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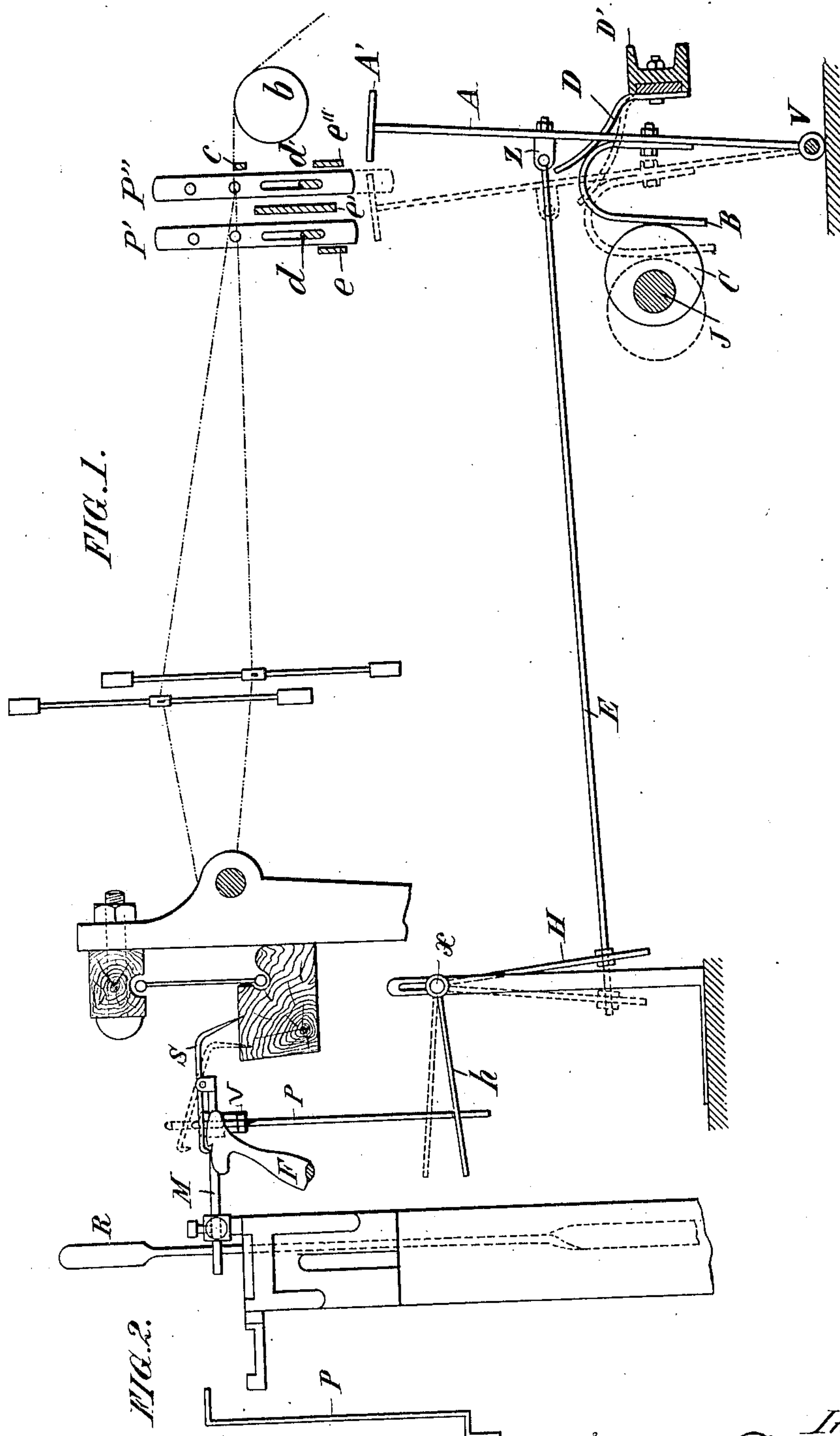
PATENTED MAY 19, 1908.

F. BLUMER.

AUTOMATIC STOP MOTION MECHANISM FOR POWER LOOMS.

APPLICATION FILED SEPT. 19, 1904.

