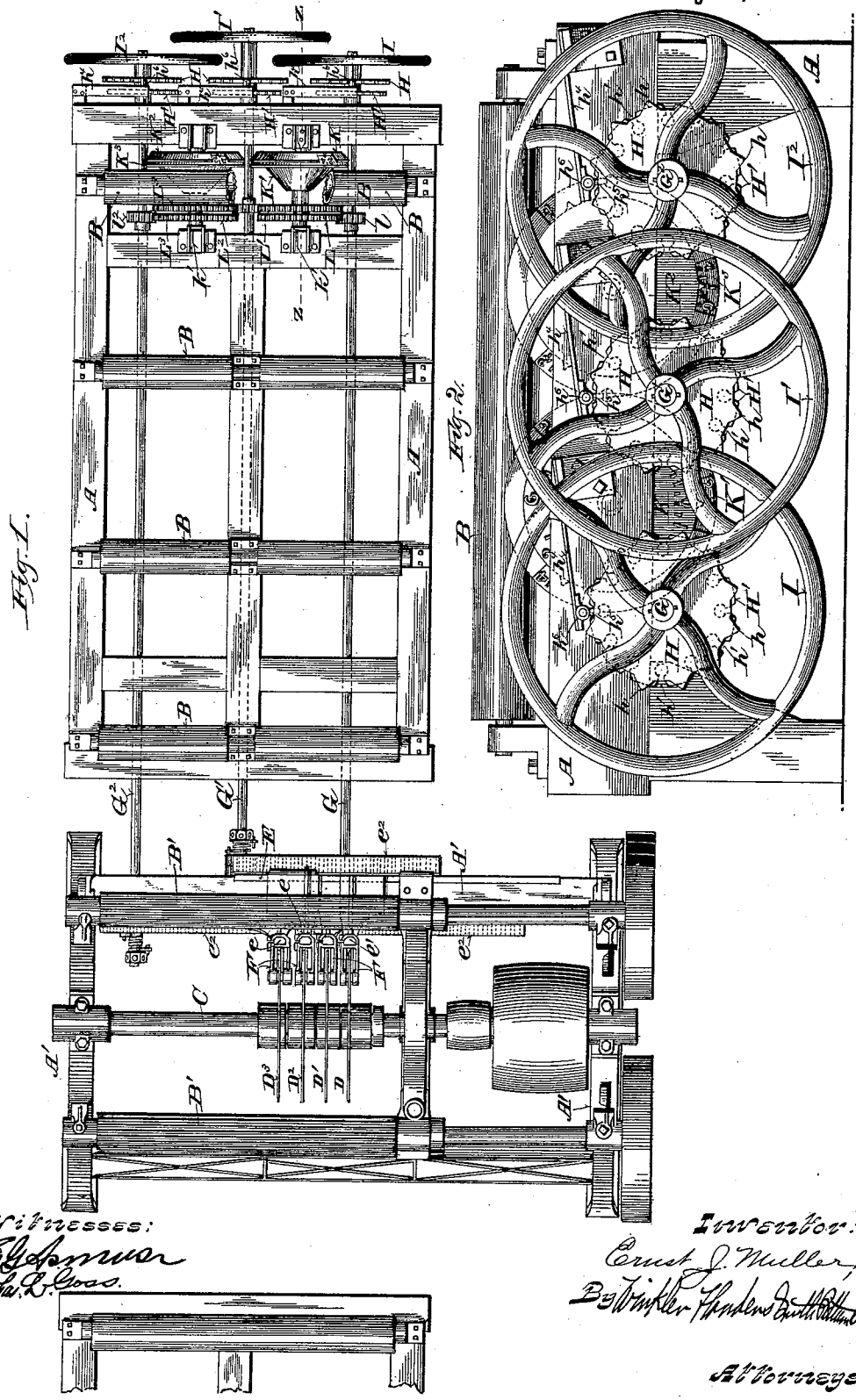


Fig. 1.

Fig. 2.

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Chas. D. Goss.

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N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.)

6 Sheets—Sheet 2.

E. J. MULLER.

GANG EDGER.

No. 406,458. Patented July 9, 1889.

