

G. E. MILLS.
PIN-LOCKING MEANS FOR CLEAVISES.
APPLICATION FILED FEB. 20, 1909.

948,237.

Patented Feb. 1, 1910.

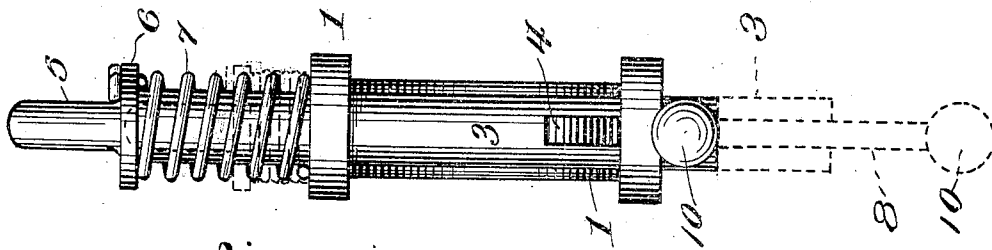


Fig. 2.

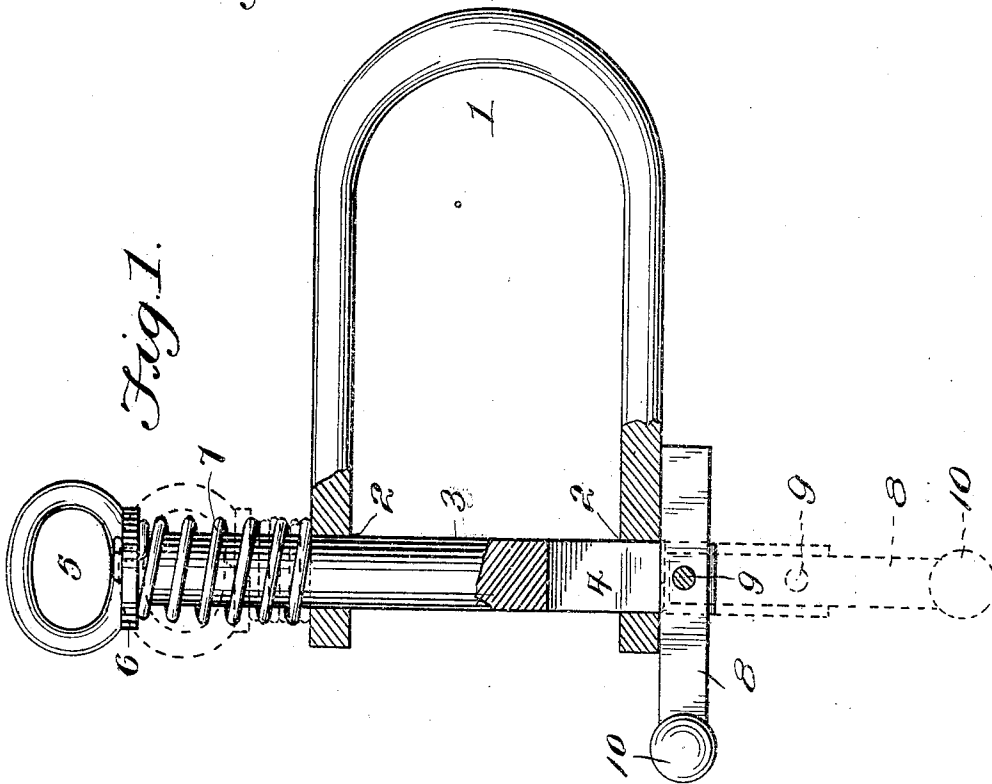


Fig. 1.

Witnesses

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PIN-LOCKING MEANS FOR CLEVISES.

948,237.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed February 20, 1909. Serial No. 479,042.

To all whom it may concern:

Be it known that I, GOULD E. MILLS, a citizen of the United States, residing at Lawrenceville, in the county of Lawrence and State of Illinois, have invented new and useful Improvements in Pin-Locking Means for Clevises, of which the following is a specification.

