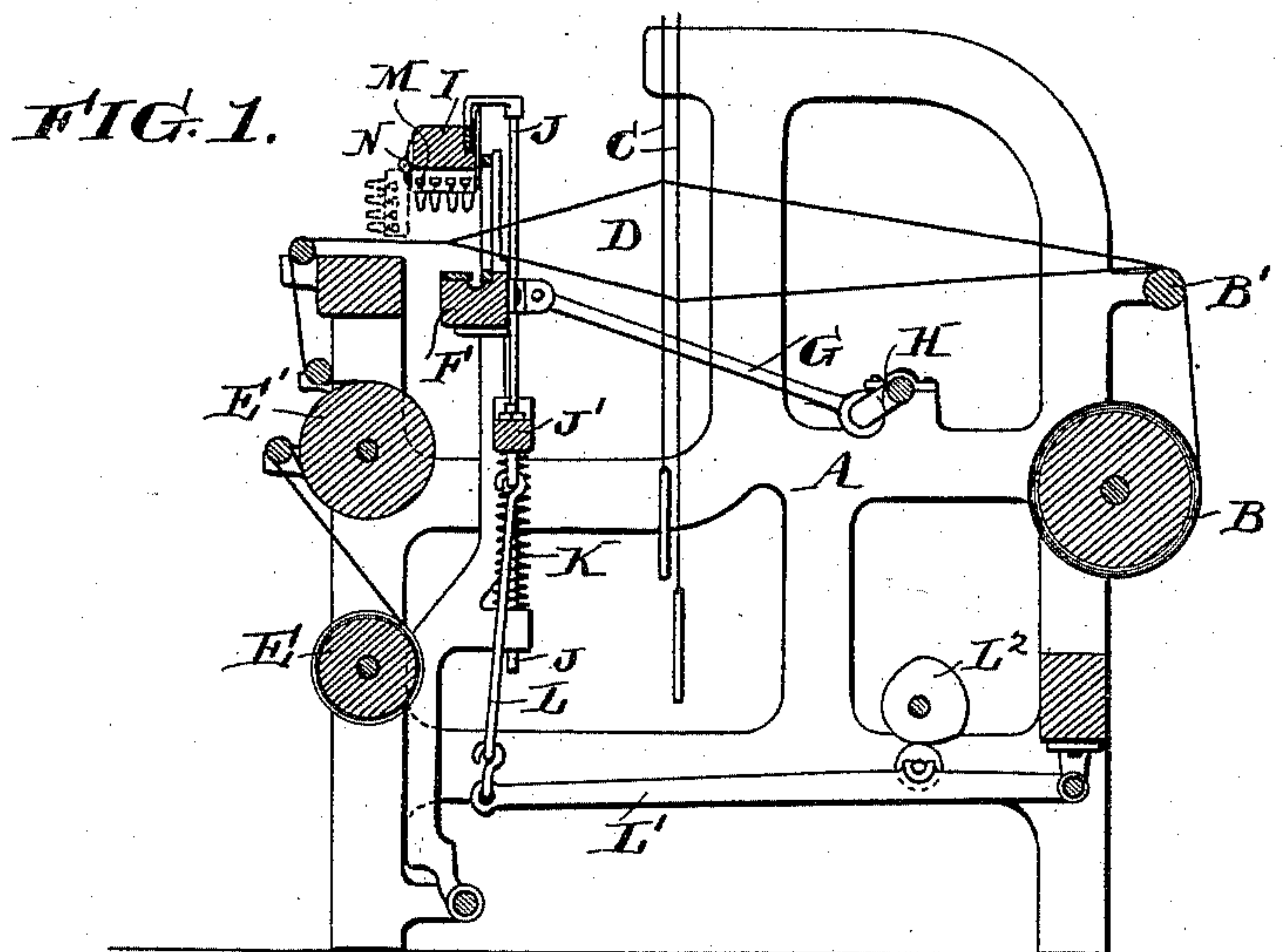


(No Model.)