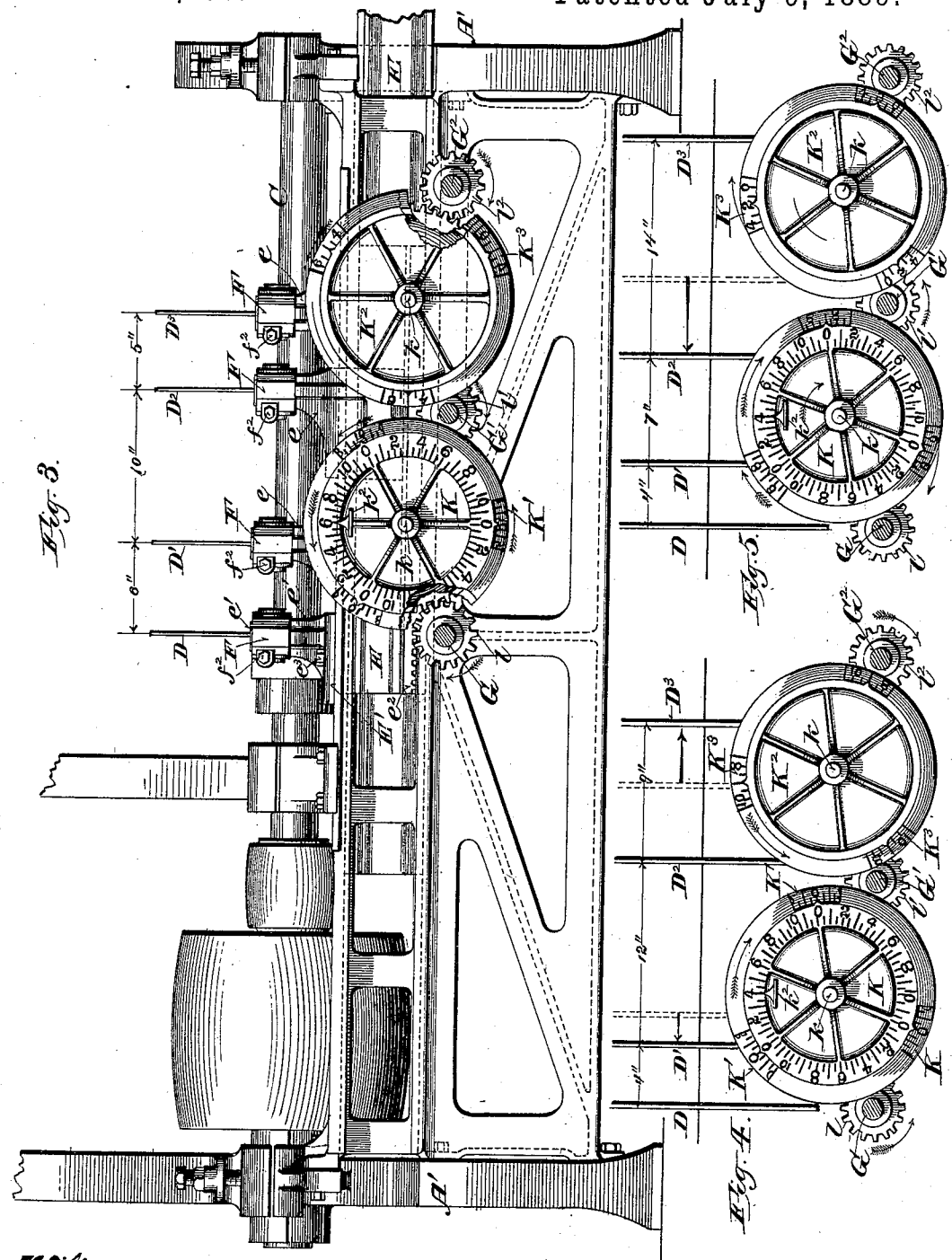


Fig. 3.

Fig. 5.

Fig. 4.

Witnesses:
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N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 6 Sheets—Sheet 3.

E. J. MULLER.

GANG EDGER.

No. 406,458. Patented July 9, 1889.

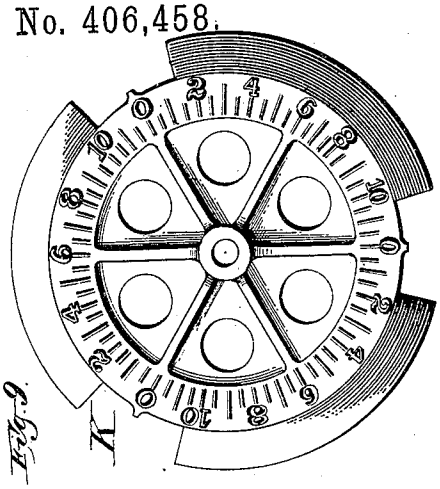


Fig. 9.

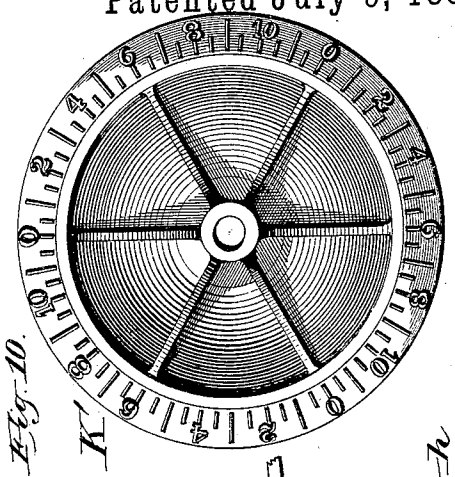


Fig. 10.

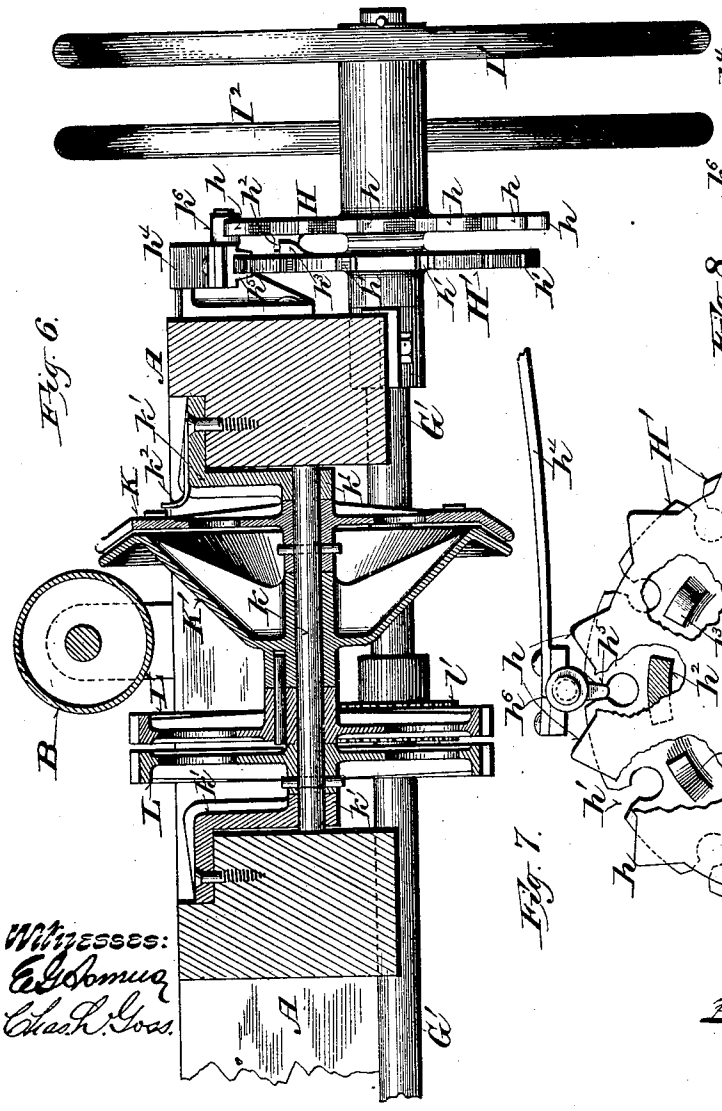


Fig. 6.

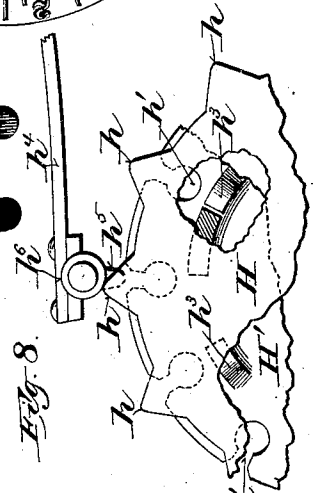


Fig. 8.

