

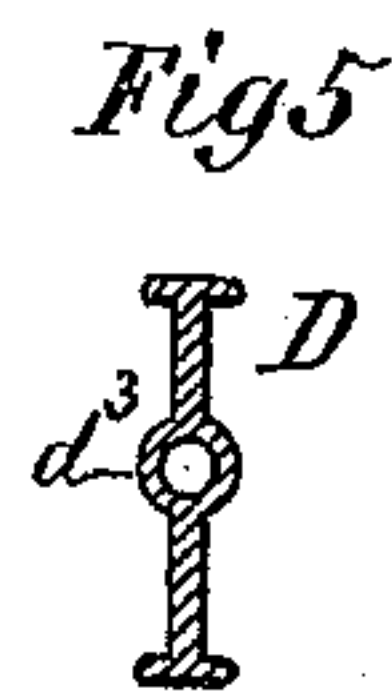
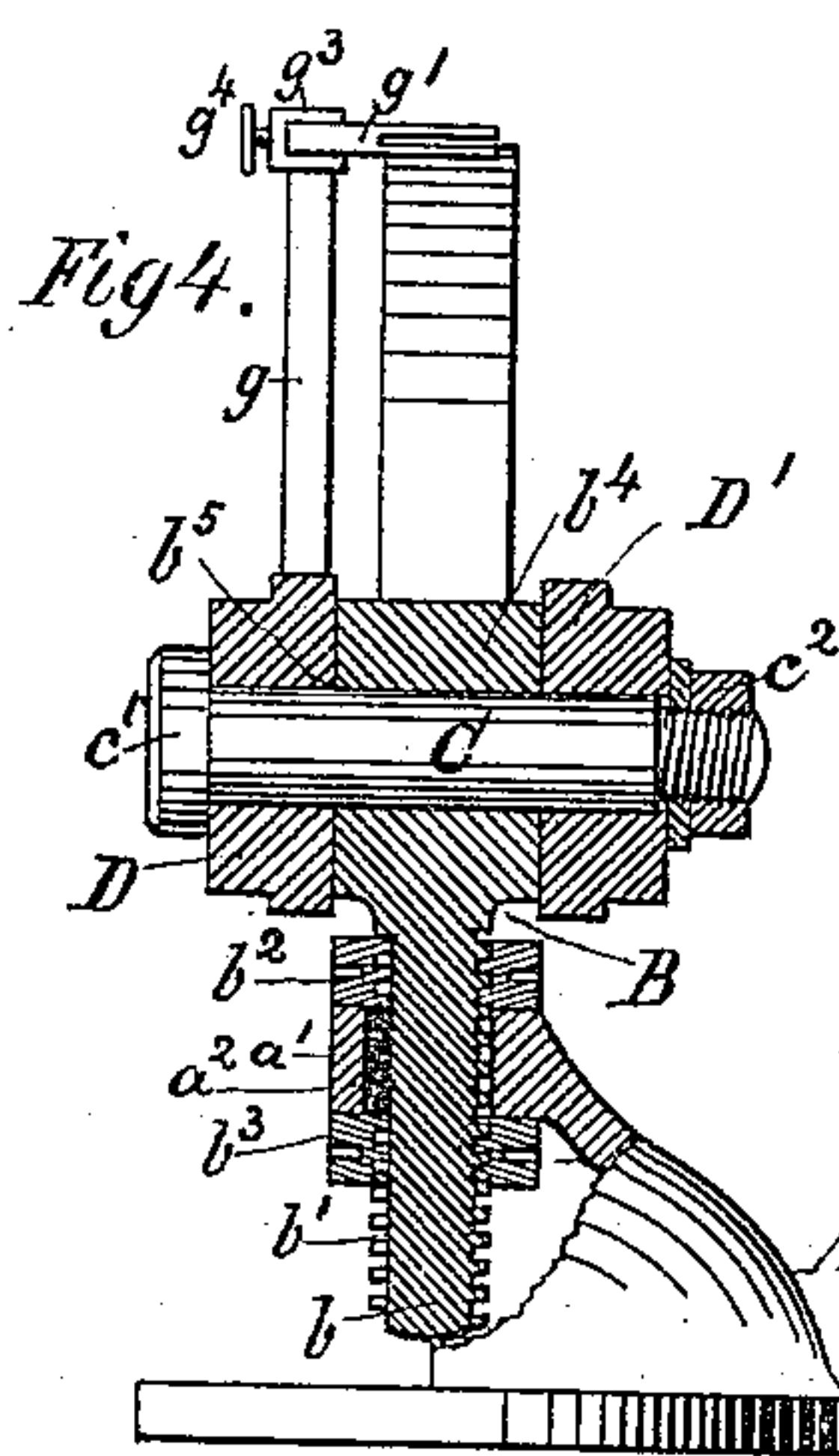
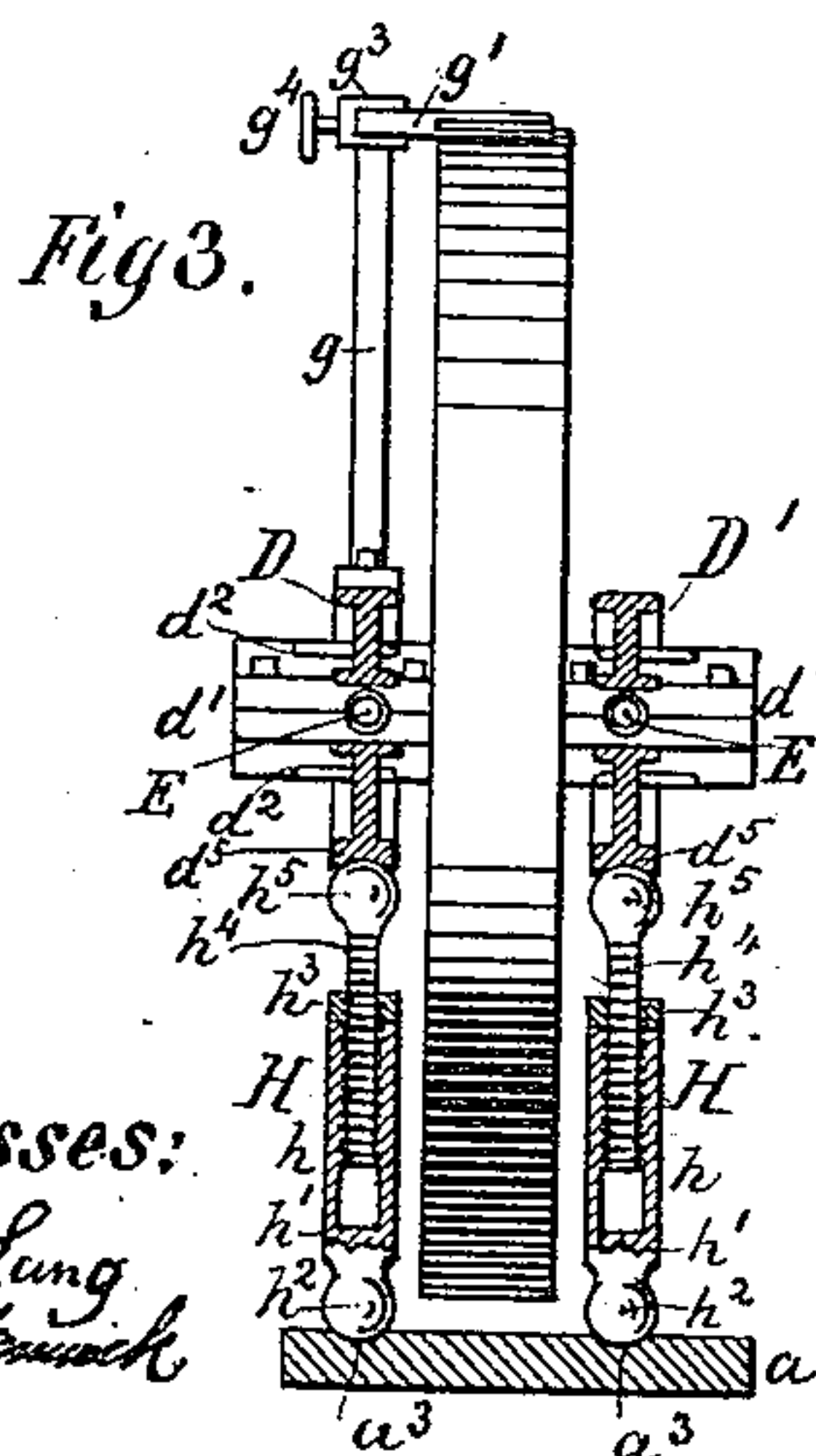