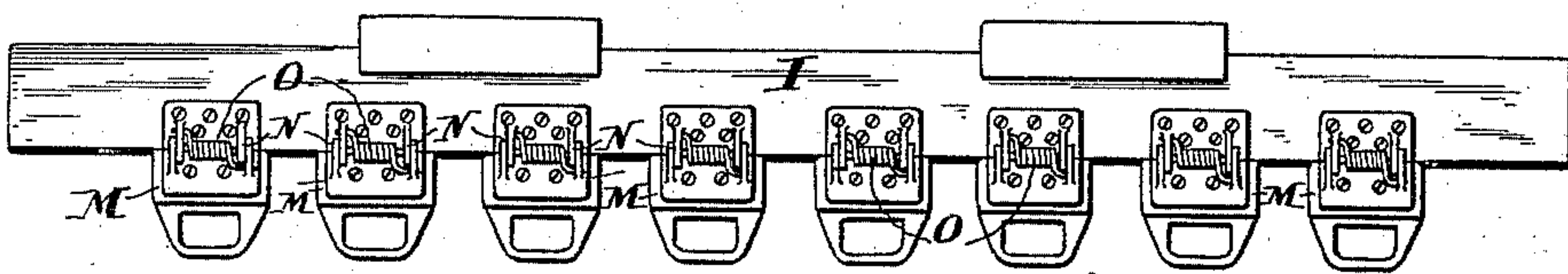
A. WAGNER.  
SWIVEL LOOM.

No. 488,512.

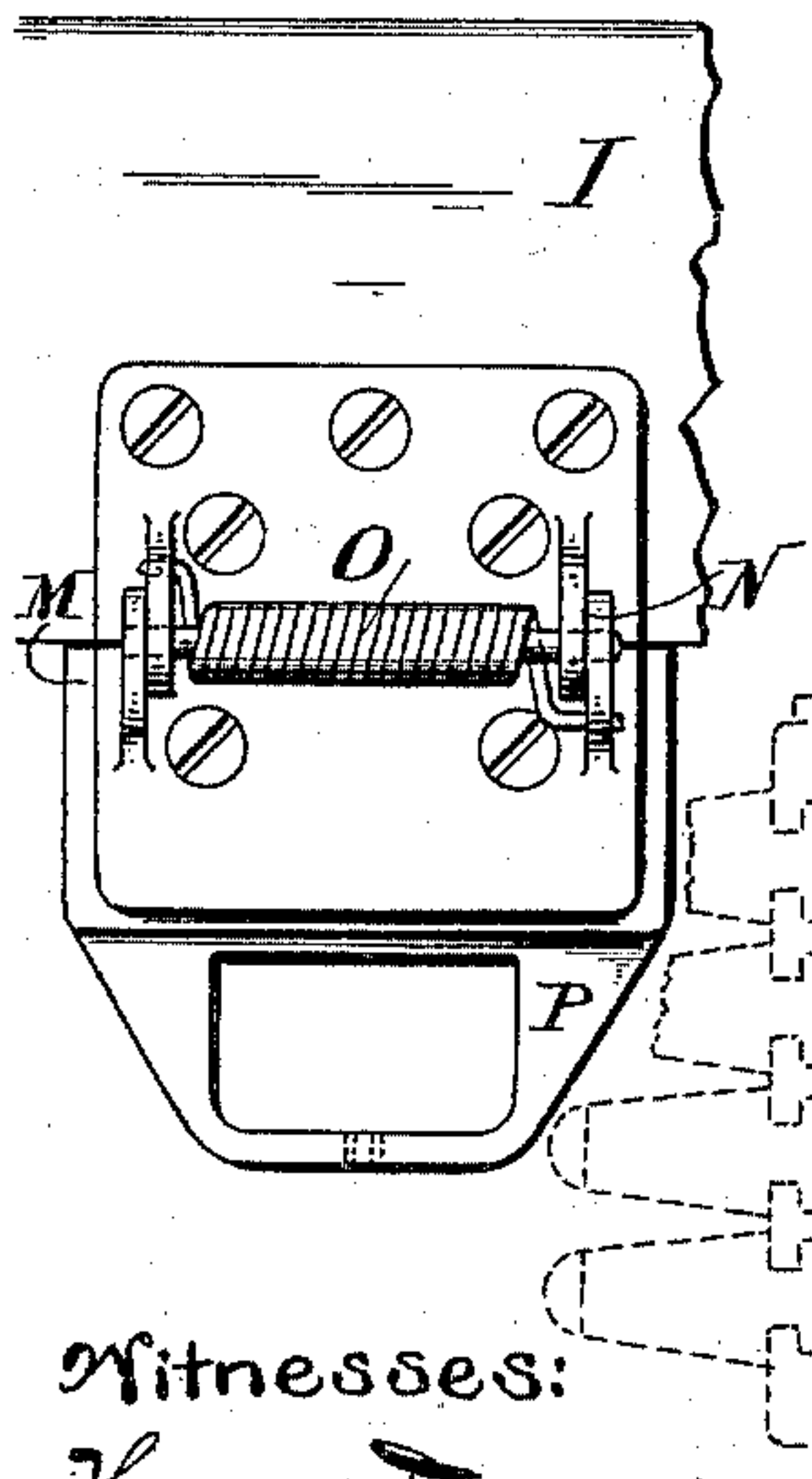
Patented Dec. 20, 1892.



