No. 837,444. PATENTED DEC. 4, 1906.

C. W. WILLETT.

GANG EDGER.

APPLICATION FILED JAN. 4, 1906.

4 SHEETS—SHEET 2.

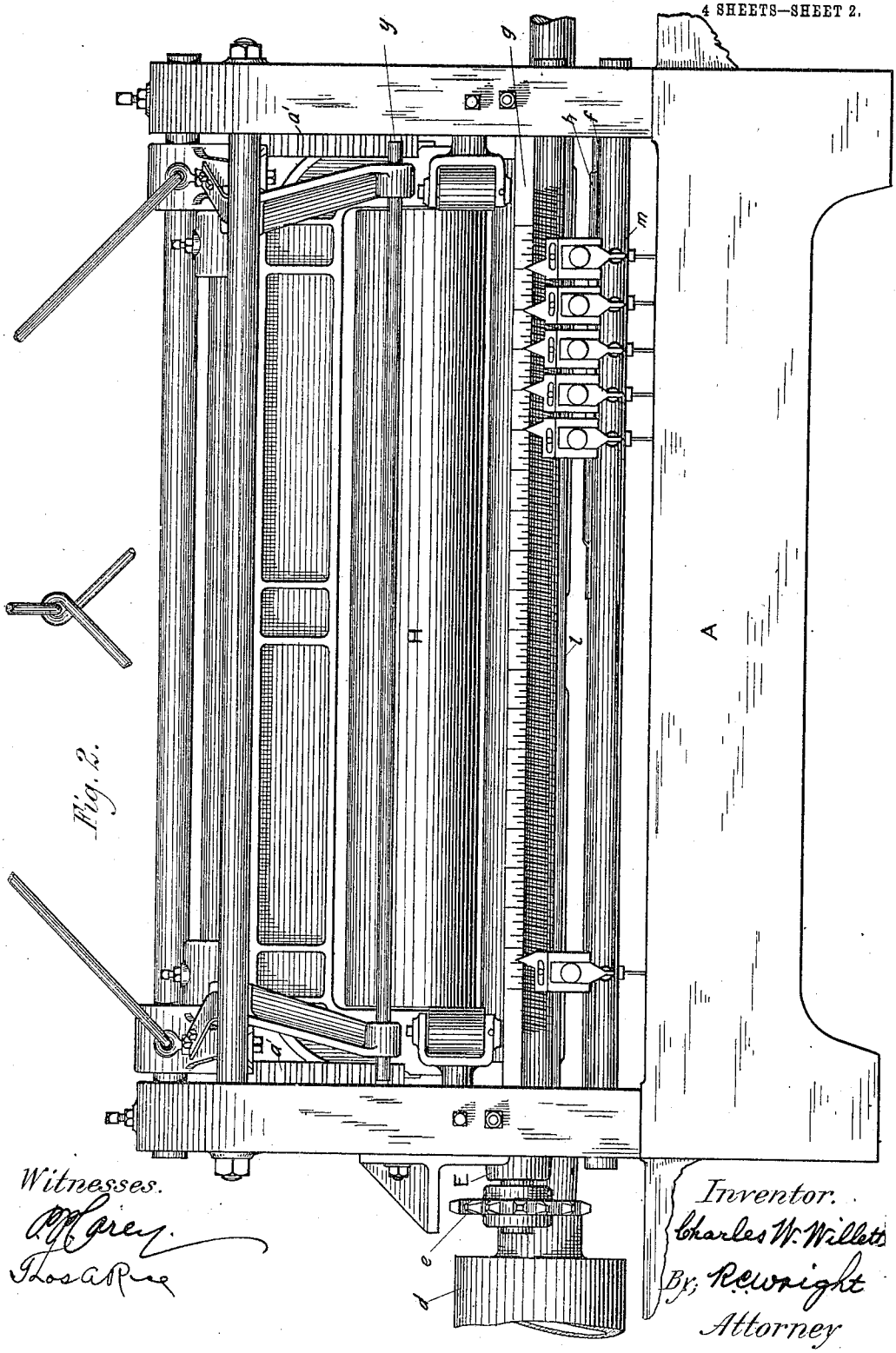



Fig. 2.