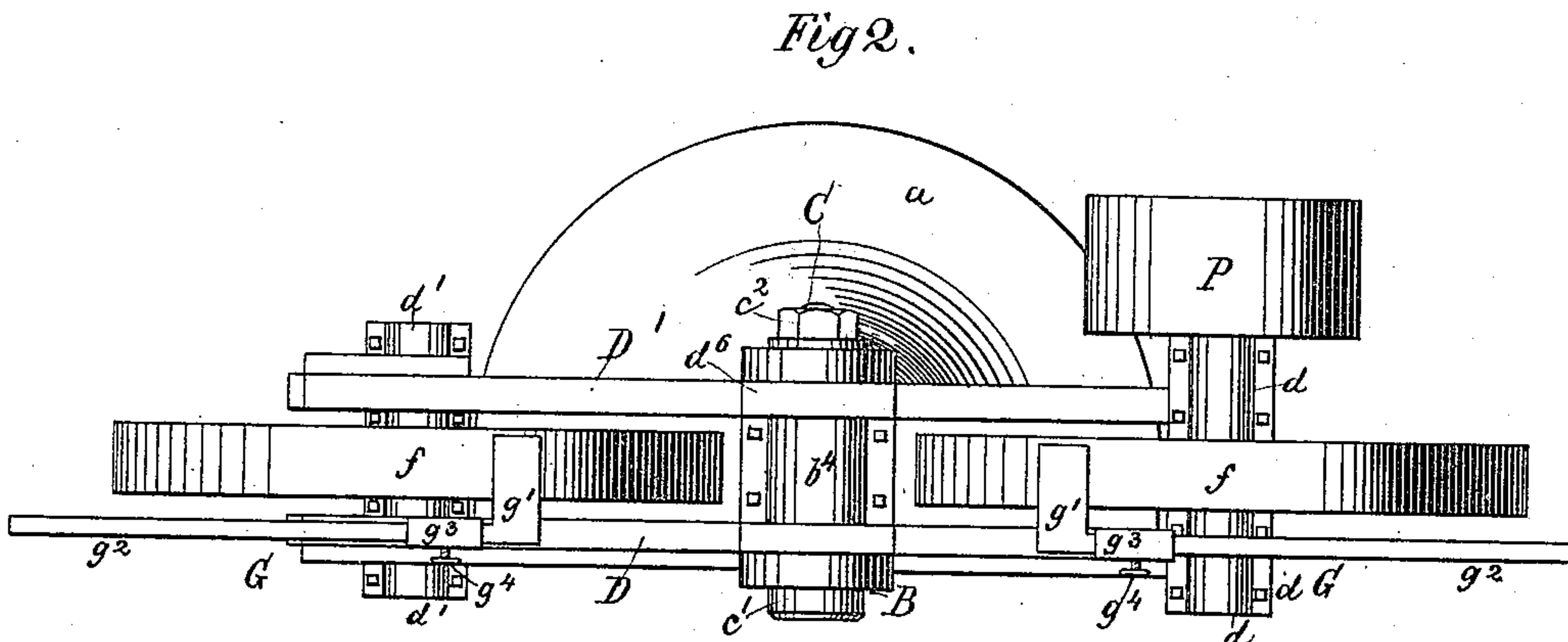