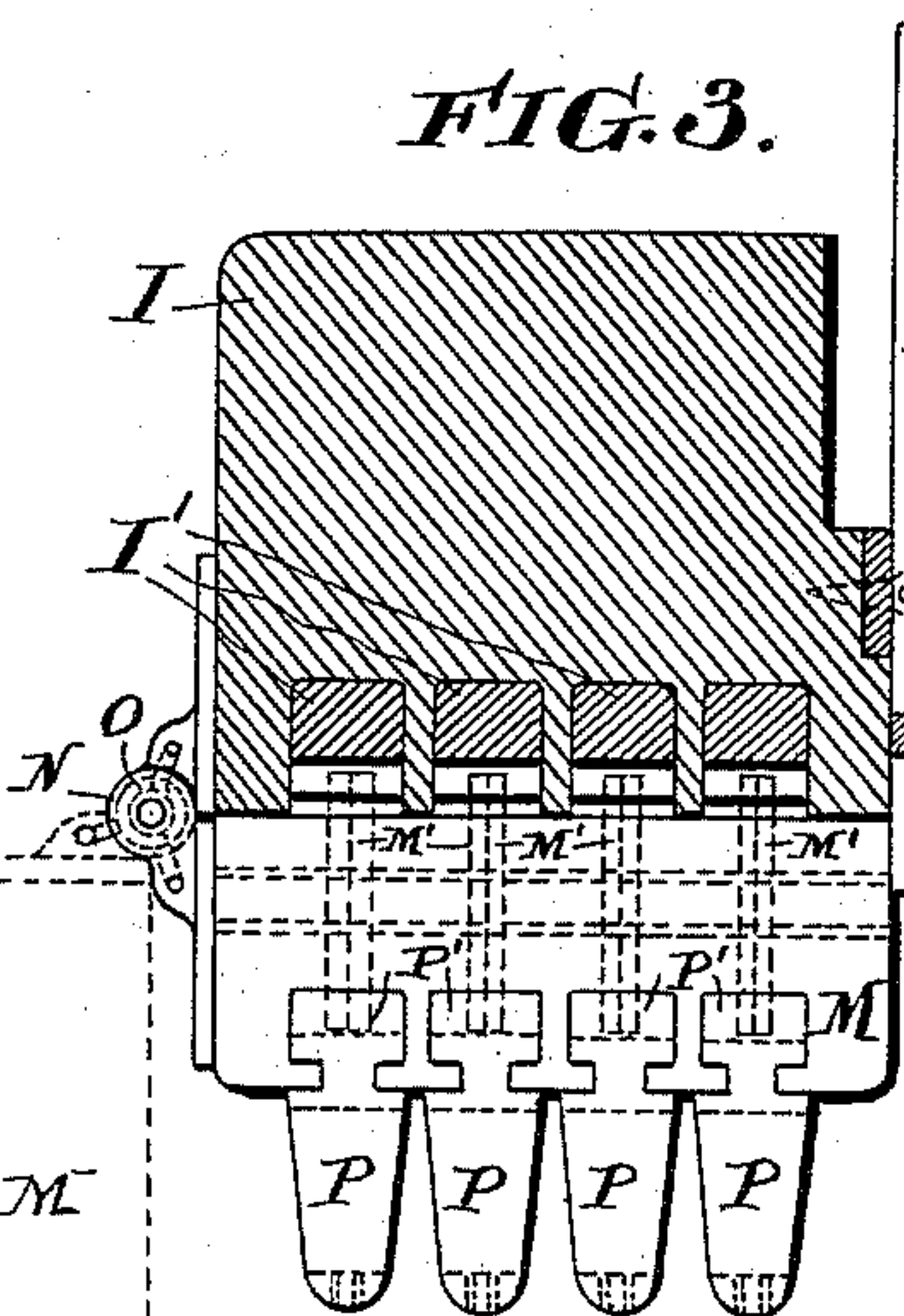
**FIG. 2.**



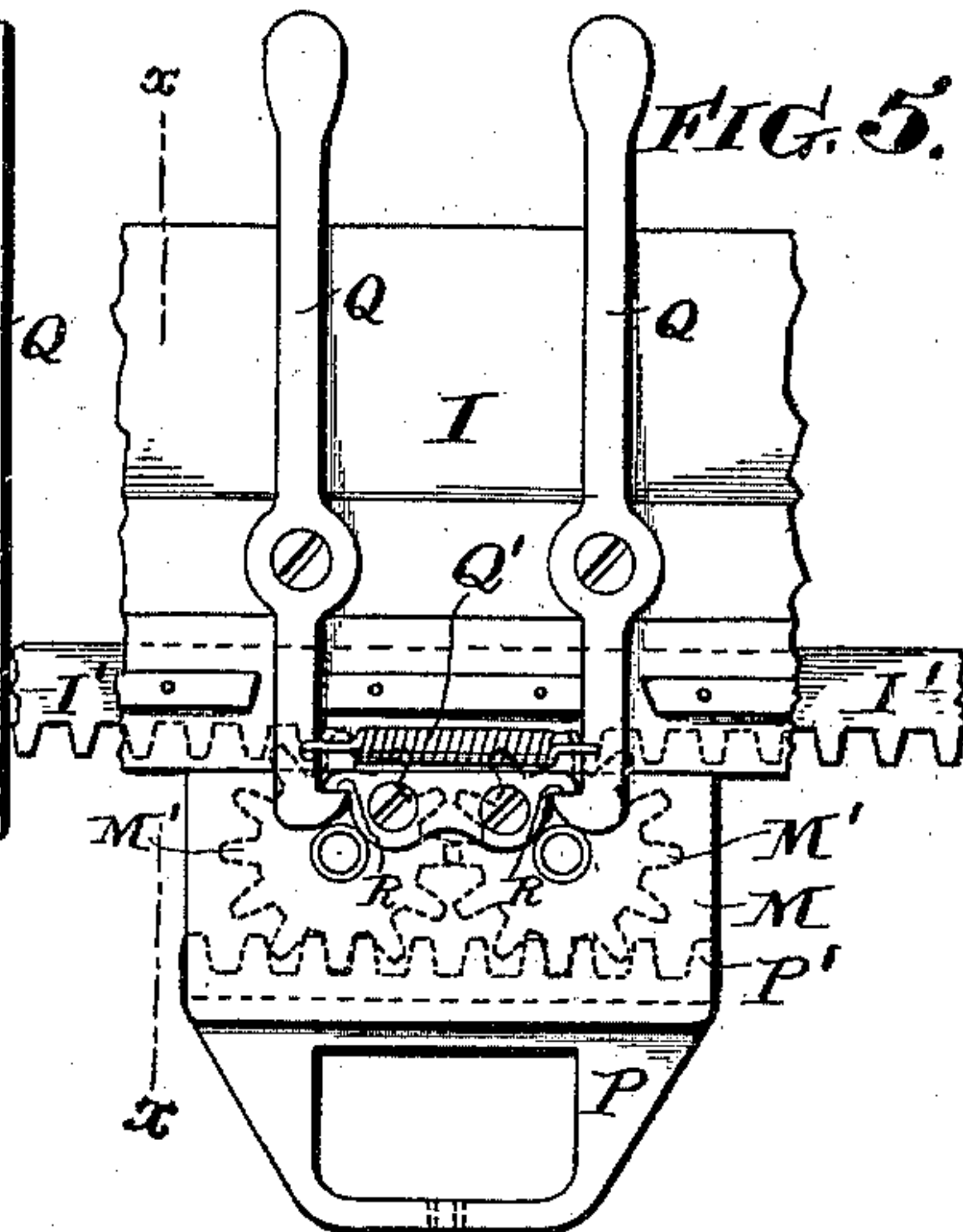
*FIG. 4.*



**FIG. 3.**



**FIG. 5.**



Witnesses:

Henry Dwyer  
C. B. Lawer.