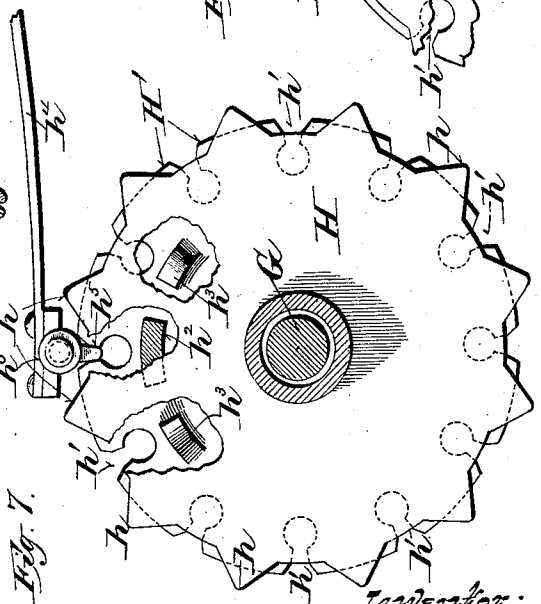


Fig. 7.

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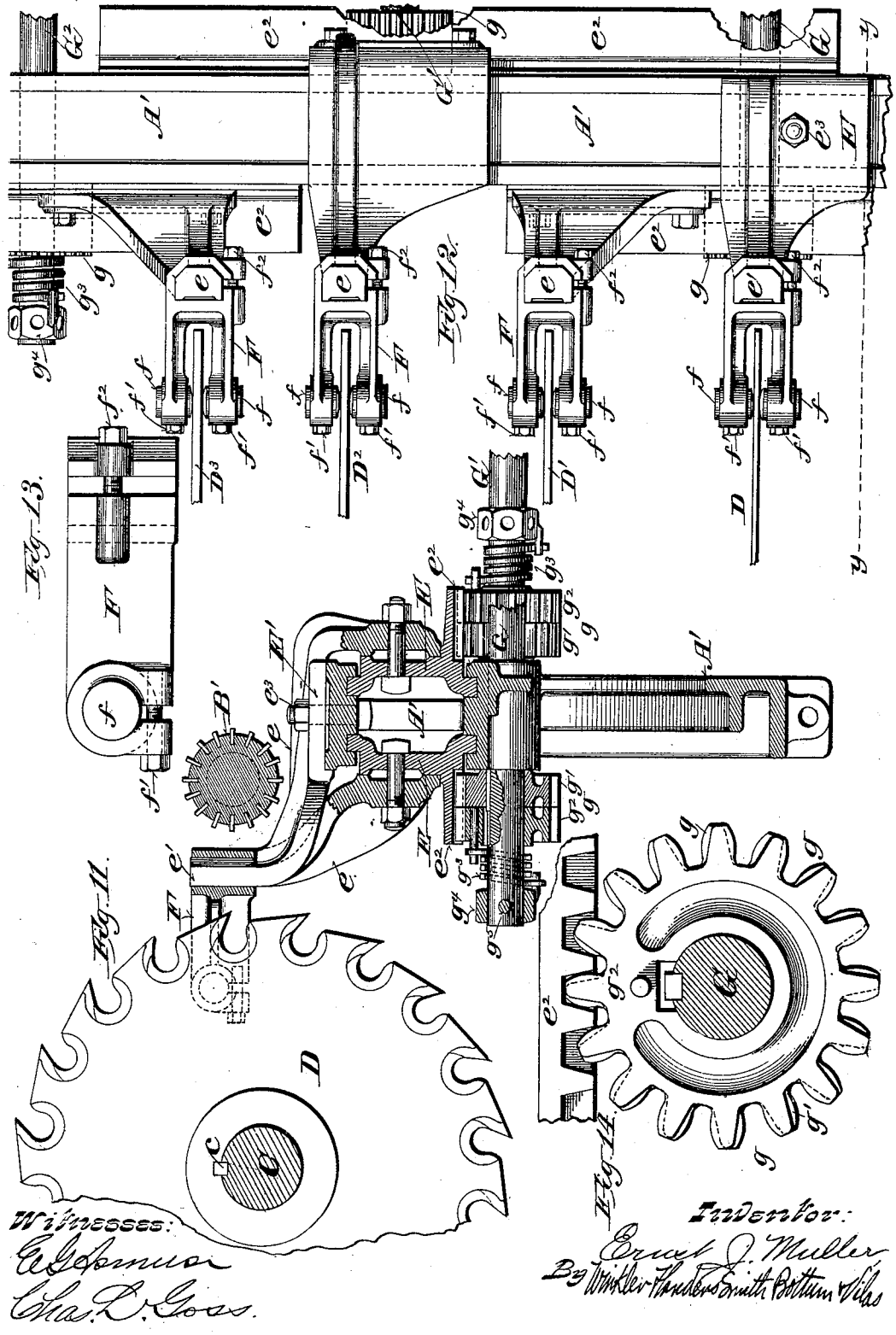
N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 6 Sheets—Sheet 4.

E. J. MULLER.

GANG EDGER.

No. 406,458. Patented July 9, 1889.



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(No Model.) 6 Sheets—Sheet 5.

E. J. MULLER.

GANG EDGER.

No. 406,458. Patented July 9, 1889.

Fig. 18.

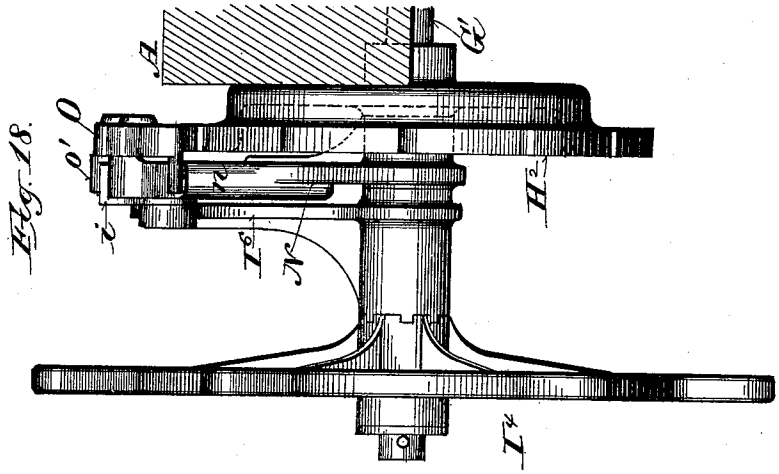


Fig. 15.

