

(No Model.)

3 Sheets—Sheet 1.

E. C. SEEBOHM.
LUMBER SORTER.

No. 574,047.

Patented Dec. 29, 1896.

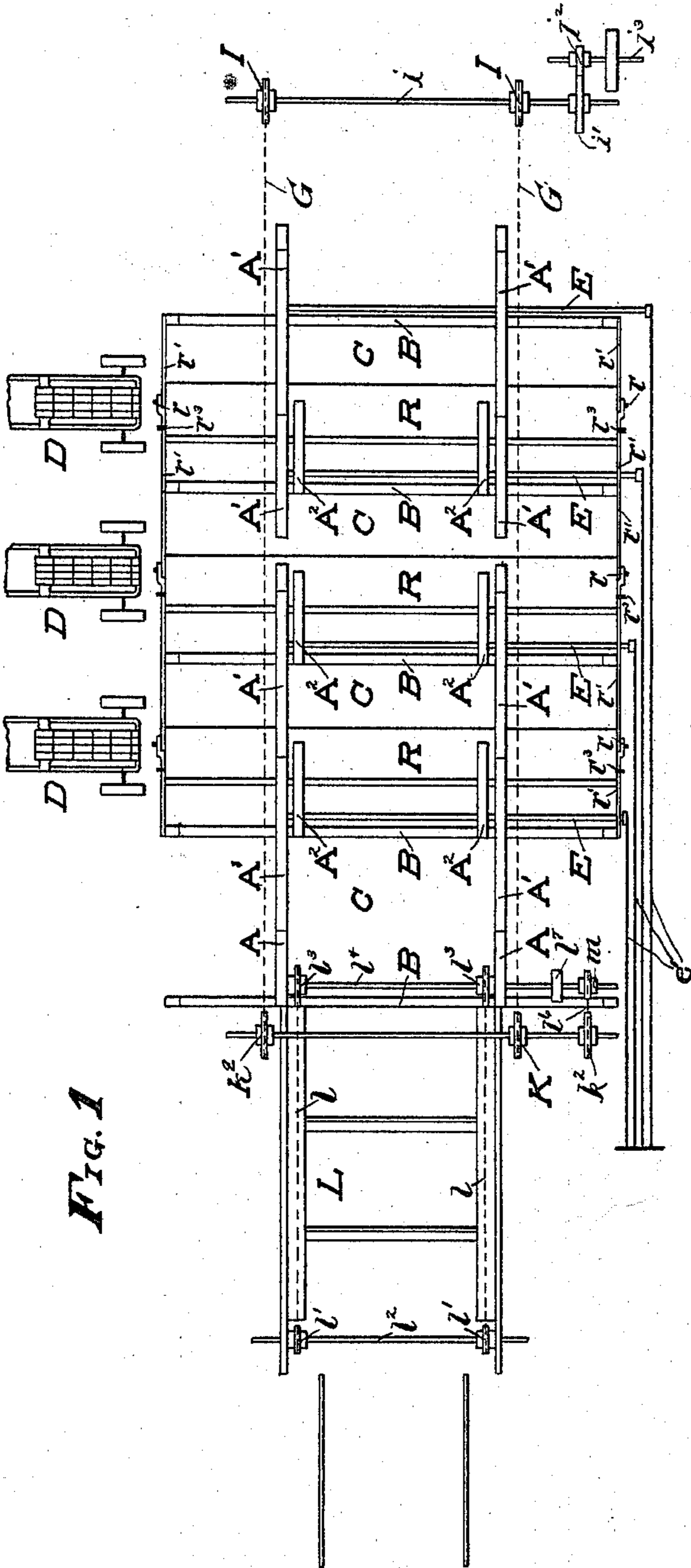


Fig. 1

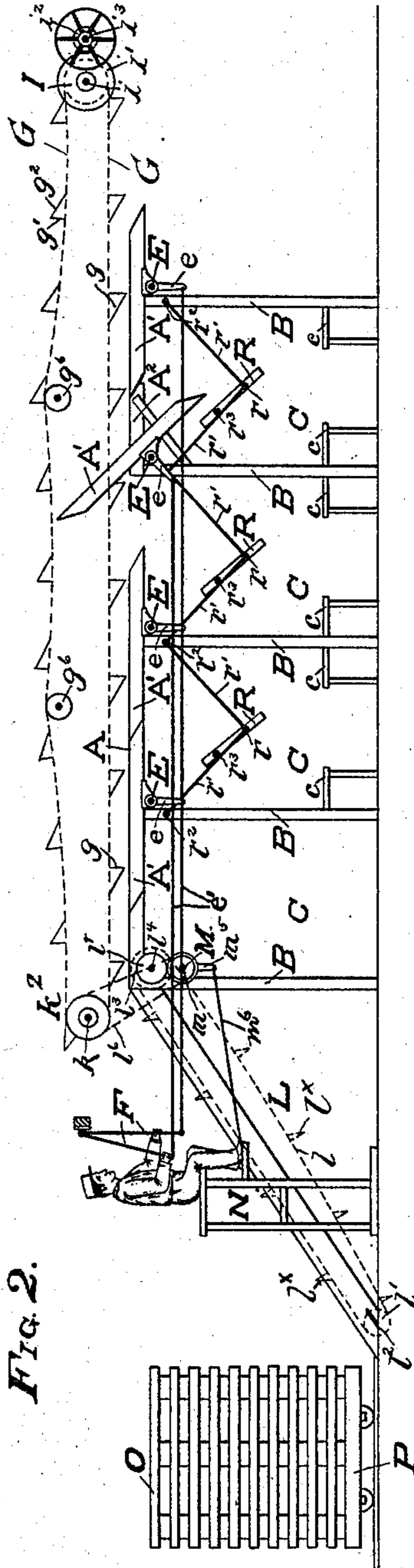


Fig. 2.

