

No. 750,917.

PATENTED FEB. 2, 1904.

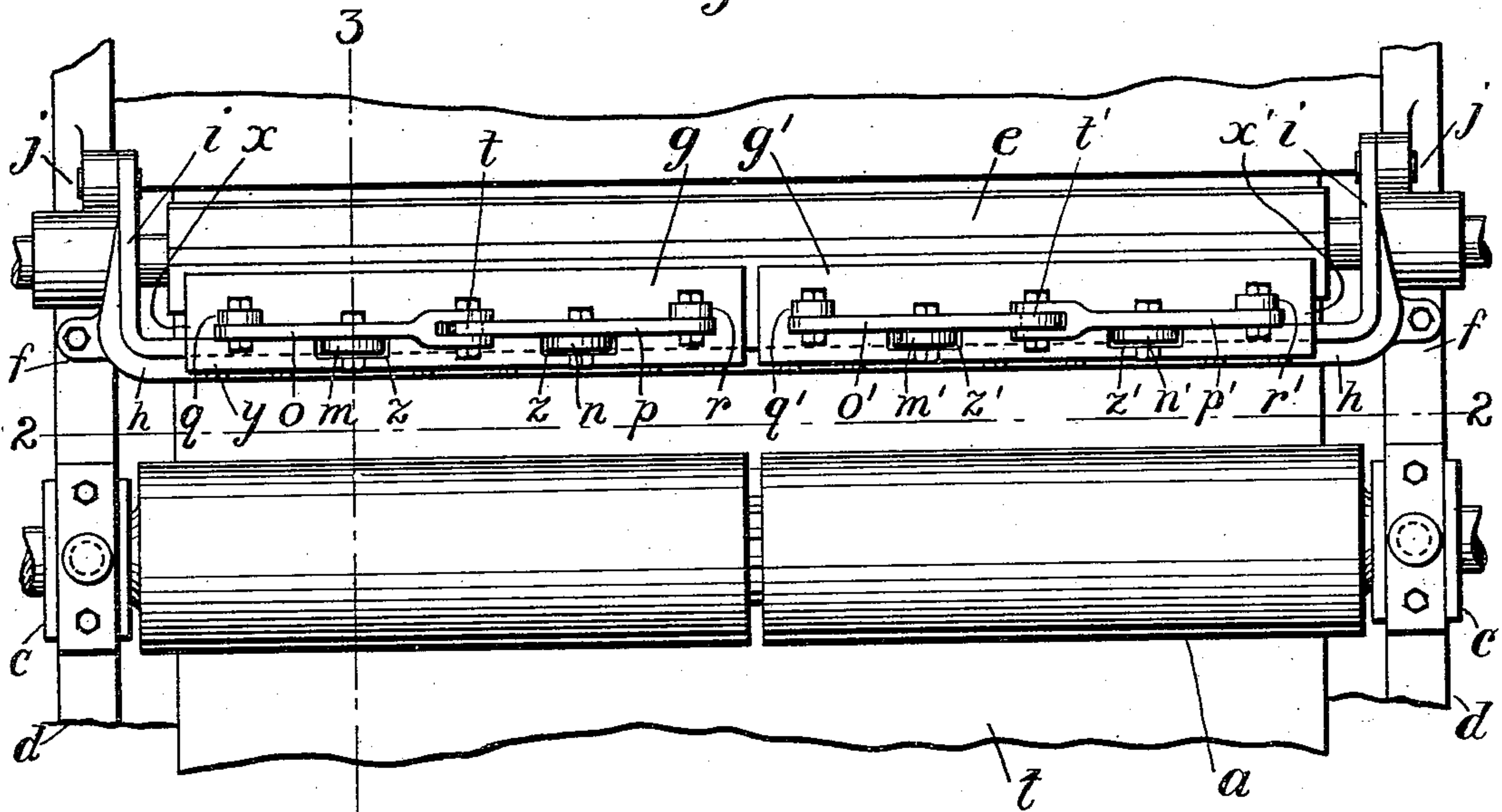
W. O. VIVARTTAS.  
PLANING MACHINE.

APPLICATION FILED AUG. 18, 1903.