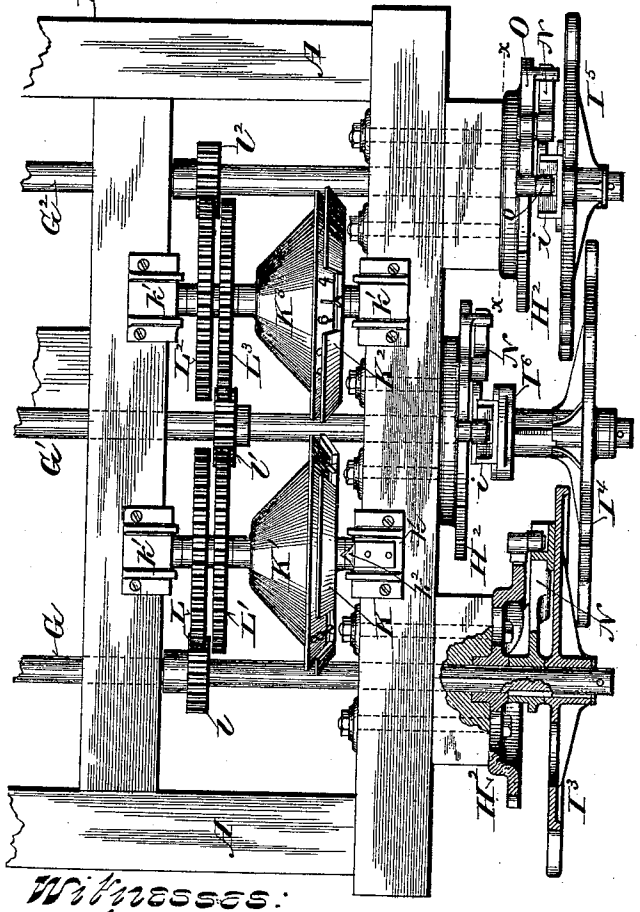


Fig. 17.

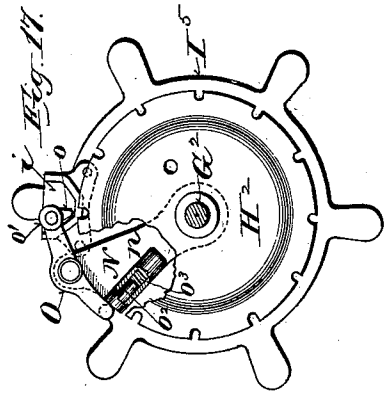
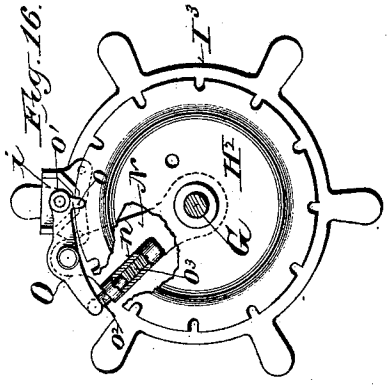


Fig. 16.



Witnesses:
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(No Model.) 6 Sheets—Sheet 6.

E. J. MULLER.

GANG EDGER.

No. 406,458. Patented July 9, 1889.

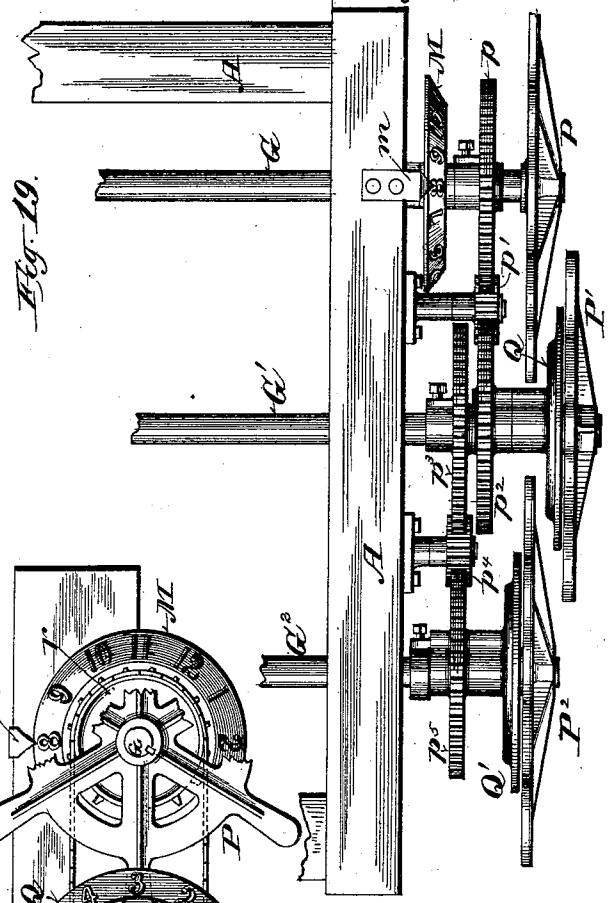


Fig. 19.

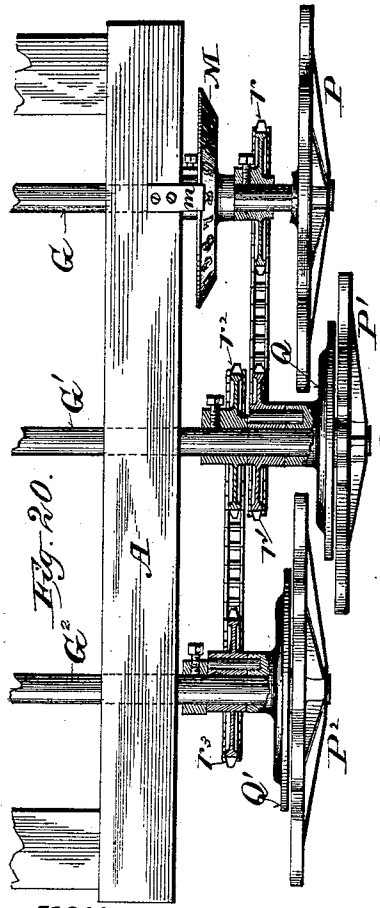


Fig. 20.

