

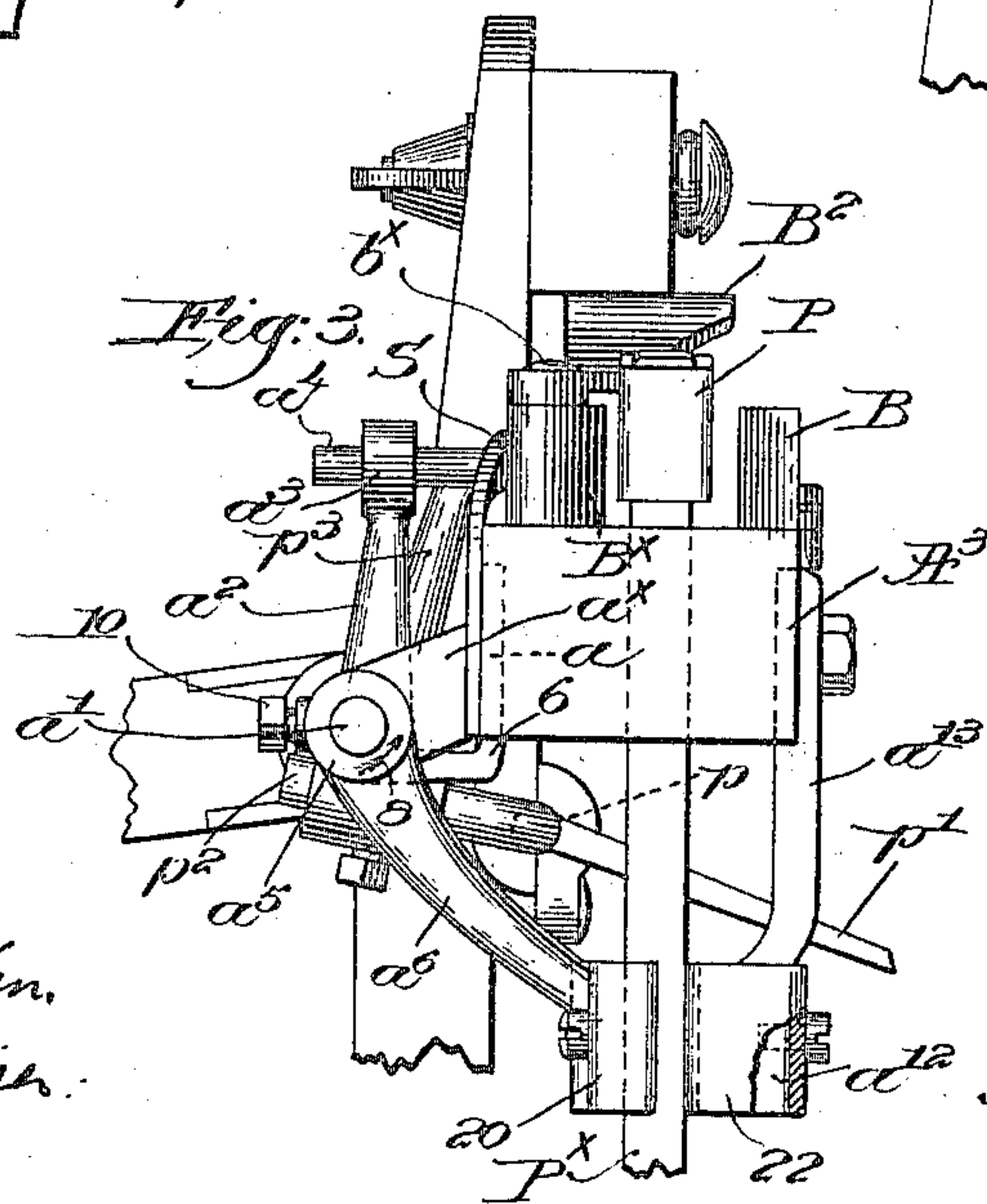
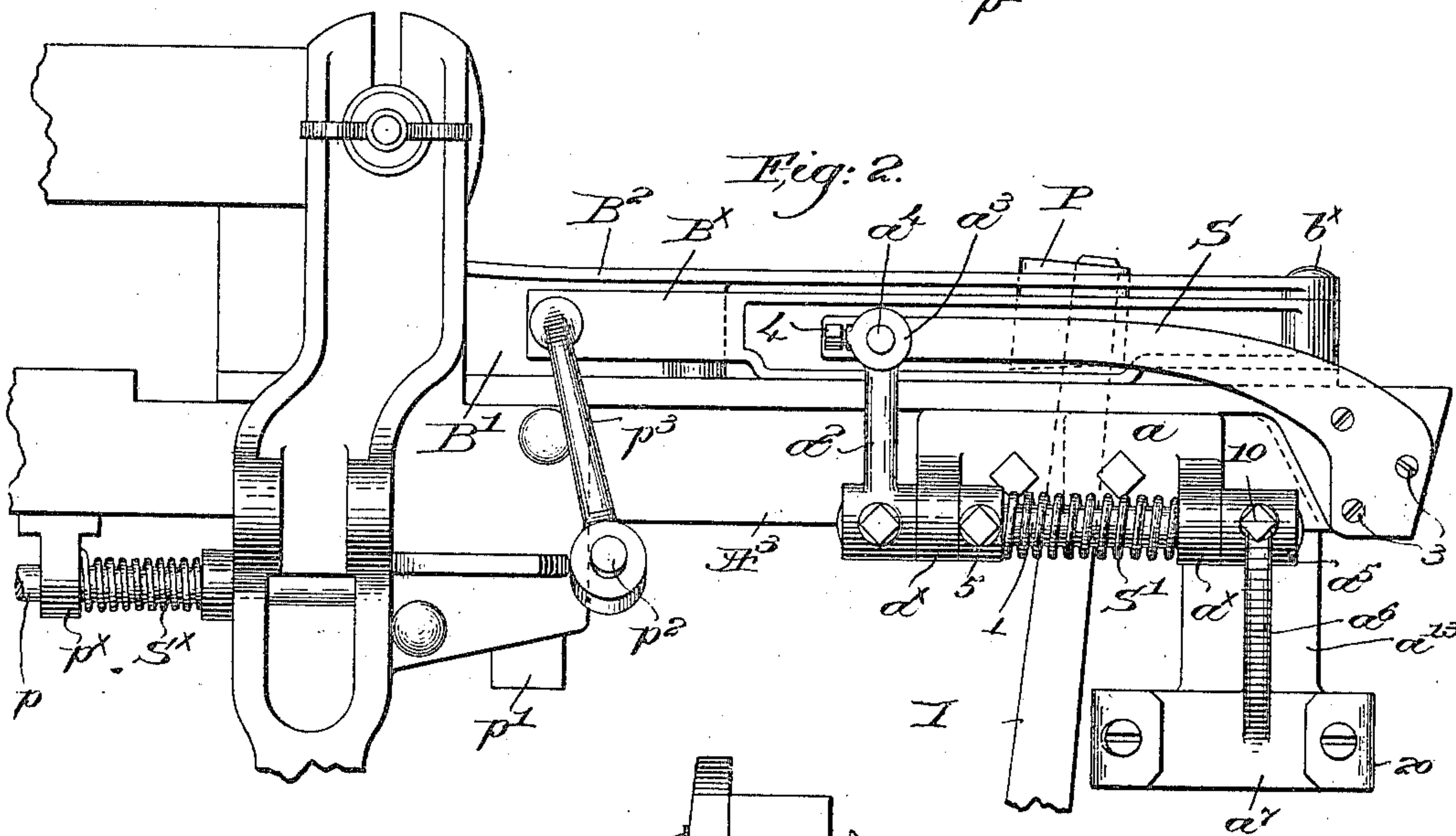