Witnesses.
A. J. Carey.
Thos. A. Rice

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THE NORRIS PETERS CO., WASHINGTON, D. C.

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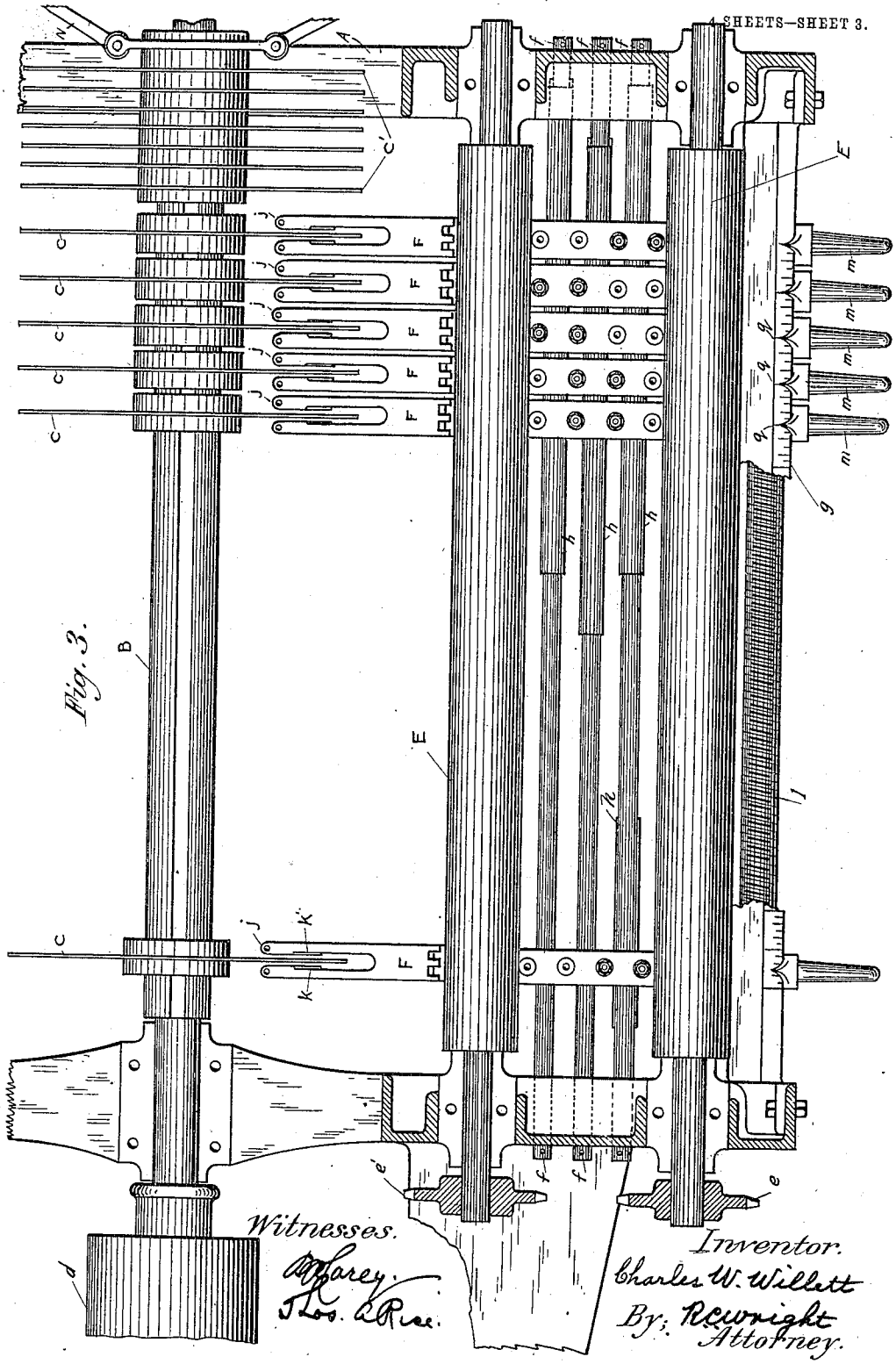



Fig. 3.

