

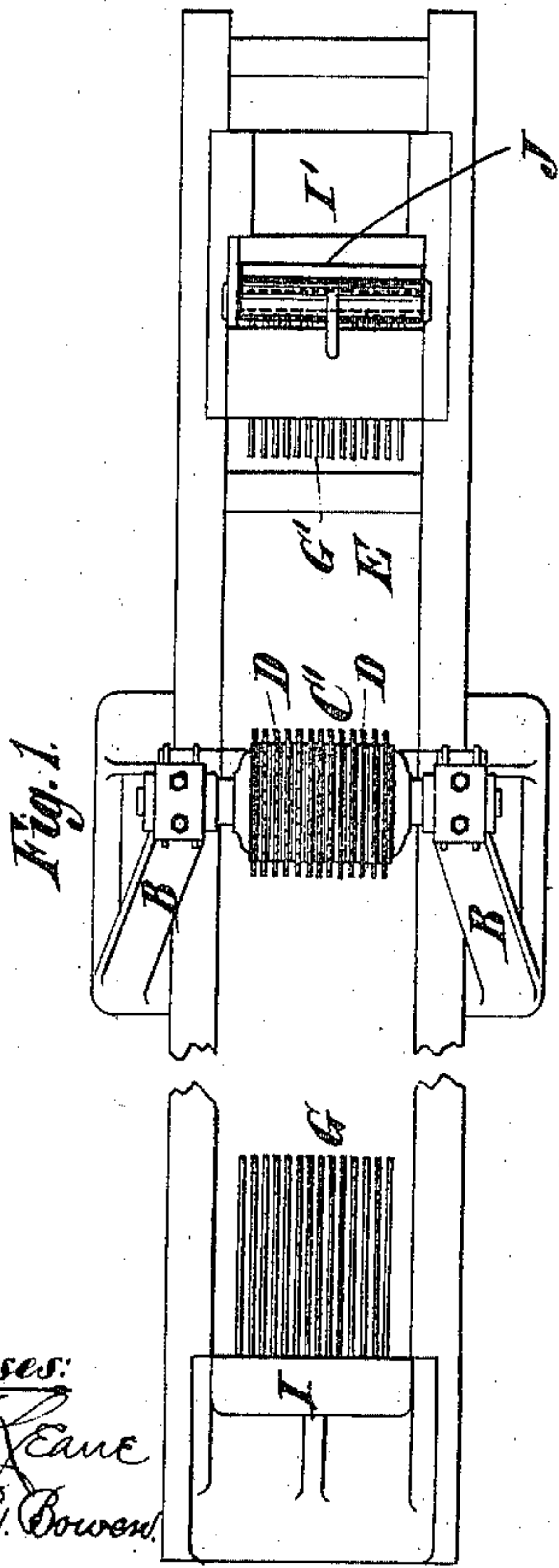