3 SHEETS—SHEET 1.



Witnesses:  
H. Benjamin  
W. A. Milord

Inventor:  
Fritz Blumer.  
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Attorney

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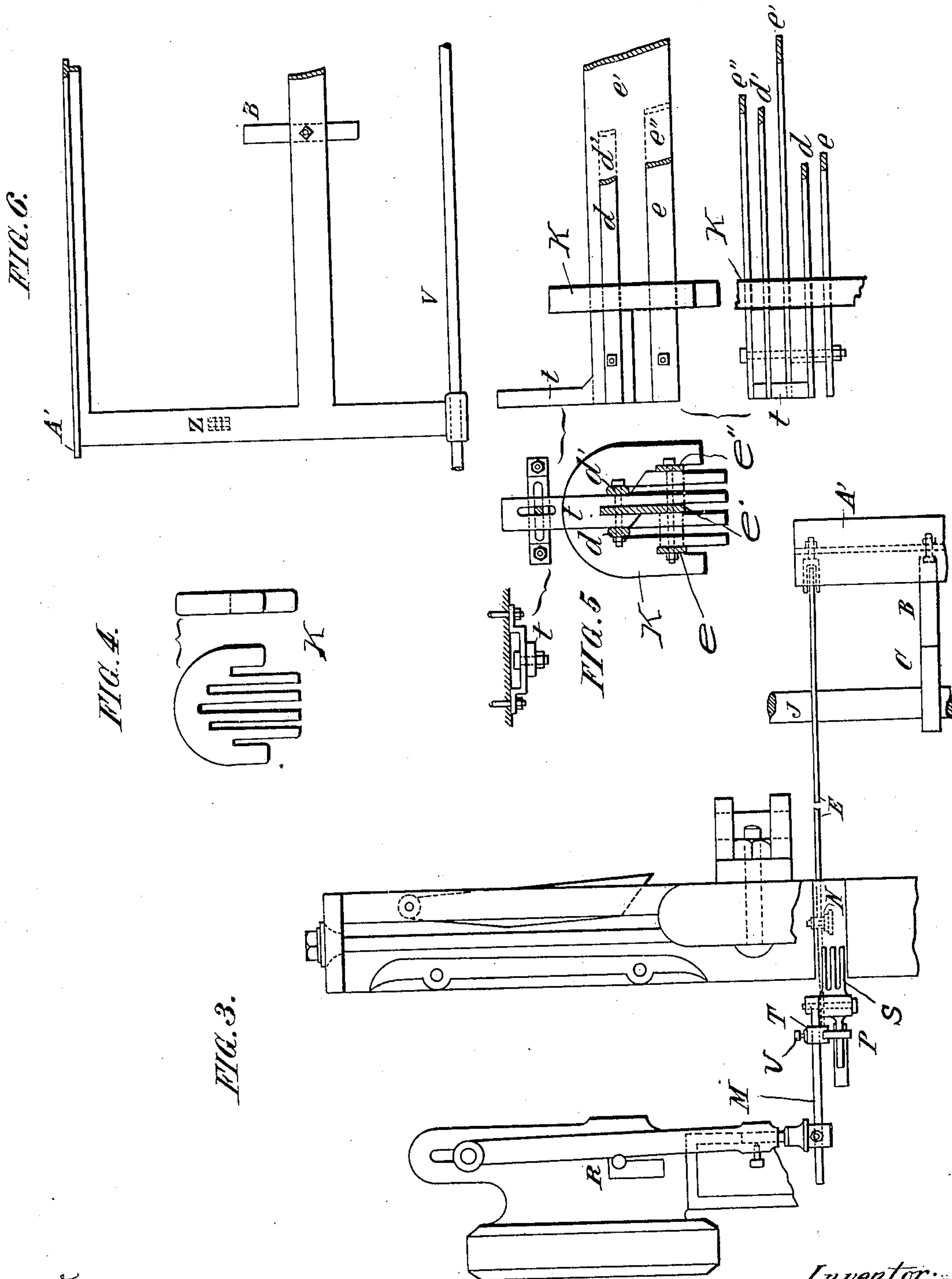
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 7.