Witnesses.
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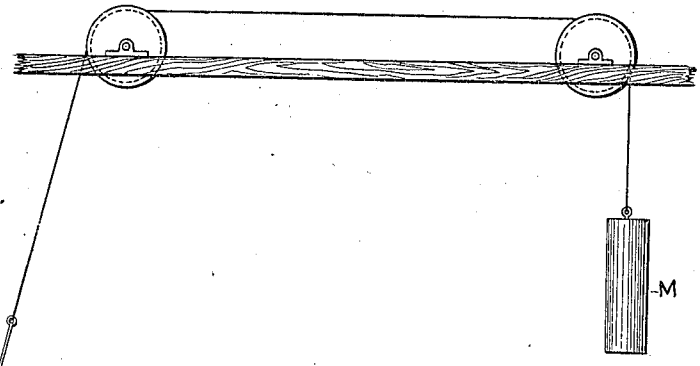
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4 SHEETS—SHEET 4.

Fig. 4.



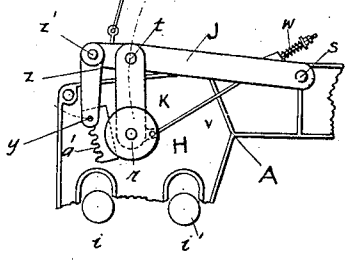




Fig. 5.

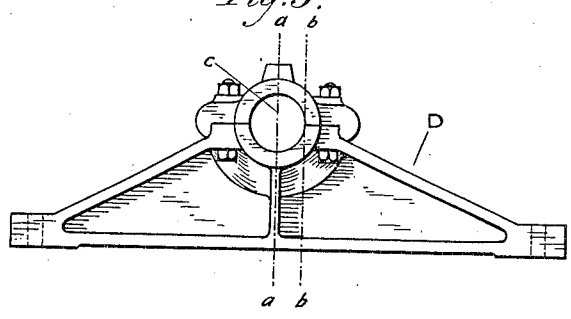



Fig. 6.

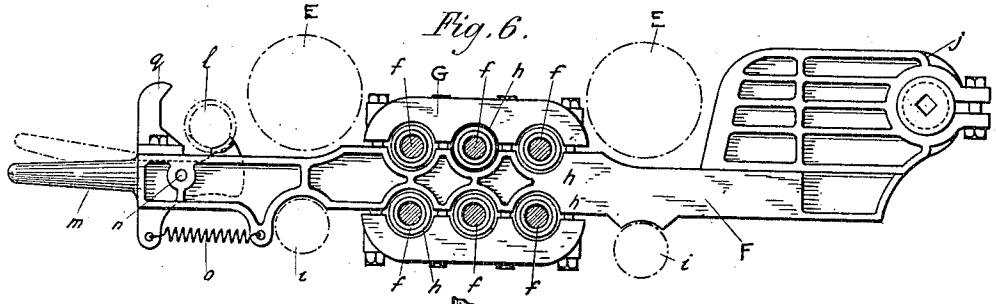
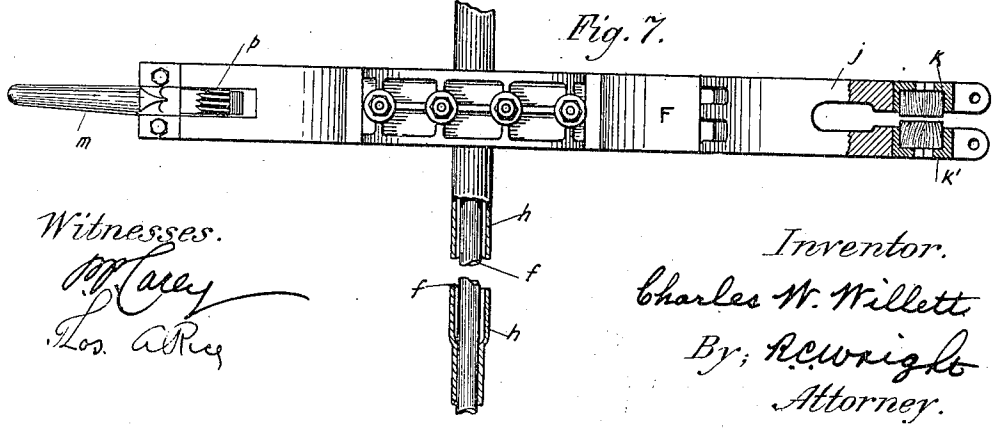



Fig. 7.