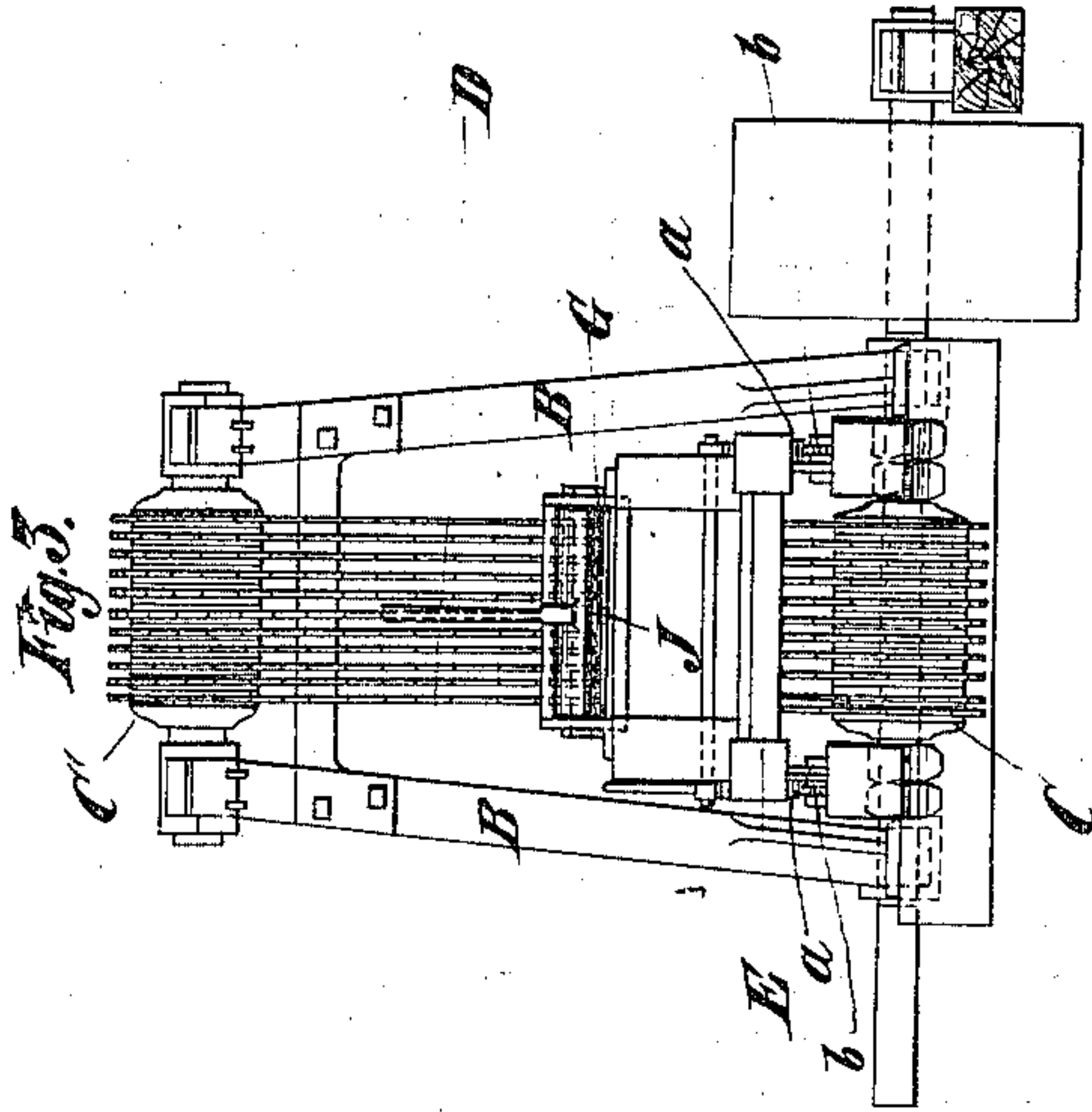