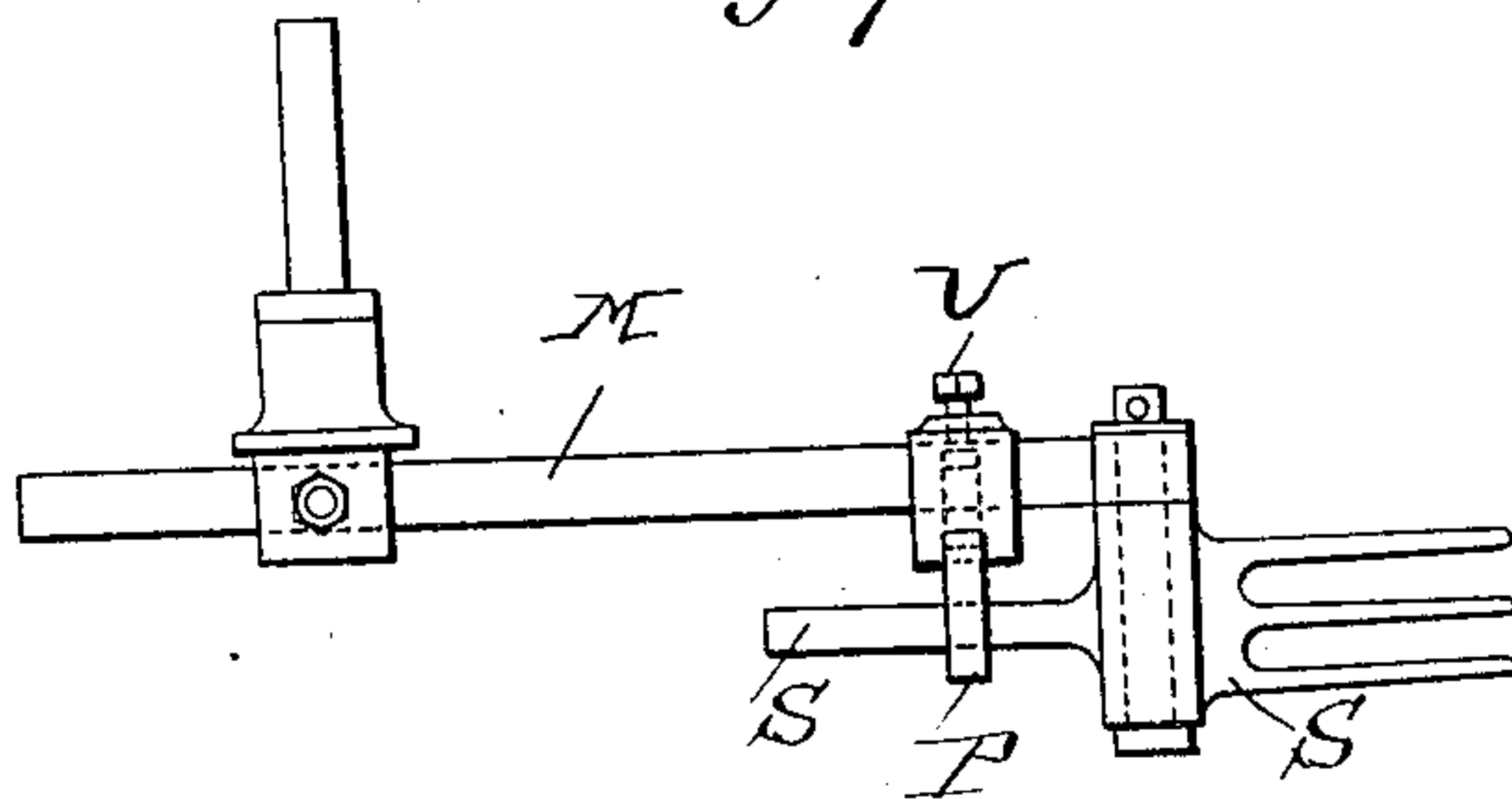


Fig. 8.