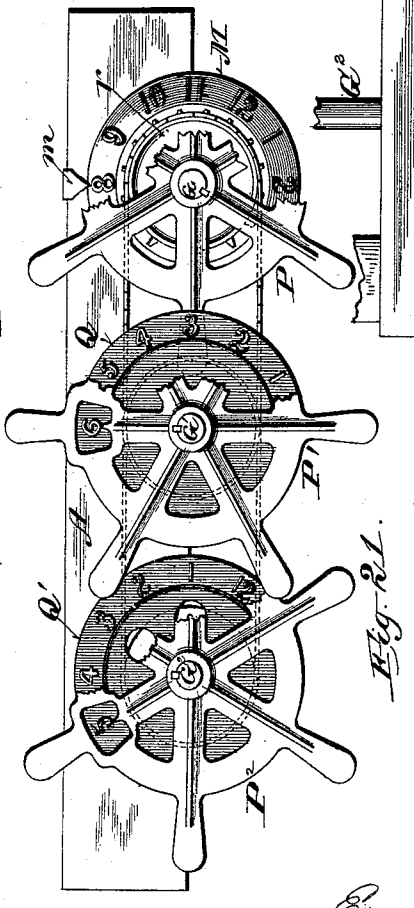


Fig. 21.

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UNITED STATES PATENT OFFICE.

ERNST J. MULLER, OF MILWAUKEE, WISCONSIN.

GANG-EDGER.

SPECIFICATION forming part of Letters Patent No. 406,458, dated July 9, 1889.

Application filed November 17, 1888. Serial No. 291,144. (No model.)

To all whom it may concern:

Be it known that I, ERNST J. MULLER, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Gang-Edgers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The objects of my invention are to facilitate setting the saws at the desired intervals from each other, to secure the same in place when adjusted, &c.

It consists, essentially, of a register connected with and operated by the saw-shifting mechanism, so as to indicate the position of each saw with reference to the other saw or saws, of a latch or locking device so connected with the saw-shifting mechanism as to be unlocked by the initial movement of the saw-shifting mechanism by the operator, but not by any force acting upon the saws or their connections, and of certain other peculiarities of construction and arrangement hereinafter specifically set forth, and pointed out in the claims.

In the accompanying drawings like letters designate the same parts in the several figures.

Figure 1 is a plan view of a machine embodying my improvements. Fig. 2 is a front elevation, on an enlarged scale, of the machine without the saws and saw-frame. Fig. 3 is a like elevation of the saw-frame, saws, and registers, (the locking devices, hand-wheels, and roller-frame being removed.) Figs. 4 and 5 are details illustrating the operation of the registers. Fig. 6 is a longitudinal vertical section on the line *z z*, Fig. 1, of one of the registering devices. Figs. 7 and 8 are detail views of the locking device, the former showing it locked, the latter unlocked. Figs. 9 and 10 are detail views of the two register-dials. Fig. 11 is a vertical section on the line *y y*, Fig. 12, of a part of the saw-shifting mechanism and its connections. Fig. 12 is a plan view of a portion of the saw-frame with the saw-shifting guides. Fig. 13 is a detail view of one of the saw-shifting guides. Fig. 14 is a detail, on an enlarged scale, of one of the saw-shifting racks and pinions. Figs. 15, 16, 17, and 18 are views of a modified form of the locking device, Fig. 15 being a plan view of the same in connection with the hand-wheels and registers, Figs. 16 and 17, sections on the line *x x*, Fig. 15, showing the reverse or rear side of the locking device, locked and unlocked, and Fig. 18 a side elevation, on an enlarged scale, of the middle locking device and its connections; and Figs. 19, 20, and 21 show modifications of the registering devices, Fig. 19 being a plan view, Fig. 20 a like view of a modification of the mechanism connecting the registers with the shifting mechanism, and Fig. 21 a front elevation.

In the operation of machines of this class the operator stands at a considerable distance from the saws. It is therefore desirable to have the registering device which indicates the positions of the saws within easy view, and in order to produce accurate work, prevent waste, and facilitate the shifting of the saws the saw-shifting mechanism should be constructed to operate without play or lost motion, and capable of operation with the fewest and simplest possible movements on the part of the operator. The saws should also be securely held in place when set as desired.

Referring to Figs. 1, 2, and 3 of the drawings, A represents the table, which, for the sake of lightness, is preferably made of wood. It is provided, in the usual manner, with transverse rollers B B, upon which the stuff to be sawed is supported and fed to the saw. It is also provided at one or both sides, in the usual manner, with longitudinal guides (not shown) against which one edge of stuff previously edged is held in feeding the same to the saws.

A′ represents the saw-frame, which is provided with bearings for the saw-arbor C and the feed-rollers B′ B′ on opposite sides of and parallel with said saw-arbor.

D D′ D^2 D^3 are a number of saws secured in or to sleeves or collars, which are mounted upon said arbor C so as to be freely movable lengthwise thereof, but held from turning thereon by a spline or feather *c*, as shown in Fig. 11.

E E E′ are slides supported and adapted to move on ways provided therefor on the saw-frame A′, parallel with the arbor C.

F F are bifurcated guides provided at the extremities of their arms with guide-pins *f f*, adjustably held in contractible eyes by means of bolts *f′*, as shown in Fig. 13. These guides are mounted upon arms *e e e′*, which are attached to and project upwardly and rearwardly from said slides, as shown in Figs. 1, 3, 11, and 12, and the guide-pins *f f* of each guide bear lightly against the opposite faces of one of the saws D D′, &c., near its periphery, and thereby each saw is caused to move lengthwise of its arbor C with the slide to which the guide is attached.

The several guides F F are formed with vertical contractible sockets for the reception of the squared extremities of the arms *e e′*, to which they are rigidly secured by the bolts f^2 f^2. The slide E′, with which the first saw D is connected, is permanently adjusted, and the saw is held at the desired point on its arbor C by means of the bolt e^3.

The several slides E E are provided with racks e^2, set parallel with the ways on which said slides move.