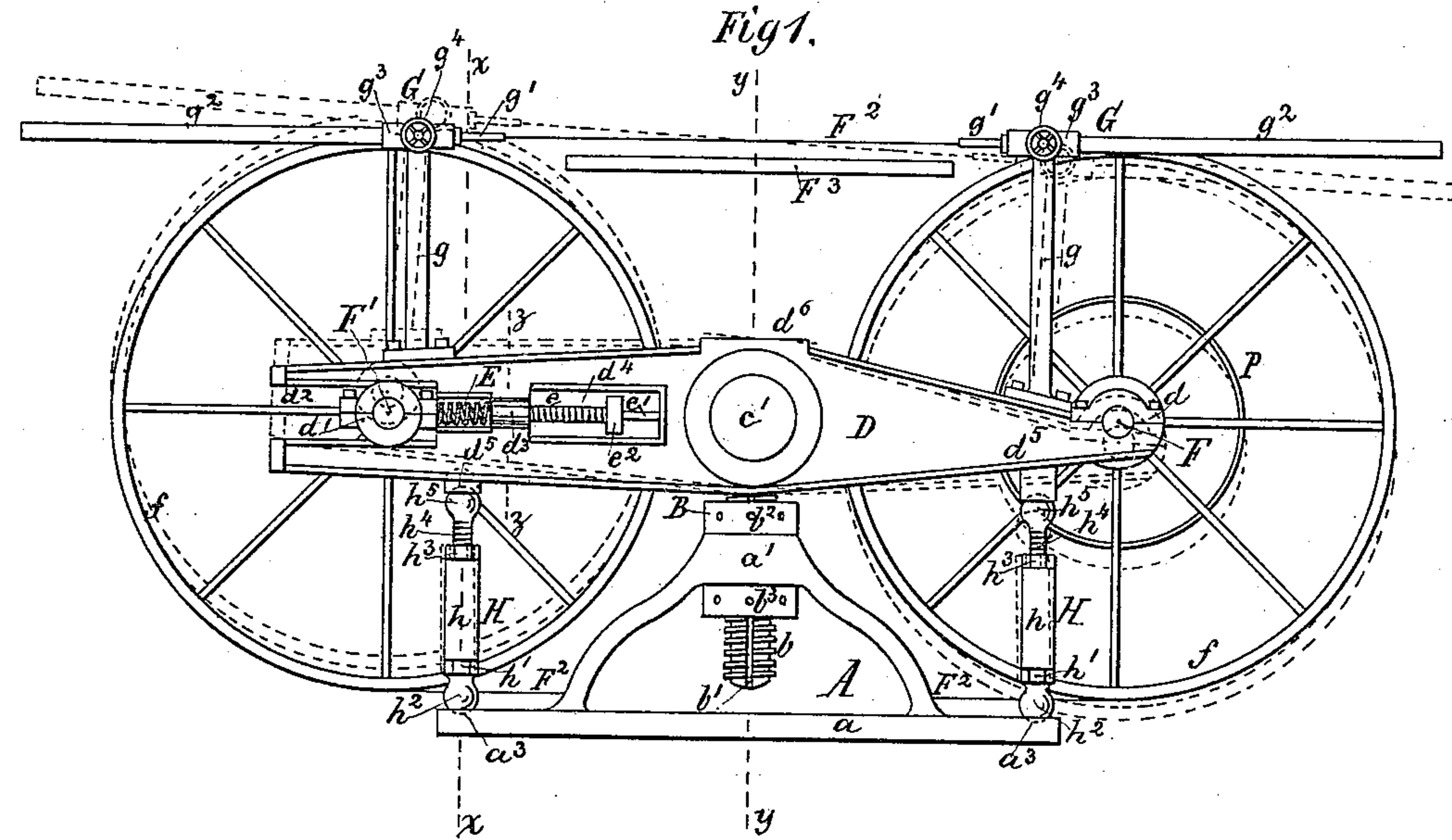
(No Model.)