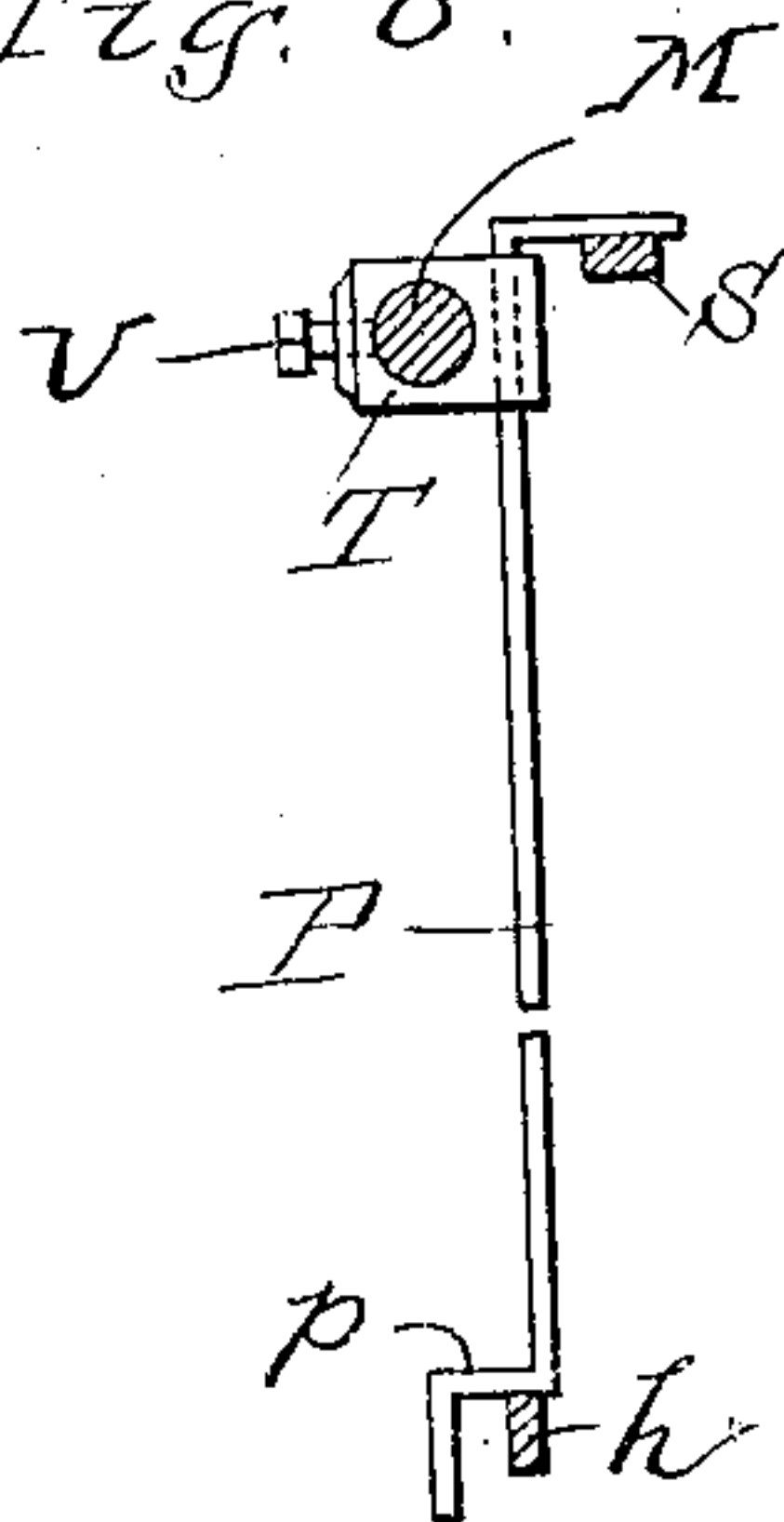


Fig. 9.