WITNESSES
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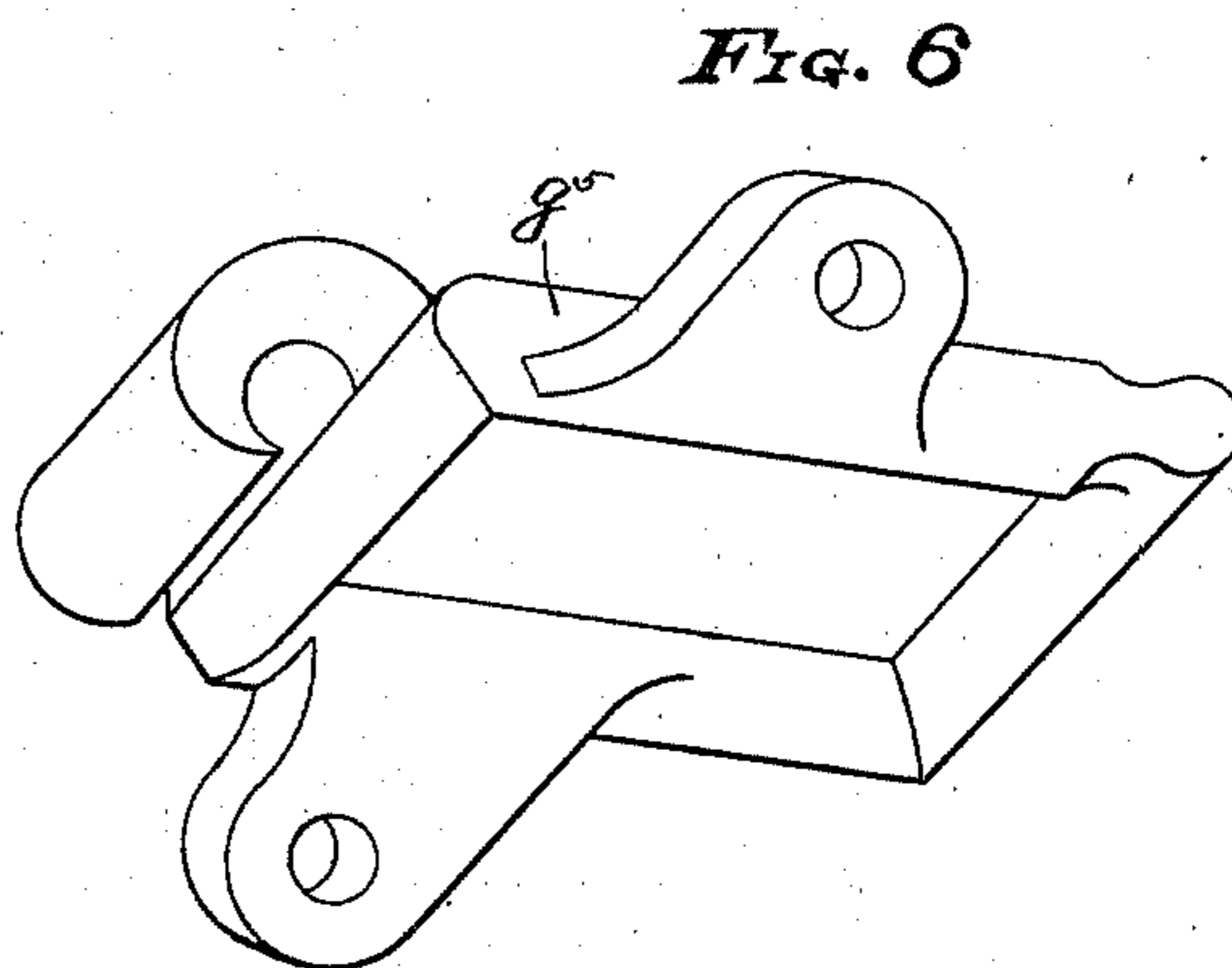