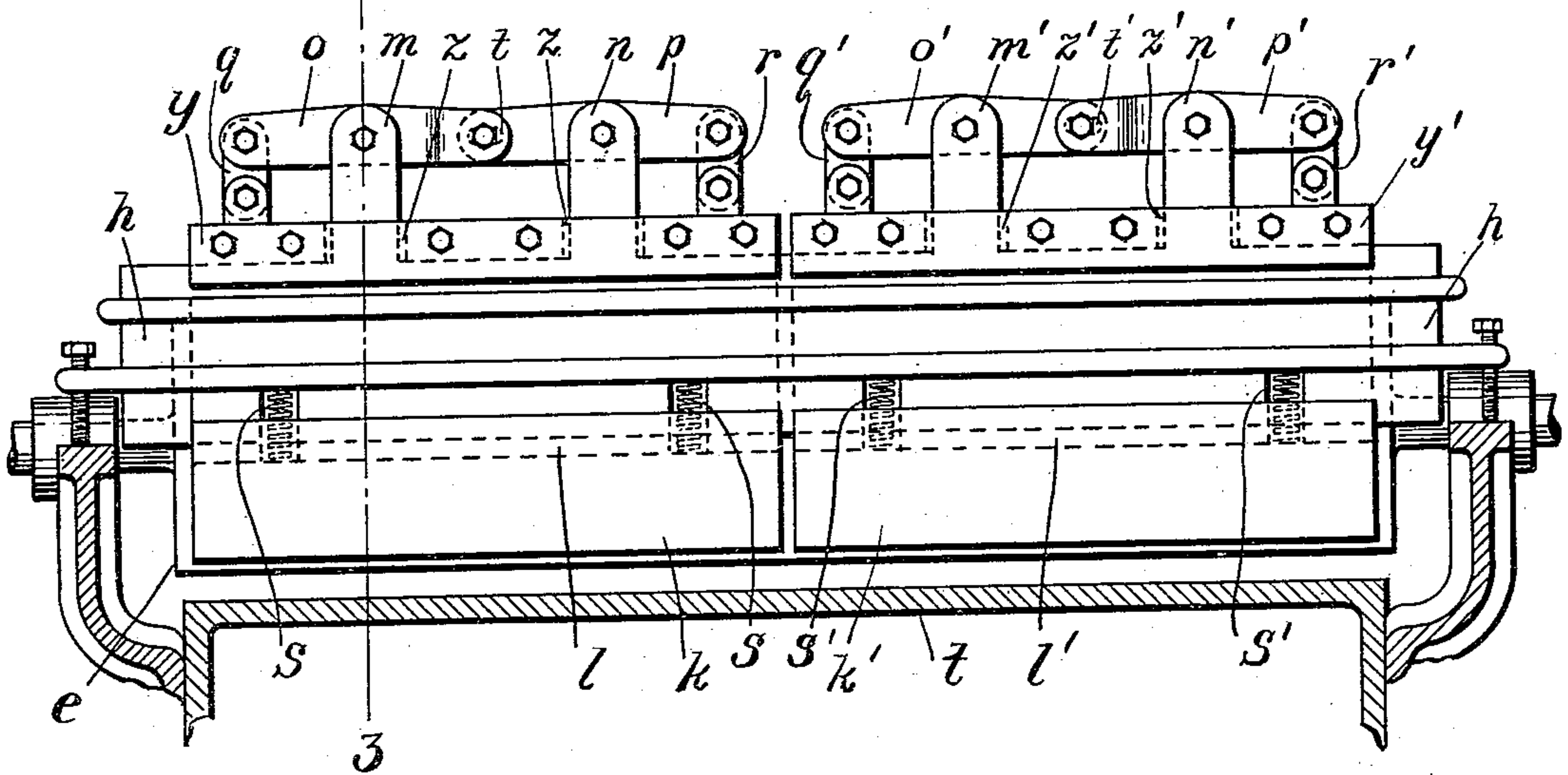
NO MODEL.

2 SHEETS—SHEET 1.

*Fig. 1*



*Fig. 2*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## PLANING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 750,917, dated February 2, 1904.

Application filed August 18, 1903. Serial No. 169,852. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM O. VIVARTTAS, a citizen of the United States, residing at Weehawken, county of Hudson, and State of New Jersey, have invented a new and useful Improvement in Planing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to divided chip-breakers for planers or surfacers.

The object of the invention is to maintain each section of the chip-breaker always in a strictly horizontal position parallel with the bed, while permitting independent vertical movement of the several sections to enable them to be raised to different levels to suit the different thicknesses of lumber fed through them.

In the drawings, Figure 1 is a plan view of a machine having a two-piece chip-breaker. Fig. 2 is a section on the line 2 2 of Fig. 1; and Fig. 3 is a section, somewhat enlarged, on the line 3 3 of Figs. 1 and 2.

$a\ b$  are the feed-rolls. The feed-roll  $a$  rotates in the bearing-box  $c$ , which is adjustable in the frame  $d$ . There are preferably as many feed-rolls or feed-roll sections as there are chip-breaker sections.