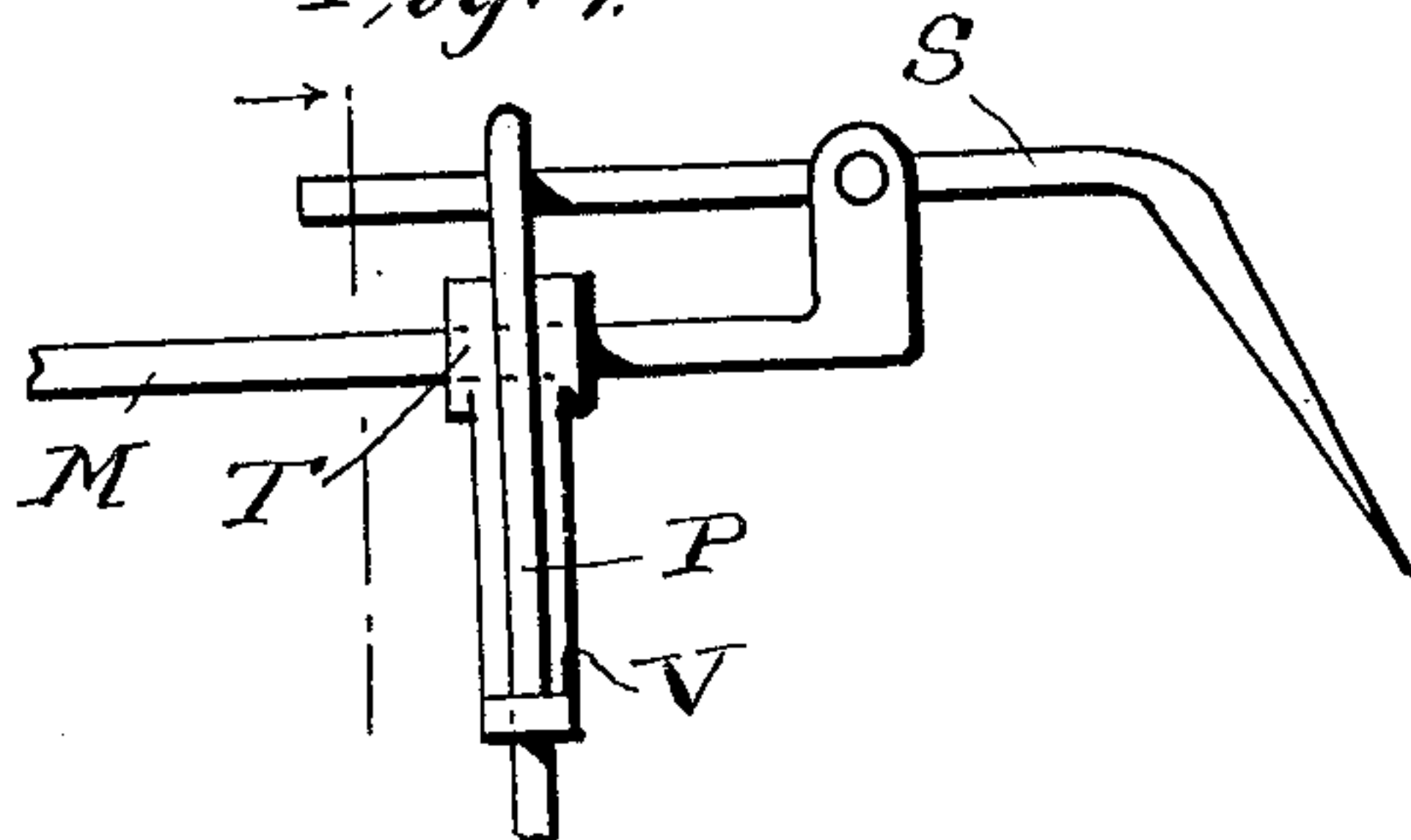