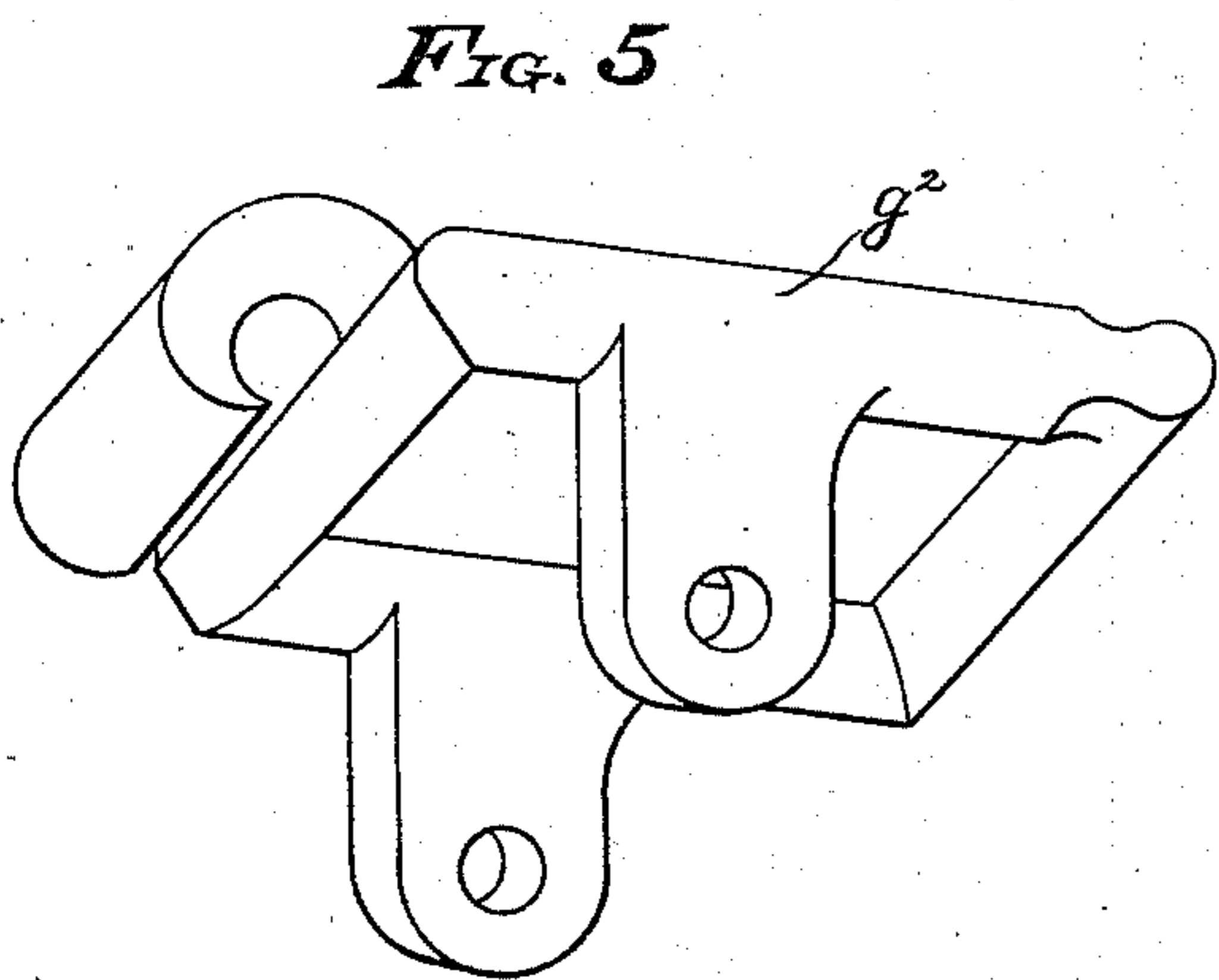
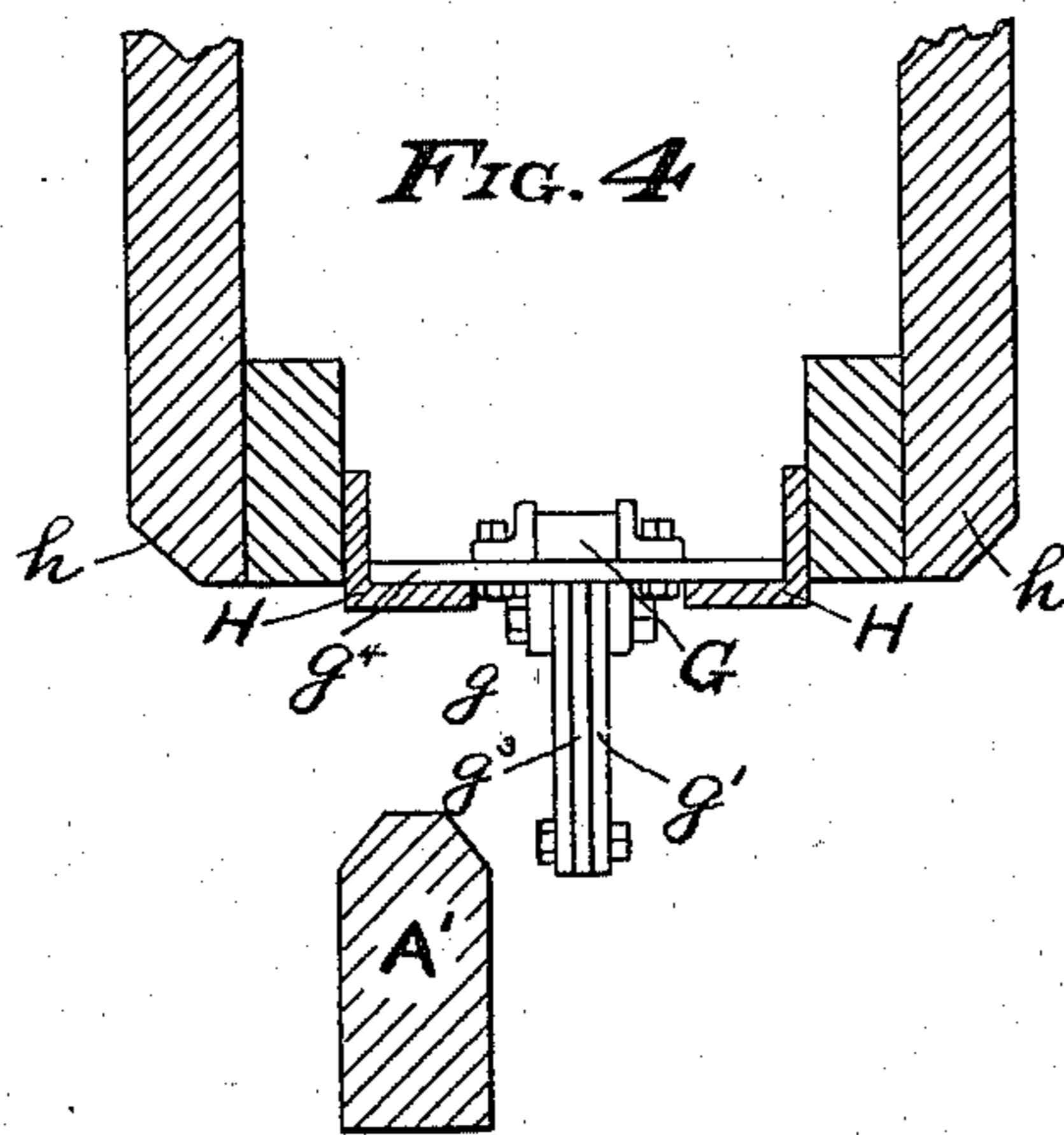