Witnesses.

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Inventor.

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THE NORRIS PETERS CO., WASHINGTON, D. C

# UNITED STATES PATENT OFFICE.

CHARLES W. WILLETT, OF PORTLAND, OREGON.

## GANG-EDGER.

No. 837,444. Specification of Letters Patent. Patented Dec. 4, 1906.

Application filed January 4, 1906. Serial No. 294,622.

*To all whom it may concern:*

Be it known that I, CHARLES W. WILLETT, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Improvement in Gang-Edgers, of which the following is a specification, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to improvements in the construction and means for operating gang-edgers.

The object of my invention is to provide in a gang-edger a new and more accurate and easier-adjustable saw-shifting mechanism and a reversible bridge-tree to accommodate saws of different sizes. I attain these objects and other practical advantages by the mechanism, construction, combination, and arrangement of parts illustrated in the accompanying drawings, which form a part of this specification.

It is well known that gang-edgers heretofore in use frequently clog up with sawdust and slivers and necessitate a stoppage of the machine. The saws are liable to bind or cramp in operation, and they cannot be quickly or accurately adjusted, and no device has been made which will receive large or small saws the way mine does.

Figure 1 is a vertical section through the center of a gang-edger having my improvements therein. Fig. 2 is a front elevation of such an edger. Fig. 3 is a horizontal section below the presser-roller of a part of the gang-edger. Fig. 4 is a detail showing sectional side elevation of forward presser-roller mechanism with counterbalance and locking device. Fig. 5 is a side elevation of the bridge-tree. Fig. 6 is a side elevation of a saw-shifter. Fig. 7 is a plan view of a saw-shifter.

Like letters refer to like parts in all figures.

A is the standard-frame of the gang-edger.

B is the saw-arbor, extending longitudinally across the frame and mounted in suitable bearings at each end, also having the pulley *d* to receive transmission of power.

C C C C C C are saws mounted upon the arbor and fixedly secured in collars thereon. The saws are adapted in the usual manner to slide longitudinally upon the key-seated arbor, so they may be moved near to or away from each other in order to set them in position to saw material of the width desired and at the same time to rotate only with the arbor.

C′, Fig. 3, represents a series or battery of similar saws locked together, which may be operated upon the same arbor and retained in position by the extension-arms N without interfering with the shifting saws.

C″ in dotted lines, Fig. 1, is a larger saw than C.

D, Fig. 5, is a reversible bridge-tree having the center of the arbor-shaft bearing *c* on the line *a a*, which is a suitable distance aside from the true center of the bridge-tree on the line *b b*, Fig. 5. There is such a bridge-tree on each side.

E E and E′ E′ are feed-rollers, suitably mounted in bearings at each end at the front and rear of the edger and having sprocket-wheels *e e′* to receive the transmission of power. Between the feed-rollers is the bed-plate X, Fig. 1.

H′ is a swinging gravity presser-roller at the rear of the edger.

The saw-shifting mechanism consists of the shifting bars F F F F F F, Fig. 3, being all of similar construction and each mounted on pipes *h*, which are compressed a suitable distance at each end, so as to clear their respective rods *f f f f f f* in the center and to telescope upon them in sliding engagement at said ends; the transverse rods *f f f f f f*, fixedly secured at each end to the sides of the frame and below the feed-rollers in suitable position; the scale-plate *g*, extending across the front of the machine and secured to it in a proper place; the threaded lock-bar *l*, Figs. 3–6, having suitably large beveled threads and mounted in bearings at either end, provided with set-screws, and the transverse bed-rods *i i′*, Fig. 1, upon which the shifting-levers are adapted to slide.