2 Sheets—Sheet 1.

G. W. MASON..
RESAWING MACHINE.

No. 442,528.

Patented Dec. 9, 1890.



Witnesses:
J. P. Theodlung
Edward S. Fenwick

Inventor.
George H. Mason
by his atty
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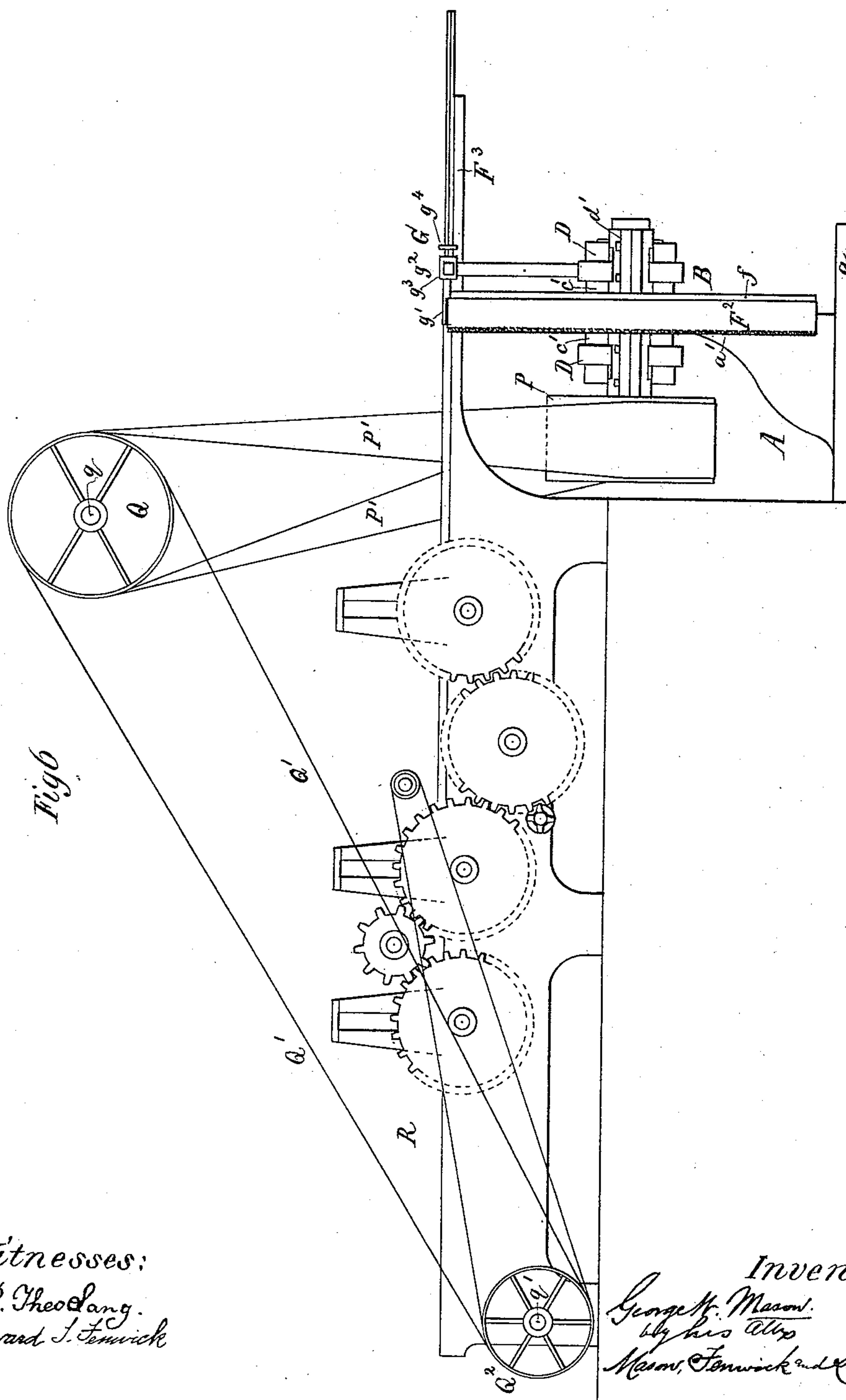
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UNITED STATES PATENT OFFICE.