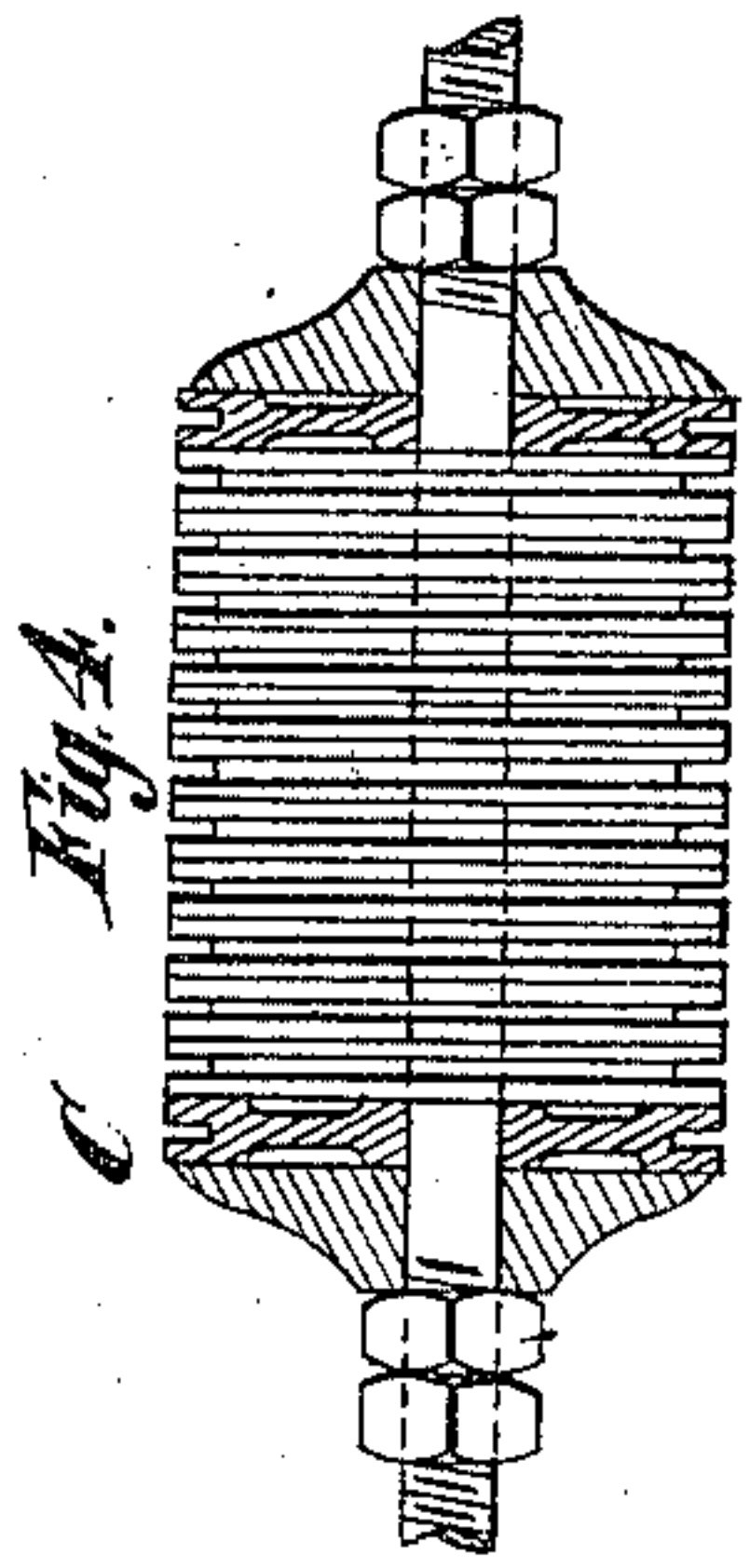
(No Model.)