$t$  is the bed over which the stock moves.

$e$  is the cutter-head on a shaft rotatably mounted in the frame  $f$ .

$g\ g'$  are the two sections of the chip-breaker.

$h$  is the guide-bar, having arms  $i$  fulcrumed at  $j$  in bearings above and back of the cutter-head shaft. Adjacent to the nose-pieces  $k\ k'$  of the chip-breaker sections are the grooves  $l\ l'$ , into which the lower part of the guide-bar extends, by which means each section of the chip-breaker is adapted to slide vertically and independently of the other section upon the guide-bar.

$s\ s'\ s'$  are springs between the guide-bar  $h$  and the nose-pieces of the chip-breaker sections  $g\ g'$ .

The upper laterally-extending end  $x$  of the chip-breaker section  $g$  has bolted to it the cap

$y$ , provided with recesses  $z$ . Projecting upward from the guide-bar and extending through recesses  $z$  are standards  $m\ n$ .

$o\ p$  are levers pivoted between their ends to the standards  $m\ n$ , respectively. The adjacent inner ends of levers  $o$  and  $p$  are connected together, a bolt  $t$  extending through lever  $o$  and through a slot in lever  $p$ .

$q\ r$  are links the lower ends of which are pivoted to the chip-breaker section  $g$  and the upper ends of which are pivoted to the outer ends of the levers  $o$  and  $p$ , respectively. Similarly, the upper laterally-extending end  $x'$  of the chip-breaker section  $g'$  has bolted to it the cap  $y'$ , having recesses  $z'$ . Standards  $m'\ n'$  extend upward from the guide-bar through the recesses  $z'$ , to which standards are pivoted the levers  $o'\ p'$ . These levers are connected together at their inner ends and connected at their outer ends by means of links  $q'\ r'$  with the chip-breaker section  $g'$ .

The operation of the devices described is as follows: The stock first passes between the feed-rolls  $a$  and  $b$  and thence is fed forwardly underneath the chip-breaker and cutter. Each section of the chip-breaker will be raised on the slide-bar dependent upon the thickness of the stock—that is, if a relatively thin piece of lumber is put through one section of the chip-breaker and a relatively thick piece through the other section the sections will rise to different levels to accommodate the two different thicknesses of lumber. If we assume that either piece is narrow in proportion to the width of the section through which it passes and that it passes through one side of the section, the whole section will lift up parallel with the bed, thus giving an equal pressure to such narrow piece the same as if it passed through the middle of the section—that is, if such narrow piece of lumber is passed through the left-hand side of section  $g$  of the chip-breaker, Figs. 1 and 2, the left-hand side of the section will rise, elevating, through link  $q$ , the outer end of lever  $o$ , depressing the inner ends of levers  $o$  and  $p$ , and elevating the outer end of lever  $p$  thereby through link  $r$ , causing the right-hand end of the section to



rise to the exact level of the left-hand side, thus maintaining the section exactly level.

Thus it will be understood that the two sections of the chip-breaker are each always maintained in a strictly horizontal position parallel with the bed, although they may occupy different levels to suit the different thicknesses of stock that may be fed through them at any one time.

It will be understood that while I have shown the application of my invention to a two-piece chip-breaker and a two-piece feed-roll it is obvious that there may be any number of chip-breaker sections, corresponding to the number of pieces into which the feed-roll is divided.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. In a woodworking-machine, in combination, a pivoted supporting-bar, a chip-breaker divided into sections each having a groove, said bar extending partially into said grooves, a spring confined between said bar and each chip-breaker section, standards on said bar extending above each chip-breaker section, levers pivoted between their ends to said standards, the inner ends of said levers being pivoted together, and links pivoted to the outer

ends of said levers and extending downwardly and pivoted to the chip-breaker sections.

2. In a woodworking-machine, in combination, a cutter-head, a supporting-bar pivoted on one side of said cutter-head and extending over and beyond the same, a chip-breaker divided into sections each having a nose-piece adjacent to the cutter-head and a groove adjacent to said nose-piece, the upper portion of each chip-breaker section extending laterally, a spring seated in each groove, the free end of said bar extending into said grooves and seating against said springs, standards secured to the free end of said bar and extending upwardly through the laterally-extending portion of each chip-breaker section, levers pivoted between their ends to the standards, the inner ends of said levers being pivoted together, and links connecting the outer ends of said levers to the laterally-extending portions of the chip-breaker sections.

In testimony of which invention I have hereunto set my hand at Philadelphia on this 29th day of July, 1903.

WILLIAM O. VIVARTTAS.

Witnesses:

M. F. ELLIS,

M. M. HAMILTON.