The shifting bars are provided with yokes *j*, having wooden friction-blocks *k k′*, Fig. 7, on the inside of each arm of the yoke, adapting it to contact with the saws C in sliding engagement therewith. The shifting bars are also formed with the vertical guide-plates G for each one. Each of said guide-plates is formed with as many openings through the same as there are other shifting bars, and the said openings are in such places and of such diameter as will allow the free passage through the same of the telescoping-pipes *h* of all the other bars. The lever-handles *m m m m m m* are pivotally mounted on the pivot *n*, Fig. 6, at the end of the shifting bar. The handles are retained in horizontal locking position by means of the spring *o*, and when unlocked the

handle is raised to the dotted-line position shown in Fig. 6, when its threaded end *p*, Fig. 7, is released from engagement with the lock-bar *l*, the said end *p* being adapted to mesh with the lock-bar at any place thereon in order to lock the lever and retain the saw in the position where it may be set, as shown by the indicator *q* on the handle and according to the gaged scale-plate *g*.

What I intend to and do claim as new and useful is the saw-shifting mechanism and the reversible bridge-trees.

It will therefore be seen that by means of these improvements the saws may be set and locked in position at any desired gage without removing any parts to do so or interfering with each other and likewise without cramping the levers or saws or stopping the machine. I am aware that gages have been in use; but there never has been known or used a telescoping shifting device like mine, nor a complete threaded locking-bar provided with beveled thread and adapted to be turned when worn and to mesh with the lock-handle at any place accurately all the time. It will be further seen that by means of my reversible bridge-tree saws of considerably-differing diameters may be used in the same edger by merely reversing the bridge-tree and still leave them adjusted quickly and accurately in operative position. Edgers heretofore in use have only been adapted to the use of one size of saw.

I claim—

1. In a gang-edger, the combination with means to feed and saw material; of a saw-shifting mechanism comprising sliding yoked bars F, formed with vertical guide-plates G having therein a suitable number of openings of a size adapted to allow the passage through them of other telescoping shifting-bar pipes, said bars being mounted on pipes compressed at each end a short distance to telescope in sliding engagement on the fixedly-secured rods *f* and to clear the rods in the middle part of said pipes and having the pivoted locking-handles *m* provided with means to hold them in place and means to adjust them to a gaged scale, also having the threaded ends adapted to mesh with a bevel-threaded transverse lock-bar at any place thereon, and the said lock-bar *l* mounted at either end so it may be turned and secured in position, with means to do this, all substantially as described.

2. In a gang-edger, the combination with means to saw material; of reversible arbor bridge-trees D having the center of the arbor-shaft bearing a suitable distance aside from the true center, to adapt it to receive a shaft at a different place when reversed, substantially as described.

3. A gang-edger having means to feed and saw the material, a saw-shifting mechanism comprising sliding yoked bars F, formed with vertical guide-plates G, having therein a suitable number of openings of a size adapted to allow the passage through them of other telescoping shifting-bar pipes, said bars being mounted on pipes compressed at each end a short distance to telescope in sliding engagement on the fixedly-secured rods *f*, and to clear the rods in the middle part of said pipes, and having pivoted locking-handles *m*, provided with means to hold them in place and means to adjust them to a gaged scale, also having the threaded ends adapted to mesh with a bevel-threaded, transverse lock-bar *l*, mounted at either end so it may be turned and secured in position with means to do this; also reversible arbor bridge-trees D, having the center of the arbor-shaft bearing a suitable distance aside from its true center to adapt it to receive a shaft at a different place when reversed; all substantially as set forth.

4. A gang-edger saw-shifting bar F, formed with an end yoke, and having a vertical guide-plate G, having therein a suitable number of openings of a size adapted to allow the passage through them of other telescoping shifting-bar pipes, said bar being mounted on a pipe, compressed at each end a short distance, adapted to telescope in sliding engagement on a transverse rod, and to clear the rod in the middle part of said pipe, also provided with a handle *m* adapted to lock the shifting bar, substantially as described, and for the purpose specified.

5. A gang-edger bevel-threaded shifting-bar lock-bar *l*, adapted to receive the meshing of a lock-handle of the shifting bar, at any place thereon, rotatable in its bearings and adapted to be secured therein in fixed position, substantially as described, and for the purpose specified.

6. A gang-edger reversible arbor bridge-tree D, having the center of its arbor-shaft a suitable distance aside from its true center to adapt it to receive a shaft at a different place when reversed, substantially as described, for the purpose specified.

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Witnesses:
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N. M. HUTTON.