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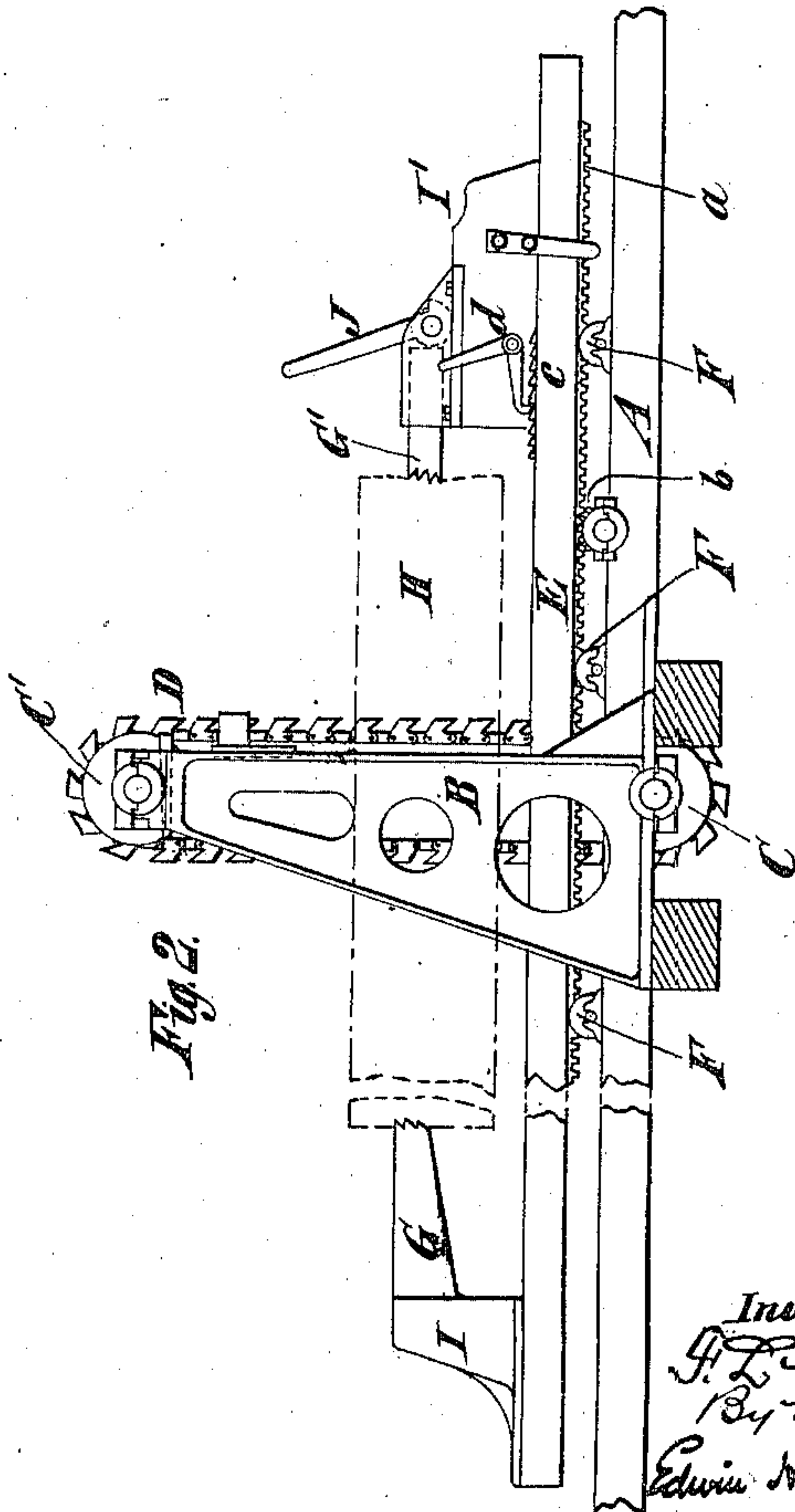
F. L. MAGAW.  
CHAIN SAWING MACHINE.