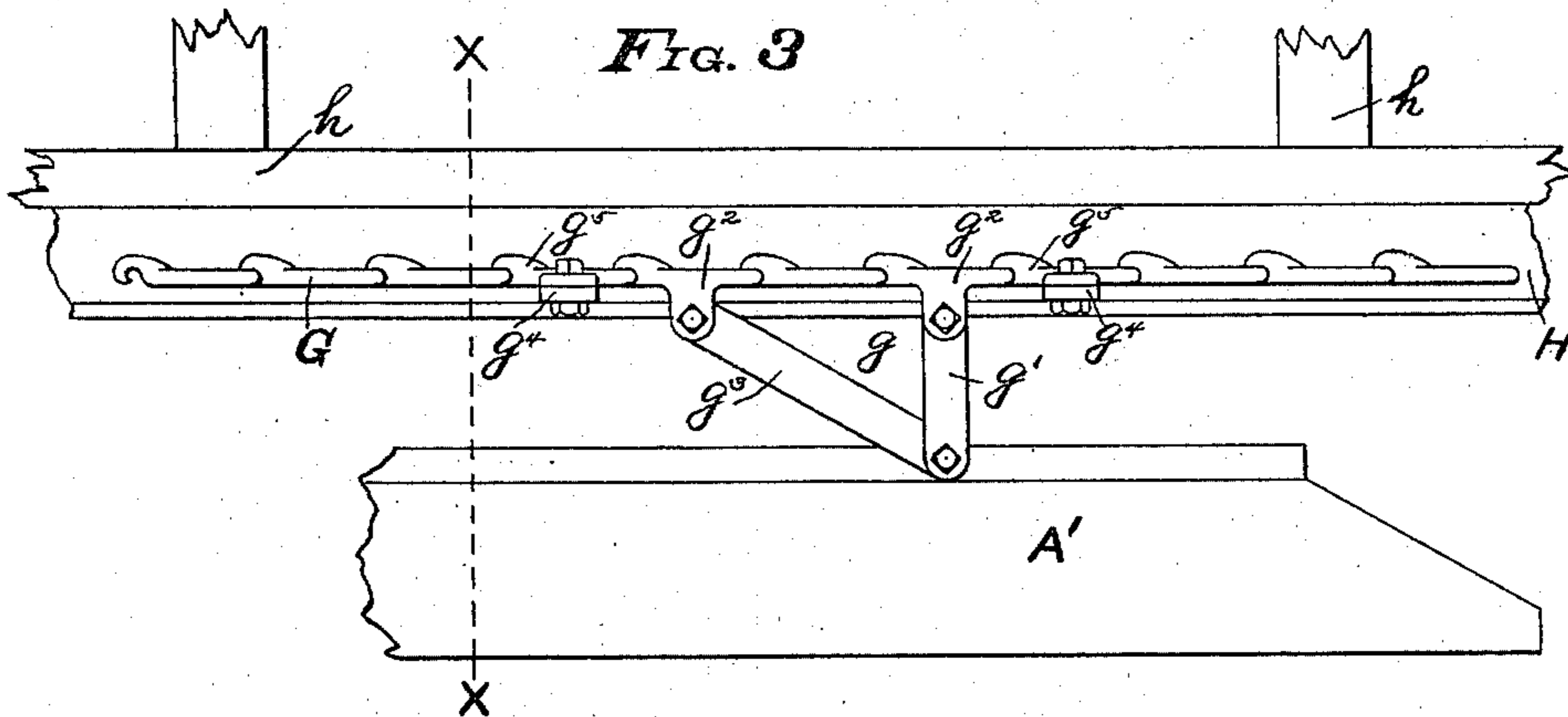
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