G G′ G^2 are shafts extending lengthwise of the table A, from the front end thereof to the saw-frame A′, and having suitable bearings therein. They are provided at their rear ends with pinions *g g*, which engage with the racks e^2 e^2 on slides E E. The pinions *g g* are each composed of two sections *g′* and g^2, one being keyed fast to the shaft while the other is capable of turning thereon. The teeth of one section have working-faces on one side and are cut away on the opposite side, and the teeth of the other section are similarly formed but reversed, so that the working-faces only of said sections shall engage said rack. To a pin or projection on the side of the loose section g^2 of each of said pinions is attached one end of a spiral spring g^3, which is coiled around said shaft and is attached at the other end to a similar pin or projection on a polygonal collar g^4, adjustably fastened on said shaft by means of a pin g^5, as shown in Fig. 11. By this means the tension of the springs g^3 g^3 may be adjusted, as required, to take up and prevent all play between the teeth of the racks and pinions.

Upon the front ends of the shafts G G′, &c., at the front end of table A, are loosely mounted the hand-wheels I I′ I^2, by means of which the saw-shifting mechanism is operated and the locking devices, hereinafter described, are unlocked.

Each of the shafts G G′, &c., is provided with two disks H H′, the former rigidly attached to the hub of the adjacent hand-wheel, so as to be turned therewith, and the latter keyed or otherwise fastened just behind it to said shaft. The disk H is provided on its periphery at intervals with teeth *h*, having inclined or beveled edges, as shown in Figs. 2, 7, and 8, and the disk H′ is formed at corresponding intervals in its periphery with notches *h′*. The disk H′ is provided on its front face, as shown in Figs. 6, 7, and 8, with two lugs h^3 h^3, a short distance apart, and between them and equidistant from the center of said disks the disk H is provided with a lug h^2, which has a limited movement between said lugs h^3 h^3, sufficient to allow the teeth *h* of the disk H to be moved in either direction opposite the notches *h′* in the disk H′, as seen in Fig. 8. When the lug h^2, moving in either direction, engages one of the lugs h^3, it causes the disk H′ and the shaft to which it is keyed to turn with it.

For each pair of disks H H′, I provide a spring-arm h^4, attached at one end to the table A and provided at its opposite free end with a detent h^5, adapted to engage the notches in the disk H′, and on one side with a friction-roller h^6, adapted to be engaged by the teeth *h* of the disk H, so as to lift the detent h^5 out of the notches in disk H′, as shown in Fig. 8, and to carry said detent over said notches when the hand-wheel is turned in either direction.

At the front end of the machine two short shafts *k* are supported in boxes *k′ k′*, midway between and parallel with the shafts G G′ G^2, as shown in Figs. 1, 3, 6, and 15. Upon each of these short shafts are mounted a pair of dials and a pair of similar gears, one dial and one gear being fastened to the shaft and the other dial and gear being connected and capable of turning together thereon, as shown in Fig. 6. Each of the rear dials is formed about its periphery with a rearwardly-inclined graduated rim, preferably divided into three parts of twelve divisions each, as shown in Fig. 10, and each front dial is provided with a corresponding rim, which is divided into three equal parts by indentations, through which portions of the scales on the rear dial are exposed, and at the center of which are formed indexes to mark the divisions to be read on said scales, as shown in Figs. 3 and 8. The inclination of the graduated rims of the dials brings the upper part of the scales into better view of the operator, and dividing the rear dials into three separate scales and making three openings or indentations in the rims of the front dials insures one at least of said scales and the indentation and index by which said scale is observed being on the upper side of the dials, within easy view of the operator.

Upon the shaft *k*, between the shafts G and G′, are mounted dials K and K′ and the gears L L′, the dial K and gear L being placed near the ends of said shaft and secured thereon, so as to be turned together, and the dial K′ and gear L′ being loosely mounted on said shaft between the dial K and gear L, and connected so as to be turned together, but independently of the rotation of the other dial and gear. The dial K is provided on its front face just within its inclined rim with a circular scale similar to that on the rear dial K′, divided

into three equal parts of twelve divisions each, reading from left to right, and an index k^2, attached to the table A, indicates on said dial the distance of the first movable saw D′ from the fixed saw D. The scales on the rear dial K′ read from left to right, as seen in Fig. 10. Upon the other short shaft between the shafts G′ and G², connected with the second and third movable saws D² and D³, are mounted, in the manner just described, similar dials K² and K³ and the gears L² and L³; but the dial K² has no scale—simply the indentations and indexes for reading the scales on the rear dial K³, which read from right to left, as shown in Figs. 3, 4, and 5.

The shafts, G, G′, and G² are provided, respectively, with pinions l, l', and l^2, which work with the gears L, L′, L², and L³, the pinion l working with the gear L, the pinion l', on opposite sides, with the gears L′ and L³, and the pinion l^2 with the gear L², as shown in Figs. 1 and 15. In like manner a machine may be constructed for any desired number of movable saws, with shifting mechanism, locking devices, and registers like those herein described. The details of construction and arrangement of the several parts of the machine may be modified in various ways without departing from the principle of my invention.

Referring to Figs. 15, 16, 17, and 18, illustrating a modified form of the locking device, in which I³ I⁴ I⁵ represent hand-wheels provided at intervals about their peripheries with handles to facilitate their operation and mounted loosely upon the front ends of the shafts G G′, &c., H² H² are disks having notches at the desired intervals in their peripheries and rigidly attached to the front end of the table A, concentric with the shafts G G′, &c., which pass through them. Between the disks H² and hand-wheels I³, &c., are secured rigidly on said shaft arms N, to the outer ends of which are pivoted levers O O. These levers O O are provided at one end with laterally-projecting friction-rollers O′ O′, and with detents o o, adapted to engage with the notches in disks H², and at the opposite ends they are connected with stems o^2 o^2, which are inserted and work freely in radial sockets n n, formed in the arms N N. Springs o^3 o^3, inserted in said sockets and bearing against the inner ends of the stems o^2 o^2, hold the detents o o normally in engagement with the notched disks H², as shown in Fig. 16. To the rear sides of the hand-wheels I³ and I⁵ and to an arm I⁶, rigidly connected with the hand-wheel I⁴, are attached U-shaped flanges i i, in which are inserted the friction-rollers o' o' of levers O O. The initial movement of either hand-wheel in either direction carries one of the inclined sides of its flange i against the friction-roller and forces the same outwardly, and moves and holds the detent o out of engagement with the notched disk H² until the hand-wheel is again released and allowed to recede slightly, when the spring o^3 throws said detent into engagement with said notched disk. The friction-roller o', engaging with either side of the flange i outside of its inclines, causes the arm N and the shaft to which it is fixed to be turned with the hand-wheel. This construction of the locking mechanism admits of the notches in the disk H² being close together, so as to stop the saws at quite short intervals.