GEORGE W. MASON, OF EAU CLAIRE, WISCONSIN.

RESAWING-MACHINE.

[SPECIFICATION forming part of Letters Patent No. 442,528, dated December 9, 1890.]

Application filed March 15, 1890. Serial No. 343,971. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MASON, a citizen of the United States, residing at Eau Claire, in the county of Eau Claire and State of Wisconsin, have invented certain new and useful Improvements in Resawing-Machines and the Same Combined with Planing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in improvements in a machine of that type which is used for resawing or splitting sawed or planed boards, said improvements adapting the machine for more effectively sawing boards with either two parallel or one straight and one converging side, and also especially adapting the same for attachment to a planing or other machine, so that the operation of planing and resawing are carried on continuously, and thus time and labor of handling the boards between the planer and resawing-machine saved.

In the accompanying drawings, Figure 1 is a rear elevation of my resawing-machine. Fig. 2 is a top view of the same, the saw being omitted. Fig. 3 is a vertical cross-section in the line $x x$ of Fig. 1. Fig. 4 is a vertical cross-section in the line $y y$ of Fig. 1. Fig. 5 is a detail section in the line $z z$ of Fig. 1. Fig. 6 is a diagram illustrating a planing-machine and my resawing-machine combined.

The letter A in the drawings represents a foundation or support consisting of a bed-plate a and tubular central guide a' .

B is a frame-carrier, consisting of a vertical screw b , having a longitudinal keyway b' , upper and lower clamp-nuts $b^2 b^3$, respectively bearing against the upper and lower faces of the tubular guide a' , and a head b^4 , with a horizontal bearing b^5 therein. The keyway b' permits the screw to slide upon a spline a^2 , fastened in the tubular guide a' . Into the bearing b^5 a horizontal fulcrum-shaft C is fitted, to which two lever-frame beams $D D'$ are fastened by means of a head of the shaft C and a nut c^2 at the end of it. They are arranged one at either side of the head b^4 and made to bear snugly against it. Each of these lever-frame beams $D D'$ is provided at one end with a fixed transverse horizontal shaft-

bearing d and at the other end with a similar but adjustable bearing d' . The adjustable bearings d' are made to slide in longitudinal guideways d^2 of the lever-frame bearing $D D'$, and there they bear against springs E, which latter are longitudinally adjusted by means of screws e . Each of these screws e is provided with a guide-shank e' and a milled head e^2 , their threaded portions being fitted into boss formations d^3 at the ends of the guideways d^2 , and the milled heads moving in slots d^4 of the lever-frame beams, while the guide-shanks e' are fitted into suitable holes in the said beams. Thus the milled heads may be easily operated by hand when the tension of the springs E is required to be changed, as will be seen. Other suitable means than milled heads may be employed in order to facilitate the operation of the said screws—that is, means adapted for the use of a wrench or other implement.

In the bearings $d d'$ the shafts F F' of the band-saw drums f are hung, and over these drums the band-saw F² is stretched and held taut by means of the tension of the springs E. The shaft F, which is hung in the rigid bearings d , is provided with a driving-pulley P. The band-saw is controlled by guides G, placed over a saw-table F³, and is steadied between said guides. The guides consist of two posts g , fastened to the rear lever-frame beam D, and two sliding slotted guide-heads g' . The guide-heads g' are provided with shanks g^2 , which slide in suitable heads g^3 of the post g and are there held in position by means of set-screws g^4 . When narrow boards are to be resawed, the guide-heads are set nearer together and farther apart when wide boards are to be resawed. When boards of uniform width are to be resawed, the guide-heads are set in contact with their edges, and thus very accurate work can be produced.

When it is desired to saw at an angle or slope for the purpose of producing boards of a tapering sectional area, it can be effected by tilting the lever-frame beams $D D'$ by means of swivel-screws H. These swivel-screws consist each of a tubular nut h , having a polygonal formation h' and a spherical head h^2 , a check-nut h^3 , and a screw h^4 , having a spherical head h^5 . The heads h^2 rest in suitable depressions a^3 of the bed-plate a , and

the head h^5 in similar depressions d^5 in the lever-frame beams $D D'$, and thus are capable of readily accommodating themselves to the different positions of the said beams.