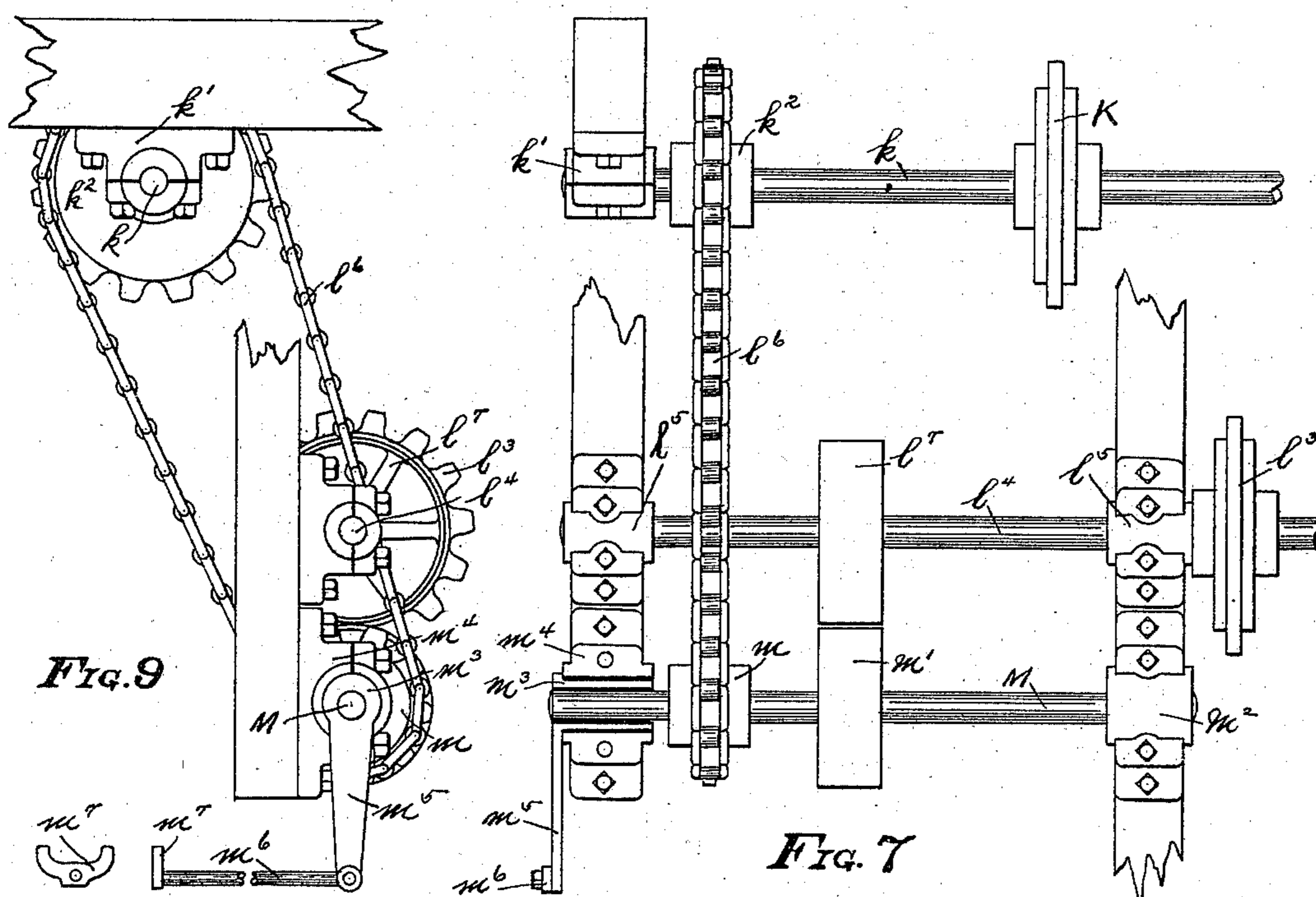
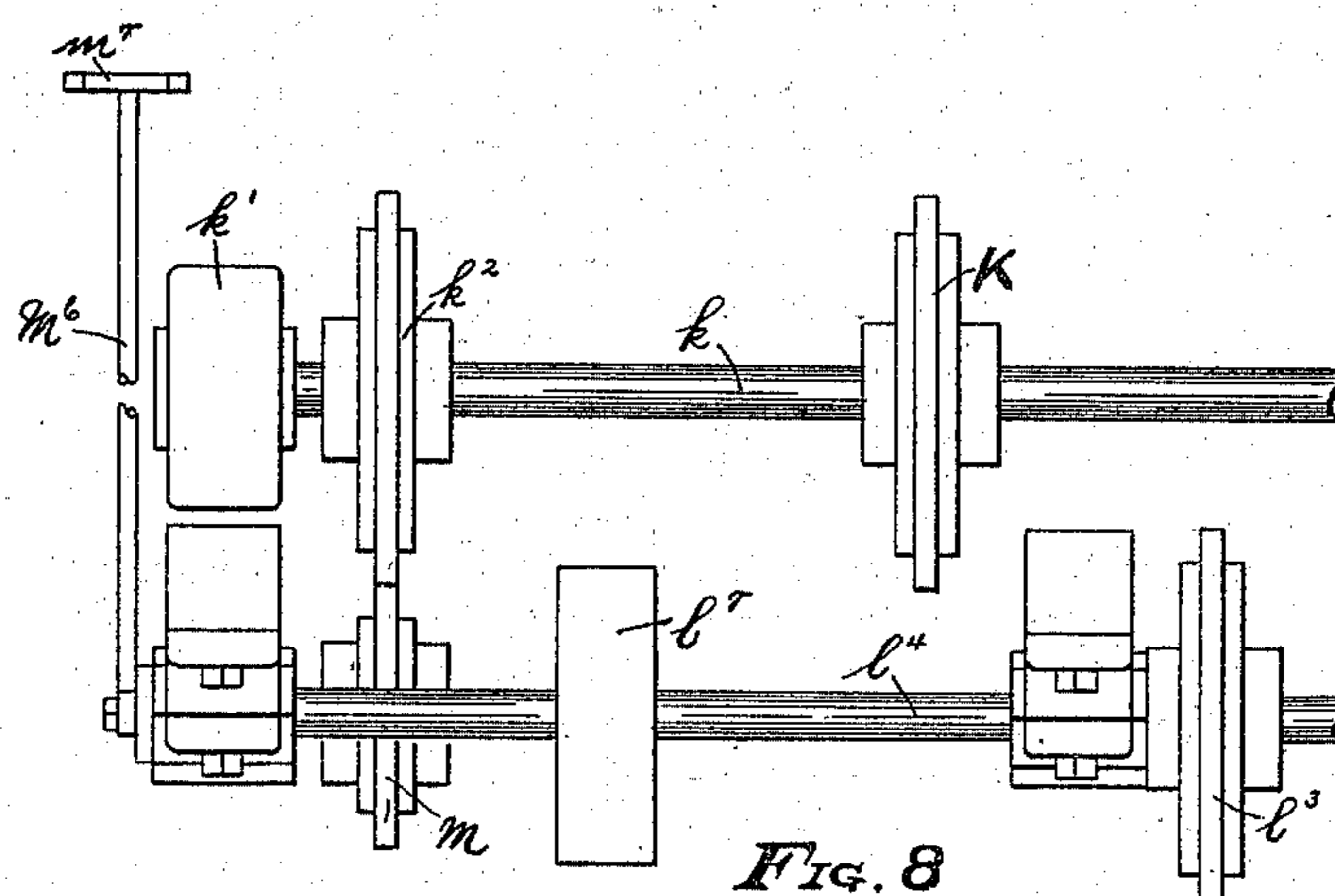
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UNITED STATES PATENT OFFICE.