No. 279,780.

Patented June 19, 1883.



Witnesses:  
J. J. Keane  
James R. Bowen



*Inventor:*  
J. L. Magaw  
By his Atty  
Edwin H. Brown

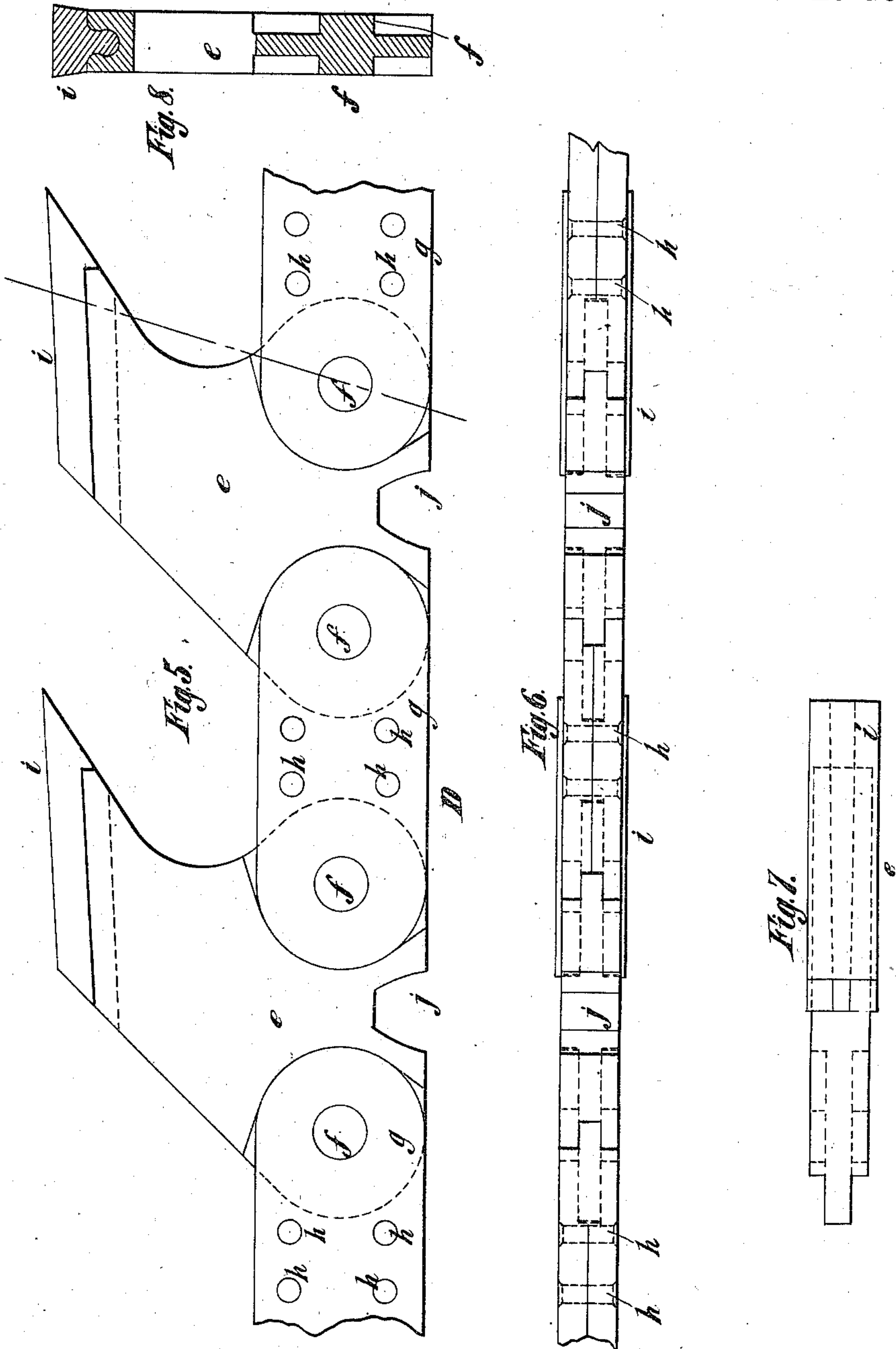
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# UNITED STATES PATENT OFFICE.

FREDERICK L. MAGAW, OF FLATLANDS, NEW YORK, ASSIGNOR OF TWO-THIRDS TO JOHN A. PEER, OF GRASS VALLEY, CALIFORNIA, AND WILLIAM C. EDES, OF BOSTON, MASSACHUSETTS.

## CHAIN SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 279,780, dated June 19, 1883.

Application filed August 23, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK L. MAGAW, of Flatlands, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Chain Sawing-Machines, of which the following is a specification.

The improvement consists in a saw composed of a number of teeth made in the form of links, and having mortised and rounded ends provided with integral pivots and a number of intermediate connecting-links severally composed of longitudinal sections having rounded ends mortised and perforated to fit the integral pivots of the toothed links, and secured together by rivets or like devices.

The improvement also consists in a saw comprising a number of links, each forming the stock of a tooth, detachable faces secured to the projecting portions of the stocks by means of dovetailed tongues and grooves, which are preferably tapered lengthwise, and intermediate links connecting the links on which are the teeth.

The improvement also consists in the combination, with a number of saws made in the form of chains, of drums for supporting the same, composed of a number of peripherically-grooved disks for receiving the several saws, and secured together on shafts upon which they fit, whereby provision is afforded for readily arranging the saws at different distances apart, so that they will produce boards of different thickness.

In the accompanying drawings, Figure 1 is a plan of a machine embodying my improvement. Fig. 2 is a side elevation of the same. Fig. 3 is an end view thereof. Fig. 4 is an enlarged sectional view of one of the drums for supporting the saws. Fig. 5 is an enlarged side view of a portion of one of the saws. Fig. 6 is a view of the inner edge of the same. Fig. 7 is a view of the outer edge of one of the toothed links, and Fig. 8 is a transverse section of the same.

Similar letters of reference designate corresponding parts in all the figures.

A designates the base-piece of the machine. It may be of any suitable construction. On it

are erected standards B, in which are mounted drums C C', supporting a number of saws, D, which are made in the form of endless chains.