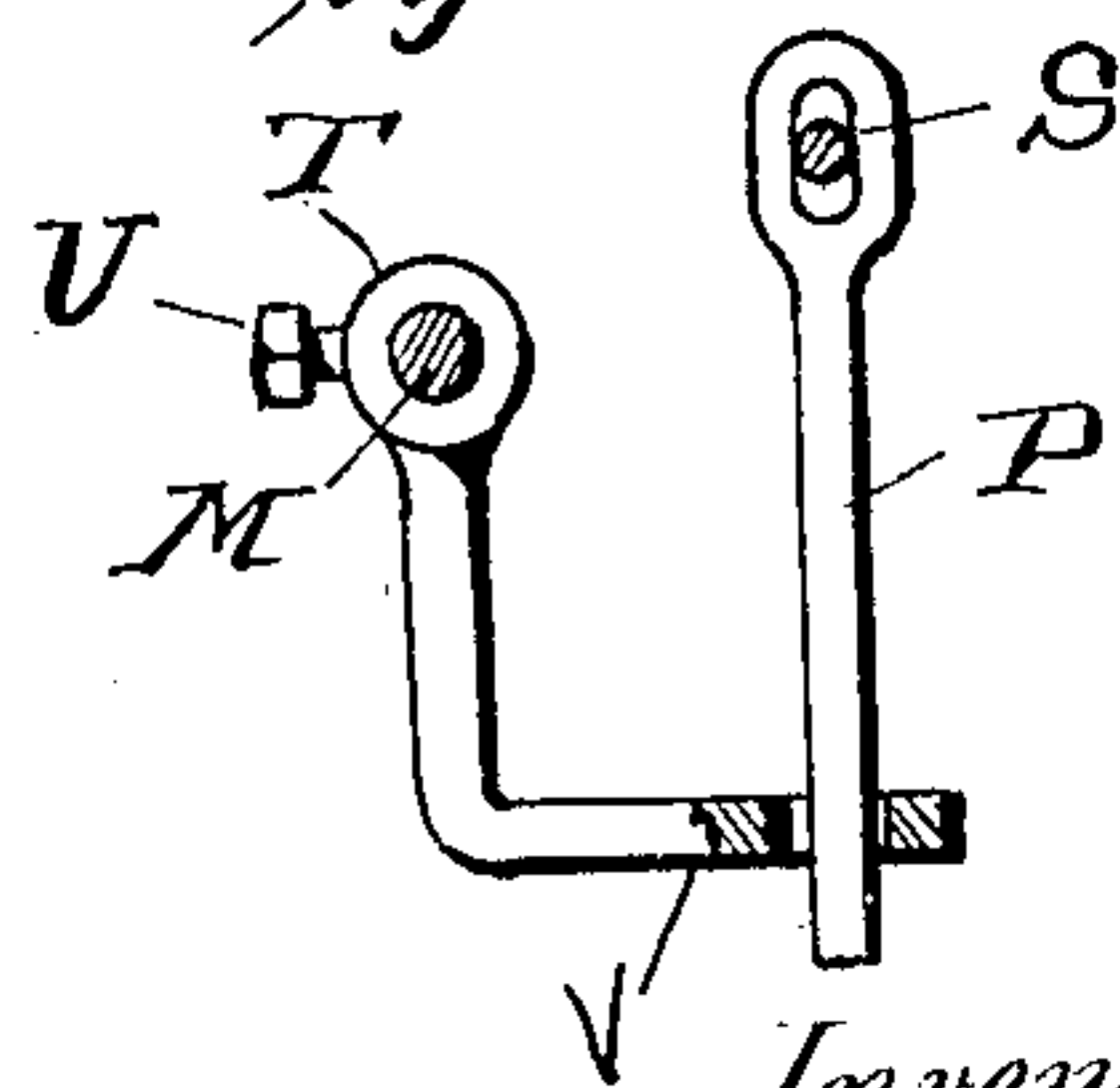