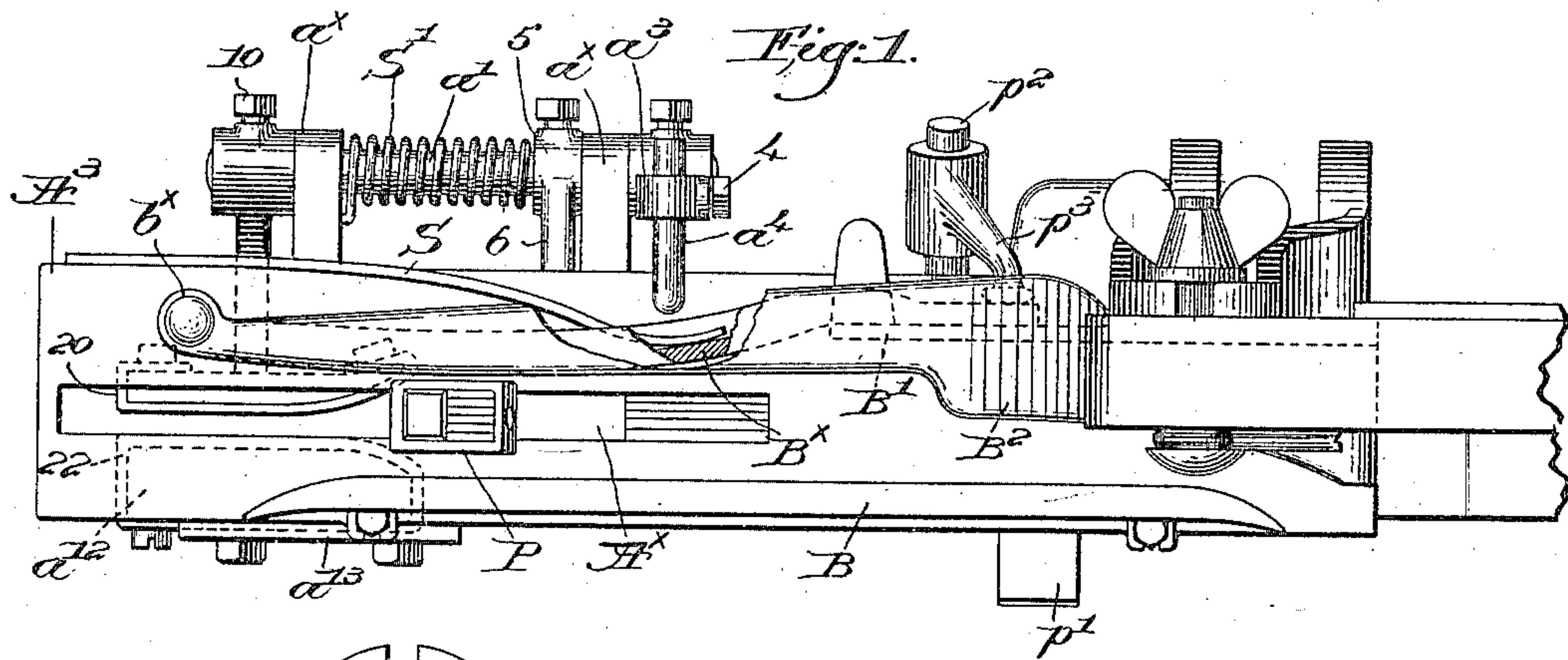
No. 680,778.