E designates a bed, which is supported by anti-friction rollers F, mounted in bearings on the base-piece A of the machine, and is free to move longitudinally back and forth transversely to the saws D. It is provided on the under side with toothed racks a, with which engage gear-wheels b, affixed to a rotary shaft and serving to impart motion to it.

G G' designate holders for a log, H, which is designed to be sawed into boards. These holders are arranged opposite the spaces between the saws D, and are of such thickness that they can pass between the latter and allow them to cut through the ends of the log. When the saws thus cut through the ends of the log, the boards cut off will still be held in place by the holders. The holders G are affixed to a stock-piece, I, which may be made in the form of a carriage adapted to travel along the bed and to be secured thereto in different positions; but as here shown it is affixed to the bed so as to maintain but one position thereon. The holders G may be secured in the stock-piece I in any suitable manner, and may be maintained at the desired distances apart by spacing-pieces, which may be removed and replaced by others to provide for adjusting the holders at different distances apart.

The holders G' are arranged in a stock-piece, I', which is made in the form of a carriage adapted to be shifted along the bed into different positions to suit logs of different lengths. It is shown as secured in position by means of a ratchet-toothed rack, c, and a pawl-like lever, d. The holders G' are fitted in recesses in the stock-piece I', so that they can slide longitudinally therein. A cam-lever, J, bearing against their rear ends, serves to force them and the holders G into the ends of the log to be cut after the log and stock-pieces have been properly adjusted relatively to each other. The opposite ends of the holders are preferably toothed, so as to indent themselves into the ends of the log.



The saws D comprise links *e*, each of which is provided with a single tooth, and which have their ends mortised and provided with integral pivots *f*. These links are connected  
 5 by intermediate links, *g*, which are severally composed of two longitudinal sections having the sides of their end portions mortised and provided with perforations to fit the end portions of the links *e*. Rivets or other devices,  
 10 *h*, fasten the sections of the links *g* together, and thereby secure them to the links *e*. The links *e* are so shaped as to form the stocks of the teeth, and have detachable faces *i*, which are fitted to the teeth by means of tongues and  
 15 grooves, which are dovetailed, as best shown in Fig. 8, and which preferably taper rearwardly, so that they may wedge and lock. These faces may be renewed when desirable or removed for sharpening. The links *e* preferably have recesses *j*, whereby they may engage  
 20 with teeth or spurs on one or both of the drums C C'. The drums C C' are severally composed of a number of disks having in their peripheries grooves adapted to accommodate the saws and guide them. The disks composing the  
 25 drums are slipped over shafts and retained there by heads, which are secured there by nuts screwed on the shafts.

Disks of different thicknesses may be employed to space the saws differently; or spacing-pieces may be interposed between the disks for this purpose. When the saws are differently spaced, the holders must of course be correspondingly spaced.

35 What I claim as my invention, and desire to secure by Letters Patent, is—

1. A saw composed of a number of teeth made in the form of links and having mortised and rounded ends provided with integral pivots, and a number of intermediate connecting-links severally composed of longitudinal  
 40 sections having rounded ends mortised and perforated to fit the integral pivots of the toothed links, and secured together by rivets or like devices, substantially as specified. 45

2. A saw comprising a number of links, each forming the stock of a tooth, detachable faces secured to the projecting portions of the stocks by means of dovetailed tongues and grooves, and intermediate links connecting the links on  
 50 which are the teeth, substantially as specified. 55

3. A saw comprising a number of links, each forming the stock of a tooth, detachable faces secured to the projecting portions of the stocks by means of dovetailed tongues and grooves  
 55 which are tapered longitudinally, and intermediate links connecting the links on which are the teeth, substantially as specified.

4. The combination, with a number of saws made in the form of chains, of drums for supporting the same, composed of a number of peripherically-grooved disks for receiving the  
 60 several saws, and secured together on shafts upon which they fit, whereby provision is afforded for readily arranging the saws at different  
 65 distances apart, so that they will produce boards of different thickness.

FRÉDÉRIC L. MAGAW.

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T. J. KEANE,  
 JAMES R. BOWEN.