Referring to Figs. 19, 20, and 21, illustrating modifications of the registering devices and of the mechanism connecting them with the several saw-shifting shafts, which are in this case reversed in position, P P′ P² are hand-wheels rigidly secured to the front ends of said shafts.

M is a dial having a beveled rim on which a scale is marked reading from left to right, and an index m, fixed to the table A, indicates on said scale M the position of the first movable saw with reference to the fixed saw.

Q Q′ are dials loosely mounted, respectively, on the shafts G′ and G², behind and close to the hand-wheels P′ and P², and provided on their front faces with circular scales reading from right to left, which are covered by the rims to said hand-wheels. A single division or number on each of said scales Q Q′ is exposed to view through openings made for the purpose in the rims of said hand-wheels P′ P², and an index or point is formed in each of said openings to indicate the exact division on the scale to be read. Upon the shaft G is fixed a gear p, and upon the shaft G′ is mounted similar gears p^2 p^3, the gear p^2 being connected with the dial Q and revoluble therewith upon said shaft, and the gear p^3 being fixed on said shaft, so as to be turned therewith. Upon the shaft G² is mounted a like gear p^5, which is connected and revoluble with the dial Q′ thereon. The gears p and p^2 mesh with the opposite sides of an idle-pinion p', mounted on a stud projecting from the table A, and the gears p^3 and p^5 mesh with the opposite sides of a similar idle-pinion p^4.

In place of the train of gears p p', &c., I may employ chain-wheels r r' r^2 r^3, as shown in Figs. 20 and 21, the wheels r and r^2 being fixed, respectively, upon the shafts G and G′, and the wheels r' and r^3 being mounted loosely upon the shafts G′ and G², and connected with the dials Q and Q′, so as to turn therewith upon said shafts. The wheel r is connected by a chain belt with the wheel r', and the wheel r^2 is connected in like manner with the wheel r^3.

My improved machine operates as follows: Referring to Figs. 1 to 14, inclusive, the several saws are set, for instance, at the intervals indicated in Fig. 3 by turning the hand-wheels in the proper direction—to the right when the saws are to be moved to the right, or to the left when the saws are to be moved to the left. The initial movement of the hand-wheel I carries one of the teeth h of disk H into engagement with the roller h^6,

and thereby lifts the detent h^5 out of engagement with the notched disk H′. The lug h^3 then engages with one of the lugs h^3 and causes the disk H′ and the shaft G to rotate with said hand-wheel. The pinion l, meshing with the gear L, connected with the dial K, turns the latter until the fixed index k^2 points to the figure 6 thereon, indicating that the saw D′ is six inches from the saw D. The hand-wheel I is then released, and the spring-arm h^4 forces the detent h^5 into engagement with the disk H′ and thereby locks the saw D′ in position. The next saw D^2 is then set, for instance, ten inches from saw D′ by turning the hand-wheel I′ in like manner, and the pinion l' on shaft G′, meshing with the gear L′, connected with the dial K′, turns the latter till the divisions marked 10 thereon are disclosed through the openings in the rim of dial K. The hand-wheel I′ is then released and the saw is held in place by a locking device like that described. Finally, the last saw D^3 is set, say, five inches from the saw D^2 in the same manner by means of the hand-wheel I^2. The pinion l^2 on shaft G^2, meshing with the gear L^2, connected with the dial K^2, turns the latter till the openings in its rim are over and disclose the divisions marked 5 on the dial K^3. The hand-wheel I^2 is then released and the saw D^3 is locked in position, as previously described.

It will be observed that the pinion l' of shaft G′, by which the saw D^2 is operated, meshes with both the gears L′ and L^3, connected, respectively, with the dials K′ and K^3, and that any change in the position of said saw is indicated on said dials, which show on dial K′ its distance from saw D′ and on dial K^3 its distance from saw D^3, as seen in Fig. 4.

When a saw is moved more than twelve inches from another next to it, as shown in Fig. 5, to the number indicating its position on the proper dial must be added 12. The interval between the saws will always show whether or not the 12 is to be added to the reading of the register.

The operation of the modifications illustrated in the remaining figures of the drawings will be readily understood from the description thereof hereinbefore contained, and from the foregoing explanation of the operation of the main construction.

I claim—

1. In a gang-edger, the combination, with two or more saws movable lengthwise of their arbor and shifting mechanism connected therewith, of two concentric revoluble dials, one having a scale and connected with the shifting mechanism of one saw, and the other having an index or opening adjacent to said scale and connected with the shifting mechanism of another saw, substantially as and for the purposes set forth.

2. In a gang-edger, the combination, with two or more saws movable upon their arbor lengthwise thereof, of a register composed of a circular revoluble scale, and a revoluble index concentric therewith, one connected with one movable saw and the other connected with another movable saw, substantially as and for the purposes set forth.

3. In a gang-edger, the combination of a fixed and two or more movable saws and shifting mechanism connected with said movable saws, a rotary scale connected with the shifting mechanism of the first movable saw, a fixed index adjacent to said scale, and a register composed of a rotary index concentric therewith, one connected with the shifting mechanism of the first movable saw and the other connected with the shifting mechanism of the second movable saw, substantially as and for the purposes set forth.

4. In a gang-edger, the combination, with a number of laterally-movable saws and shifting mechanism connected therewith, of two or more registers each composed of a circular rotary scale and a rotary index concentric therewith, one connected with the shifting mechanism of one saw and the other connected with the shifting mechanism of the next saw, substantially as and for the purposes set forth.

5. In a gang-edger, the combination of a number of laterally-movable saws each provided with shifting mechanism, registers each composed of a rotary scale and a rotary index, which are connected one with the shifting mechanism of one saw and by said mechanism with a part of the next register and the other connected with the shifting mechanism of another saw, substantially as and for the purposes set forth.