EDGAR CHARLES SEEBOHM, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF ONE-HALF TO THE J. A. FAY & EGAN COMPANY, OF CINCINNATI, OHIO.

LUMBER-SORTER.

SPECIFICATION forming part of Letters Patent No. 574,047, dated December 29, 1896.

Application filed August 26, 1895. Serial No. 560,554. (No model.)

To all whom it may concern:

Be it known that I, EDGAR CHARLES SEEBOHM, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented a certain new and useful Improvement in Lumber-Sorters, of which the following is a specification.

It is the object of my invention to provide a new and improved lumber-sorter capable of sorting the lumber both as to size and grade and in which each piece of stock intended to be sorted is under direct control of the operator until it passes into one of the sorting-bins, as hereinafter explained.

My improved apparatus is designed particularly for use in planing-mills, and suitable machines designed to work the lumber dropped into the various bins may be placed at or near the end of each bin. I have made application of even date herewith for Letters Patent, being Serial No. 560,555, more particularly describing and claiming this last feature, and respectfully refer to that application for a more full description thereof.

My invention consists in the parts and in the arrangement, construction, and combinations of parts hereinafter more particularly described and claimed.

In the drawings, Figure 1 is a plan view of my improved apparatus. Fig. 2 is a side elevation of same. Fig. 3 is an enlarged side elevation of the conveyer-chain and parts; Fig. 4, a cross-section of the same on the line $x x$, Fig. 3, indicating the hangers h , hereinafter referred to, also in section. Fig. 5 is a view in perspective of the shoe-link; Fig. 6, a similar view of the supporting-link. Fig. 7 is a front end elevation, partly in section, of a detail of the driving mechanism for the inclined carrier; Fig. 8, a plan view, and Fig. 9 a side view, of the same.

A A represent the ways of my improved apparatus, supported on standards B B. The ways are divided into sections A' A' of any number desirable or necessary to accommodate the machines to be supplied or the grades or lengths into which the stock is to be divided. These sections communicate with bins C. The sections are secured to rock-shafts E E, having attached thereto crank-

arms $e e$, connected by means of links e' to shifting-levers F. I have shown two ways A, although more may be employed, if desired. All the sections in a transverse line are secured to the same rock-shaft, which in turn is operated by one of the levers. The sections are pivotally balanced or nearly so.

G G are chains, provided with shoes $g g$, adapted to take against the lumber and propel it over the ways. The shoes g consist of a heel g' , against which the material abuts, pivotally connected to a link g^2 in the chain. A brace g^3 connects the other end of the heel with another link g^2 in the chain. This construction presents a positive abutment for the material, and the heel, brace, and links being pivotally connected enables the shoe to round the sprocket-wheels over which the chain passes. The chain is also provided with runner-plates g^4 , secured to links g^5 in the chain and adapted to support the latter on runners H, carried by hangers h . The chains G G are carried by sprocket-wheels I I near one end of the series of bins and by sprockets K K near the other. The sprockets I I are supported on a shaft i , supporting a gear i' , communicating with a gear i^2 , mounted on a shaft i^3 , operated from a suitable source of power. The chains are supported in their return by idlers g^6 . The sprockets K K are supported by a shaft k , mounted on hangers k' .

L is an elevator for elevating the material onto the ways A A and has chains $l l$ with lugs l^x for forcing up the lumber. The chains $l l$ travel on sprockets $l' l'$ on a shaft l^2 at their lower end and over sprockets $l^3 l^3$ on a shaft l^4 , mounted in bearings $l^5 l^5$ at their upper end. A sprocket-chain l^6 passes over a sprocket k^2 , mounted on the shaft, and over a sprocket m on a shaft M. A gear m' , preferably a friction-gear, is mounted on the shaft M and communicates motion to a similar gear l^7 , mounted on the shaft l^4 , thus operating chains $l l$ on the elevator L. The shaft M is mounted in a bearing m^2 at one end. At its other it takes into an eccentric bearing m^3 , which is in turn mounted in a bearing m^4 . The eccentric bearing m^3 is provided with a crank m^5 , having secured to it a link m^6 , carrying a stirrup m^7 for the operator. A thrust of the

crank will throw the eccentrically-mounted gear m' into communication with its mate, thus operating the chains ll . These chains may be thrown out of operation instantly at the will of the operator by a thrust of the crank in the opposite direction.

N represents a stand for the operator.