Inventor:

August Wagner  
by his Vtly.  
Frederic T. Chamber.



# UNITED STATES PATENT OFFICE.

AUGUST WAGNER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
SCHAUM & UHLINGER, OF SAME PLACE.

## SWIVEL-LOOM.

SPECIFICATION forming part of Letters Patent No. 488,512, dated December 20, 1892.

Application filed November 21, 1891. Serial No. 412,618. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUST WAGNER, of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and  
5 useful Swivel-Looms, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to swivel-shuttle looms  
10 and particularly to the means for securing the shuttle-carrying blocks to the swivel-batten beam.

In another application filed by me on the 18th day of May 1891, Serial No. 393,217, I  
15 have shown and described a device substantially similar in its general features to my present one except that the independent shuttle-carrying blocks are there shown and described as being normally held in position  
20 upon the face of the beam, and my present invention consists in so combining a series of springs to the beam and each block that they will tend to normally hold the blocks away from the face of the beam and to one side of  
25 it. This device I have found to be much more useful than the previous one as it is only necessary for the operator to unlatch the block when it will automatically move into a position in which it can be readily reached  
30 and handled.

Reference is now had to the drawings which illustrate my invention and in which,—

Figure 1 is a side elevation showing the general features of a loom embodying my invention. Fig. 2 is a front elevation of the  
35 swivel-shuttle beam having attached to it the shuttle-carrying blocks. Fig. 3 is a cross-sectional view taken on the line  $x-x$  of Fig. 5. Fig. 4 a back view of a portion of the beam  
40 with one attached shuttle-block; and Fig. 5 a similar front view.

A is the framing of the loom; B the warp beam; B' a roller over which warp threads pass; C C heddles; D the shed; E the cloth  
45 roll; E' a series of take-up rolls over which the fabric passes to the cloth roll.

F is the lay; G a connecting rod; and H a crank by which the lay is operated.

I is the swivel-shuttle beam which moves  
50 forward and backward with the lay but is given vertical motion through the medium of rods J.

J' is a brace rod connecting with rods J; K a spring acting on the rods J to thrust them normally upward; L a link connecting  
55 the rods J or brace J' with a lever L' which is operated at suitable times in any convenient way as by means of a cam L<sup>2</sup>—the downward motion of the lever drawing the beam I into operative position. 60

M M M, &c., are the swivel-shuttle carrying blocks which are independently hinged to the beam I as by hinges N.

O O, &c., are springs so connected with the bar I and with each of the blocks as to tend  
65 to throw the block away from the face of the beam and to one side of it as for instance as is shown in dotted lines in Fig. 3.

P P P are shuttles held in properly formed grooves at the bottom of the shuttle block  
70 and having teeth on their upper faces as is indicated at P'.

M' M' are gear-wheels journaled in the block M which engage the teeth P' and are engaged by the reciprocating racks as indicated at I', Figs. 3 and 5—these racks being  
75 secured in the face of the beam I.

Q, Q, are the latch levers; Q' a spring holding them normally together; and R R detents secured on the face of the blocks M which  
80 are engaged by latch levers as shown in Fig. 5 when the blocks are thrown into operative position. It is evident of course that by merely drawing the handles of the latch levers I together they will release their hold  
85 upon the block which will then be immediately thrown out as is indicated in Fig. 3 by the action of the spring O.

Having now described my invention, what I claim as new and desire to secure by Letters  
90 Patent, is:

The combination of the beam I with separate and independent shuttle-blocks M arranged to carry the swivel shuttles, said blocks being hinged to one edge of the beam; springs secured to the beam and to each block  
95 in such way as to normally hold the blocks away from the face and to one side of the beam; and a catch arranged to hold the block in place on the beam face.

AUGUST WAGNER.

Witnesses:

LEWIS R. DICK,  
FRANCIS T. CHAMBERS.