Fig. 10.



Witnesses:

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Inventor:

Fritz Blumer.  
By Frederick Benjamin  
Attorney.



# UNITED STATES PATENT OFFICE.

FRITZ BLUMER, OF ENGI, SWITZERLAND.

## AUTOMATIC STOP-MOTION MECHANISM FOR POWER-LOOMS.

No. 888,300.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed September 19, 1904. Serial No. 225,133.

*To all whom it may concern:*

Be it known that I, FRITZ BLUMER, a citizen of the Swiss Confederacy, and resident of Engi, Canton of Glarus, Switzerland, have invented certain new and useful Improvements in Automatic Stop-Motion Mechanism for Power-Looms, of which the following is a specification.

This invention relates to an automatic stop motion mechanism for power looms which, when a thread of the warp breaks, acts directly upon the disconnecting fork of the batten and thus automatically stops the loom.

The accompanying drawings represent this invention diagrammatically:—

Figure 1 is a side elevation of this new stop motion mechanism complete. Fig. 2 is a fragmentary view of the hook. Fig. 3 is a plan of the parts shown in Fig. 1. Figs. 4 and 5 are details of the guide. Fig. 6 is an elevation of the feeler. The remaining views are details of the weft stop mechanism.

The warp threads coming from the warp beam pass as shown over a guide bar or rail  $c'$  through eyes of the detector plates  $P'$   $P'$ , slotted and mounted on guide bars  $d$   $d'$  and grouped by three arms  $e$   $e'$   $e''$ , all connected and supported by braces  $t$  much after the manner disclosed in my U. S. Patent 830561 dated Sept. 11, 1906. Lateral movement of the detector plates may also be prevented by stops  $K$  recessed and applied as in said patent.

$A'$  designates an oscillating feeler moving below said detector plates and their guides and preferably carried by a frame  $A$  mounted on a rod  $V$ . A cam  $C$  fixed on a shaft  $J$  impinges against a bent rod  $B$  carried by said frame to impart to the latter a yielding motion in one direction; while a spring  $D$  secured to a support  $D'$  moves it in the opposite direction.

$Z$  designates an articulation connecting the frame with a rod  $E$ , which latter connects with a bell-crank lever  $H$  pivoted at  $x$  and having a substantially horizontal arm  $h$  on which rests an elbow  $p$  at the lower end of a hook  $P$  whose upper end engages the tail of the weft fork  $S$ —all as indicated in Fig. 1. The latter is pivotally supported by a rod  $M$  suitably connected with the shipper handle  $R$  in proper position so that when its hooked rear end is depressed it will be engaged and drawn back by the weft hammer  $F$ , and thereby stop the loom.

In order that the connection between the

hook  $P$  and fork  $S$  may be rendered adjustable, I employ mechanism best seen in Figs. 9 and 10, and illustrated in plan view in Fig. 3. The collar  $T$  is longitudinally adjustable upon the rod  $M$  by a set screw  $U$ , and preferably has a depending portion  $V$  apertured to surround the body of the hook  $P$  and permit the latter to reciprocate vertically. By loosening the set screw and adjusting said collar along the rod  $M$ , the point of engagement of the hook  $P$  upon the tail of the weft fork  $S$  may be brought nearer to or further from the pivotal support of the latter as will be understood.

The operation is as follows: When a warp thread breaks its detector plate drops into the path of the oscillating feeler, which is thereby held in the full line position in Fig. 1; and through the rod  $E$  and lever  $H$ , the hook  $P$  is depressed and the tail of the weft fork  $S$  dropped to a position to be actuated by the weft hammer  $F$  to cause the stopping of the loom.

What is claimed as new is:

1. In a stop motion mechanism for looms, the combination with detector plates supported by the warp threads, a weft fork pivotally supported, and the weft hammer adapted to engage said fork; of an oscillating feeler mounted below said plates, an adjustable connection between said feeler and the tail of said fork, a bent rod mounted on the feeler, a cam pressing the rod in one direction, and a spring pressing the feeler in the opposite direction.

2. In a stop motion mechanism for looms, the combination with detector plates supported by the warp threads, a weft fork pivotally supported, and the weft hammer adapted to engage said fork; of an oscillating feeler mounted below said plates, yielding means for moving it in opposite directions, a hook engaging the tail of the fork, connections between the feeler and hook, and a collar adjustable parallel with the length of the fork and having an apertured portion loosely engaging said hook.

3. In a stop motion mechanism for looms, the combination with detector plates supported by the warp threads, a weft fork pivotally supported, and the weft hammer adapted to engage said fork; of an oscillating feeler mounted below said plates, a hook engaging the tail of the fork and having an elbow, a bell-crank lever on one arm of which said elbow rests, connections between

its other arm and said feeler, a rod parallel with the fork, and a collar adjustable longitudinally on said rod and loosely engaging said hook for adjusting its point of connection with said fork.

5  
10 4. In a stop motion mechanism for looms, the combination with detector plates supported by the warp threads, a weft fork pivotally supported, and the weft hammer adapted to engage said fork; of an oscillating feeler mounted below said plates, a hook engaging the tail of the fork and having an elbow, a support for said elbow, means for raising and lowering said support by the

movements of the feeler, a rod pivotally supporting said fork and standing parallel with its tail, a collar mounted on said rod and having a depending portion apertured and loosely surrounding the hook, and a set screw for adjusting the position of the collar on the rod and hence of the hook on the fork.

In testimony whereof I have hereunto set my hand in presence of two witnesses.

FRITZ BLUMER.

Witnesses:

LUCAS LERGILLANT,  
JOSEPH SIMON.