In operation the lumber to be sorted is placed on the elevator, the chains ll thrown into operation, and the sticks elevated onto the ways $A A$. As each stick advances from the elevator to the ways a pair of shoes $g g$ takes against it and propels it along the ways until it reaches the bin receiving lumber of the grade or size of the stick propelled or at the end of which a machine is working stock similar to the stick propelled. The operator, who has each piece in view and directly under his control from the stand, then trips the section A' above that bin, when the stick drops through the ways into the bin. When the sorter is arranged to supply machines with stock to be worked, the bins may be provided on either side with a table c , on which the material may drop. A deflector R is provided for directing the lumber onto the one or other of the tables. When the operator of the machine is feeding from one of the tables, he has the deflector so placed that the material will drop on the other, and when the material is exhausted on that table he trips the deflector, so as to conduct the material to the table from which he has just been feeding, and feeds from the other. The deflector is mounted on pivots r , supported by tie-rods r' , secured to the sides of the bins, as at r^2 . Stops r^3 are provided for holding the deflector in position. The pivot r of the deflector is preferably below its center of gravity and the stop r^2 above, the deflector being thereby held in position by its weight above the pivot overbalancing that below. The sections A' are preferably almost counterbalanced, with sufficient weight at the forward end, however, to insure the return of the section to its normal position after having been tripped. The lumber drops through the opening formed at the forward end of the section, the space formed by the dropping of the rear end when the section is tripped being spanned by a bracket A^2 to support the lumber in its passage to the next section.

In my improved apparatus each stick is under direct control of the operator from his stand until it drops into one of the bins C , and the sections are operated direct by him, insuring accuracy and simplicity. Any rejects or odd pieces of sticks may be carried beyond the ways or dropped into a bin provided for that purpose.

I claim—

1. In a lumber-sorter, the combination of sectional ways, shafts on which the sections are mounted, crank-arms secured to the shafts, operating-levers, links connecting the operating-levers to the crank-arms and extending from the crank-arms to the operating-levers,

constructed and arranged to trip the sections irrespective of the position of the lumber on the ways, and continuous propelling-chains extending the length of the series of sections above and independent of the ways, substantially as and for the purpose specified.

2. In a lumber-sorter, the combination of a primary carrier for conducting the material to the ways, ways along which the material is propelled, sections in the ways, bins under the ways for receiving the material, levers for tripping the sections, links extending from the levers to the sections, constructed and arranged to trip the latter independent of the material passing over the ways, and continuous propelling-chains extending the length of the series of sections above and independent of the ways, substantially as and for the purpose specified.

3. In a lumber-sorter, the combination of the primary carrier for receiving the material to be sorted and conducting it to the ways, ways along which the material is propelled, sections in the ways, brackets at the rear end of the sections, bins under the ways, levers for tripping the sections, links connecting the levers to the sections, constructed and arranged to trip the latter independent of the position of the material passing over the ways, and continuous propelling-chains extending the length of the series of sections above and independent of the ways, substantially as and for the purpose specified.

4. In a lumber-sorter, the combination of a primary carrier for receiving the material to be sorted and conducting it to the ways, ways along which the material is propelled, sections in the ways, bins under the ways, links and levers for tripping the sections, deflectors for conducting the lumber to either side of the bins, and chains above the ways for propelling the lumber, substantially as and for the purpose specified.

5. In a lumber-sorter, the combination of sectional ways, links and levers for tripping the sections, propelling-chains above the ways, and shoes on the chains, consisting of a pivotally-mounted heel and pivotally-mounted brace, the heel and brace of each pivotally attached to each other and to separate links of the chain, substantially as and for the purpose specified.

6. In a lumber-sorter, the combination of sectional ways, links and levers for tripping the sections, propelling-chains above the ways, bins under the sections, pivoted deflectors in the bins for conducting the lumber to either side thereof, and tie-rods on which the deflectors are mounted, substantially as and for the purpose specified.

7. In a lumber-sorter, the combination of sectional ways, links and levers for tripping the sections, deflectors in the bins pivotally mounted below their center of gravity, pins on the deflectors above the pivots, and supports on which the pins may rest, substantially as and for the purpose specified.

8. In a lumber-sorter, the combination of sectional ways, chains above the ways for propelling the lumber, sprocket-wheels for propelling the chains, a primary carrier, carrying-chains therein, separate shafts about which the latter and the chains above the ways pass, and an eccentrically-mounted intermediate shaft between the latter for throwing the carrying-chains of the primary carrier in and out of operation, substantially as and for the purpose specified.

9. In a lumber-sorter, the combination of sectional ways, a driven shaft, sprocket-wheels thereon, horizontally-disposed chains actu-

ated thereby, a second shaft, sprocket-wheels thereon over which the chains pass, a primary carrier, a third shaft for propelling the chains over the latter, an intermediate shaft propelled by the second shaft an eccentric bearing therefor, gears between the intermediate and the third shaft, and a crank and link for throwing the latter in and out of engagement, substantially as and for the purpose specified.

EDGAR CHARLES SEEBOHM.

Witnesses:

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H. P. LABATUT.