6. In a gang-edger, the combination, with three or more laterally-movable saws, of two or more registers each composed of a movable scale and a movable index, each intermediate saw being connected with one of the movable parts of each adjacent register, and the outer saws being connected with the remaining parts of said registers, substantially as and for the purposes set forth.

7. In a gang-edger, the combination, with one fixed and a number of laterally-movable saws and shifting mechanism connected with the movable saws, of a register connected with the first movable saw so as to indicate its distance from the fixed saw, and registers each composed of a movable scale and a movable index, the several scales and indexes being connected in series with the several movable saws, substantially as and for the purposes set forth.

8. In a gang-edger, the combination, with laterally-movable saws and shifting mechanism connected therewith, of a register composed of a circular rotary scale and a circular rotary index-plate provided with an opening through which a single division of said scale is disclosed, but otherwise covering the scale, said index and scale being separately connected with the movable saws, substantially as and for the purposes set forth.

9. In a gang-edger, the combination, with

laterally-movable saws and shifting mechanism connected therewith, of a register composed of a circular rotary scale divided into a number of similar parts having like subdivisions, and of a rotary index-dial having a number of openings through which like divisions on the different parts of said scale are disclosed, said index and said scale being separately connected with said movable saws, substantially as and for the purposes set forth.

10. In a gang-edger, the combination, with a number of laterally-movable saws and shifting mechanism connected therewith, of a register composed of a circular beveled rotary scale and a rotary index-dial concentric therewith, provided with an opening through which a single division of said scale is visible, said scale and index being separately connected with said saws, substantially as and for the purposes set forth.

11. In a gang-edger, the combination, with a number of laterally-movable saws and saw-shifting shafts severally connected with said saws and extending to the front of the machine, where they are provided with means for turning the same, of registers mounted upon shafts midway between and parallel with said saw-shifting shafts and each composed of a rotary scale and a concentric rotary index, gears connecting said scale with the saw-setting shaft on one side of said register, and gears connecting the index with the shaft on the opposite side of said register, substantially as and for the purposes set forth.

12. In a gang-edger, the combination, with a number of laterally-movable saws and shifting-shafts individually connected with the several saws and each provided with a pinion, of registers mounted upon shafts between and parallel with said shifting-shafts, and each composed of a rotary scale and a rotary index, a pair of gears mounted on each register-shaft, one connected and revoluble with said scale and meshing with the pinion of the shifting-shaft on one side and the other connected with the pinion of the shifting-shaft on the other side of said register, substantially as and for the purposes set forth.

13. In a gang-edger, the combination, with a fixed and a number of laterally-movable saws, of shifting-shafts severally connected with said movable saws and each provided with a pinion, registers each composed of rotary dials, one provided with a circular scale and the other with an index-opening, and a pair of gears connected with said dials and meshing one with the pinion of the shifting-shaft on one side and the other with the pinion of the shifting-shaft on the other side of said register, a circular scale formed on the index-dial of the first register, and a fixed index indicating on said scale the distance of the first movable saw from the fixed saw, substantially as and for the purposes set forth.

14. In a gang-edger, the combination, with a laterally-movable saw, of a rack connecting therewith, and a pinion meshing with said rack and composed of two sections, one fixed and the other loosely mounted upon the pinion-shaft, a polygonal collar having a number of transverse perforations and adjustably secured on said pinion-shaft by a pin passing through a perforation therein and one of the perforations in said collar, and a spring attached at one end to the loose section of said pinion and at the other end to said collar, substantially as and for the purposes set forth.

15. In a gang-edger, the combination, with a laterally-movable saw, of a rack in connection therewith, a pinion composed of a fixed and a loose section working with said rack, the teeth of one section being formed with working-faces on one side and cut away on the other side, and the teeth of the other section being similarly formed but reversed, and a spring connecting the loose section with the pinion-shaft, substantially as and for the purposes set forth.

16. In a gang-edger, the combination, with a laterally-movable saw, of shifting mechanism connected therewith and arranged to move the same lengthwise of its arbor, a locking device positively holding the saw in place when locked, and an operating device connected with said shifting mechanism and capable of a limited movement independently thereof, the initial movement of said operating device acting to unlock said locking device before it moves the saw-shifting mechanism, substantially as and for the purposes set forth.

17. In a gang-edger, the combination, with a laterally-movable saw, of shifting mechanism connected therewith and provided with a hand-wheel capable of a limited movement independently of the rest of said shifting mechanism, and a locking device connected therewith and arranged to be unlocked by the initial movement of said hand-wheel, substantially as and for the purposes set forth.

18. In a gang-edger, the combination of a laterally-movable saw, a rotary shifting-shaft connected therewith and provided with a hand-wheel capable of a limited movement upon said shaft, and a spring-latch acting normally to prevent the rotation of said shifting-shaft and adapted to be unlocked by the initial movement of said hand-wheel, substantially as and for the purposes set forth.

19. In a gang-edger, the combination of a laterally-movable saw, a rotary shifting-shaft connected therewith, a pair of disks, one notched and fixed upon said shaft, the other toothed and having a limited angular movement thereon, and a spring-latch adapted to engage with said notched disk and to be engaged and unlocked by the initial movement of said toothed disk, substantially as and for the purposes set forth.

20. In a gang-edger, the combination, with a number of laterally-movable saws severally provided with shifting mechanism, of a number of registers connected with each other

and composed each of a movable scale, and a movable index whereby the distance between the several saws is automatically indicated, substantially as and for the purposes set forth.

21. In a gang-edger, the combination, with a number of laterally-movable saws and rotary shifting-shafts connected with said saws, one to each saw, of a number of registers each composed of a circular rotary scale, and a rotary index geared with said shifting-shafts, and a single part of each register being geared with a single part of the next register, whereby the distance between the several movable saws is indicated upon said registers, substantially as and for the purposes set forth.

22. In a gang-edger, the combination, with a number of laterally-movable saws and shifting mechanism connected therewith, of a number of registers each composed of a scale and index and connected with each other and with said shifting mechanism so as to indicate the distance between the several saws, and automatic locking devices connected with said shifting mechanism and arranged to be unlocked by the initial movement of said shifting mechanism, substantially as and for the purposes set forth.

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

ERNST J. MULLER.

Witnesses:
CHAS. L. GOSS,
M. E. BENSON.