Patented Aug. 20, 1901.

O. JANELLE.  
LOOM.

(Application filed May 14, 1901.)

(No Model.)



Witnesses,  
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# UNITED STATES PATENT OFFICE.

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## LOOM.

SPECIFICATION forming part of Letters Patent No. 680,778, dated August 20, 1901.

Application filed May 14, 1901. Serial No. 60,233. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR JANELLE, a citizen of the United States, residing at Manchester, county of Hillsboro, State of New Hampshire, have invented an Improvement in Looms, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

10 This invention has for its object the production of novel means for preventing rebound of the shuttle when it enters the shuttle-box of a loom.

15 Various novel features of my invention will be hereinafter described, and particularly pointed out in the following claims.

Figure 1 is a top or plan view, partly broken out, of the left-hand end of the lay of a loom with one embodiment of my invention applied thereto. Fig. 2 is a rear elevation of the parts shown in Fig. 1; and Fig. 3 is a right-hand end elevation of the lay and adjacent parts shown in Fig. 2, with a part of the picker-check broken out.

25 I have herein shown the lay  $A^3$  as having a shuttle-box thereon comprising a front plate or wall B, back wall  $B'$ , overhanging shuttle-guard  $B^2$ , and a binder  $B^x$ , pivotally mounted near the outer end of the lay at  $b^x$ , which may be all of usual or well-known construction, the lay being longitudinally slotted at  $A^x$  for the staff of the usual picker P. A suitable binder-spring S bears against the back of the binder and is secured to the lay at 3, and the protector rock-shaft  $p$ , mounted in bearings  $p^x$  beneath the lay, the dagger  $p'$ , rocker-arm  $p^2$ , having the upturned finger  $p^3$  to bear against the free end of the binder, and the controlling-spring  $S^x$  are also of usual construction and operate in a well-known manner.

40 The impact of the shuttle upon the swell of the binder at the high rate of speed of the shuttle as it enters the shuttle-box throws the binder out against the spring S and the spring  $S^x$  of the protector mechanism, and before the binder can return to engage and prevent the shuttle from rebounding the shuttle hits the picker and tends to bound back.

50 I have herein provided means to accelerate the return of the binder to properly check re-

bound of the shuttle, such means being made operative by or through the impact of the entering shuttle upon the picker.