5 When the beams $D D'$ are to be adjusted to a certain angular position or horizontal position, the check-nuts h^3 are loosened and the screws h^4 screwed into the nuts h on one side of the fulcrum-shaft C , while those on the
10 other side are simultaneously screwed out or up hard against the upper and lower bearings until the said beams stand in the desired position, whereupon the check-nuts h^3 are drawn hard upon the nut h , so as to firmly secure
15 the parts in the desired position. This operation is facilitated by means of a testing plane surface d^6 , provided upon each of the beams $D D'$, which surfaces are parallel or in line with each other and parallel with the band-
20 saw F , and by applying a spirit-level or clinometer to said surfaces the angle of the beams $D D'$ and saw F^2 can be easily determined and desired adjustment speedily effected.

For sawing boards of different thicknesses
25 the saw requires vertical adjustment, and to this end the nuts $b^2 b^3 h^3$ are loosened and the beams $D D'$ raised or lowered, as the case may be, upon the swivel-screws H until the
30 proper elevation, or both elevation and angle, of the saw F are attained, whereupon the said nuts are again drawn on, so as to retain the desired adjustment.

In Fig. 6 a table F^3 of a planing-machine R is shown, said table extending through the
35 resawing-machine. With this construction and arrangement the boards in leaving the planing-machine are moved by the ordinary feeding mechanism of the planing-machine into the resawing-machine without manual
40 labor, thus saving the services of an attendant for introducing the boards into the resawing-machine.

In this combined mechanism the resawing-machine is driven by a belt P' , which trans-
45 fers motion from the pulley Q of a line-shaft q to the pulley P . A belt Q' transfers motion from the pulley Q to a pulley Q^2 of the main shaft q' of the planing-machine R .

What I claim as my invention is—

50 1. The combination of a rigid board-support, a band-saw, means for adjusting the same in a vertical direction and also in horizontal and inclined positions, and means for

operating the band-saw, substantially as described. 55

2. In a band-saw, the vertically-adjusting carrier B , having nuts $b^2 b^3$, keyway b' , support A intermediate the ends of the beams and having tubular guide a' and spline a^2 , and the lever-frame beams $D D'$, having bear- 60 ings $d d'$, substantially as described.

3. In a band-sawing machine, the described vertically-adjustable support $A B$, the band-saw, lever-frame beams $D D'$, carrying the saw, the tilting swivel-screws H , and means 65 for operating the band-saw, substantially as described.

4. The band-saw and supporting lever-frame beams $D D'$, in combination with the fulcrum-shaft C , fixed bearing d , the adjust- 70 able spring-bearing d' , and means for operating the band-saw, substantially as described.

5. In a resawing-machine, the band-saw, means for operating the same, and supporting lever-frame beams $D D'$, having plane test- 75 ing-surfaces d^6 , substantially as described.

6. The combination of the band-saw, means for operating the same, the adjustable lever-frame beams $D D'$, fulcrum-shaft C , and the longitudinally-adjustable band-saw guides G , 80 substantially as described.

7. The combination, with a planing-machine, of the resawing-machine comprising a band-saw, means for operating the same, connected horizontal frame-beams, and a cen- 85 tral vertically-adjustable support, substantially as described.

8. The combination, with a planing-machine, of the resawing mechanism comprising a band-saw, means for operating the same, 90 and means for adjusting it inclinarily with respect to the table of the planing-machine, substantially as described.

9. The combination, with a planing-machine, of the band-saw resawing-machine, 95 comprising a band-saw, means for operating the same, and means for adjusting it both vertically and inclinarily with respect to the table of the planing-machine, substantially as described. 100

In testimony whereof I hereunto affix my signature in presence of two witnesses.

GEORGE W. MASON.

Witnesses:

E. A. BOTT,

OSCAR TURNER.