This invention is an improved interlocking clevis in which the pin is provided with a locking key for securely holding the pin to the yoke, the said key being pivoted to the pin whereby it may be moved at right angles or moved in a plane with the pin, spring means being employed for exerting its tension against the spring whereby the key can be operatively held at right angles to the pin and yieldingly engaged with the lower arm of the yoke of the clevis, the said key being provided with a major portion which extends beyond the end of the lower arm of the yoke when the key is in its operative position or in other words when it is disposed at right angles to the pin, this construction being such that the said major portion of the key may be grasped by the hand and manipulated as a lever to move the pin against the tension of the spring.

It may also be stated that a still further object of the invention is to provide the pin with a hand-engaging eye at its upper end which may be engaged by the left hand of the operator while the major portion of the key is engaged by the right hand of the operator. Pressure may then be applied to both the hand-engaging eye and the said major portion of the key and the spring may be accurately, effectively and quickly compressed.

In the accompanying drawings: Figure 1 is a sectional elevation of a clevis showing my improved locking pin applied thereto. Fig. 2 is an end elevation of the same.

The yoke 1 is provided at the inner ends of its arms with alining vertical openings 2 for the reception of the pin 3. The lower end of the pin 3 is provided with a centrally disposed downwardly opening vertical slot 4. At the upper end of the said pin is an eye 5 and an annular circumferential shoulder 6. On the upper portion of the pin is a coil extensible spring 7, the upper end of which is extended through an opening in the shoulder 6 and bent to lie on the upper side of said shoulder so as to attach said spring to said shoulder. The function of the said

spring is to raise the pin 3 as will be understood.

A key 8 is pivoted in the lower portion of the slot 4, the pivot 9 of the key being disposed near the center thereof. At the outer end of the key is a knob 10 the diameter of which is somewhat less than that of the pin. This knob, as will be understood, forms a weight at one end of the key. When the key is disposed transversely with reference to the pin which bears against the under side of the yoke and hence prevents the pin from becoming detached from the yoke, the spring by pushing upwardly on the pin causes the latter to keep the key in engagement with the under side of the yoke. Whenever it is desired to detach the pin from the yoke, the pin must be first depressed against the pressure of the spring 7, whereupon owing to its weight knob 10 at one end the key is automatically turned to a vertical position so as to dispose its major portion within the slot 4 and the key then offers no obstruction and permits the pin to be readily drawn upwardly from the yoke. By reason of the attachment of the upper end of the spring to the pin, the spring is prevented from becoming lost when the pin is removed. The key is pivoted to the pin 3 in such manner that the major portion 8 of the key when in the full line position shown in Fig. 1 extends beyond the outer end of the lower arm of the yoke 1, this construction being such that the said major portion of the key can be manipulated as a lever to force the portion 8' of the key into engagement with the under surface of the lower arm of the yoke, the engagement of the key with the yoke as described tending to compress the spring 7 to facilitate removal of the pin. The construction as just set forth is such that the key may be simultaneously actuated upon applying pressure to the pin from the eye end 5 of the pin.

What is claimed is:—

In a clevis, a yoke having a pair of spaced arms whose outer extremities are formed with alining passages, a pin removably engaged in said passages and provided at one end with a hand-engaging eye and provided adjacent to the said eye with an annular shoulder, a spring surrounding a portion of the pin and engaged at one end with the shoulder and at the other end with one arm of the yoke, said pin having its opposite end formed with a slot, and a locking key eccen-

trically pivoted between the walls of the slot of the pin and adapted to be moved at right angles to the pin and to be yieldingly engaged with one arm of the yoke to
5 hold the pin against removal, said key having its major portion extending beyond one end of one of the arms of the yoke and adapted to be actuated as a lever to force the minor portion of the key into engagement
10 with one arm of the yoke to move the pin

in a direction to compress the spring and causing the key to be moved into a plane with the pin to permit extraction of the latter from the arms of the yoke.

In testimony whereof I affix my signature 15
in presence of two witnesses.

GOULD E. MILLS.

Witnesses:

GEO. H. CUNNINGHAM,
HARRY GRAY.