A bracket  $a$ , secured to the lay, has bearings  $a^x$  for a short rock-shaft  $a'$ , having secured to it an upturned arm  $a^2$ , provided with an eye  $a^3$ , through which is extended a pusher, shown as a short rod  $a^4$ , held in adjusted position by a set-screw 4, the front end 60 of the pusher being behind and normally out of engagement with the binder. A spring  $S'$  surrounds the shaft  $a'$  between its bearings, one end of the spring being fixed to one of the bearings and the other end to a collar 5, 65 fast on the shaft, the spring normally maintaining the parts in the position shown, a stop 6 on the collar engaging the lay (see Fig. 3) and limiting the rotation of the shaft  $a'$  in the direction of arrow 8. The outer end of 70 the shaft has secured thereto, preferably adjustably, by a set-screw 10 a hub  $a^5$ , having a depending leg  $a^6$ , which at its lower end is laterally enlarged to form a foot  $a^7$ , extending parallel to and normally partly in the 75 path of the picker-staff  $P^x$  and beveled or flared at its inner end. (See Fig. 2.) The vertical face of the foot is preferably covered with leather or other suitable cushioning material, as 20, and the covered foot constitutes 80 a movable buffer forming one member of a picker-check, the latter also including a fixed buffer located opposite to the movable buffer and herein shown as a suitably-shaped head  $a^{12}$  on the lower end of a bracket  $a^{13}$ , secured 85 to the lay, said head being also covered with cushioning material, such as leather or the like 22, and the fixed buffer is also beveled or flared at its inner end, the straight vertical face of the buffer being shown as substantially 90 coincident with one side of the path of the picker-staff, the flared inner ends of the two buffers, which normally are in the position shown in the drawings and particularly referring to Figs. 1 and 3, constituting a wide 95 entrance for the picker-staff on its outward stroke. When the shuttle enters the shuttle-box, it hits the swell of the binder  $B^x$  and throws the latter outward with great violence, such movement of the binder being opposed by 100 the action of the springs  $S S^x$ , and the shuttle as it continues its movement toward the end of



the lay hits the picker and the latter is moved with the shuttle. Such impact of the shuttle upon the picker drives the picker-staff between the fixed and movable buffers comprising the picker-check and presses the movable buffer  $a^7$  toward the back of the loom to thereby rock the shaft  $a^1$  in the opposite direction to the arrow 8, and such rocking of the shaft moves the pusher  $a^4$  forward to engage and push the binder back toward the front of the shuttle-box, accelerating its return by the quick sharp blow imparted to it by the pusher.

The separation of the buffers against the action of the spring  $S'$  operates at the same time as a check for the picker, and the acceleration imparted to the binder on its return movement brings the binder into position to engage the side of the shuttle before the latter has had an opportunity to rebound, such engagement of the binder with the shuttle thereby checking and preventing rebound of the shuttle.

When the picker is thrown inward by any usual actuating means, (not shown,) the picker-staff passes out from between the fixed and movable buffers constituting the picker-check, and the movable buffer returns to normal position, (shown in Fig. 1,) and at the same time the pusher  $a^4$  is withdrawn from engagement with the binder, so that the latter is left entirely to the control of the binder-spring and the spring on the protector rock-shaft at the next impact of the entering shuttle.

By the construction herein shown the resistance of the binder and the impact of the shuttle are not increased, but an additional impulse is given to assist the return of the binder to operative position in time to engage and prevent rebound of the shuttle.

Having fully described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a loom, the lay, a shuttle-box thereon, a spring-controlled binder thrown out by impact of the entering shuttle, the picker, a picker-check comprising a fixed and a yielding buffer, between which the picker passes when struck by the entering shuttle, and means actuated by movement of the yielding buffer to engage and accelerate the return of the binder to position to prevent rebound of the shuttle.

2. In a loom, the lay, a shuttle-box thereon, a binder, the picker, a spring-controlled rock-shaft on the lay and having a finger to cooperate with and resist outward movement of the binder, a second rock-shaft also mounted on the lay and having an arm to cooperate with the binder, and means operated by shuttle-induced movement of the picker to rock the second rock-shaft and bring the arm thereof into engagement with the binder, to accelerate the return of the latter to position to cooperate with the shuttle.

3. In a loom, the lay, a shuttle-box thereon, a binder, the picker, a picker-check having a buffer movable by engagement with the picker, a pivotally-mounted arm on the lay and normally inoperative, and connections between the buffer and arm to move the latter toward and to engage the binder to accelerate its inward movement into checking position for the shuttle.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OSCAR JANELLE.

Witnesses:

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