W. W. WILLS.

LEVERAGE.

No. 50,409. Patented Oct. 10, 1865.

Fig: 3.

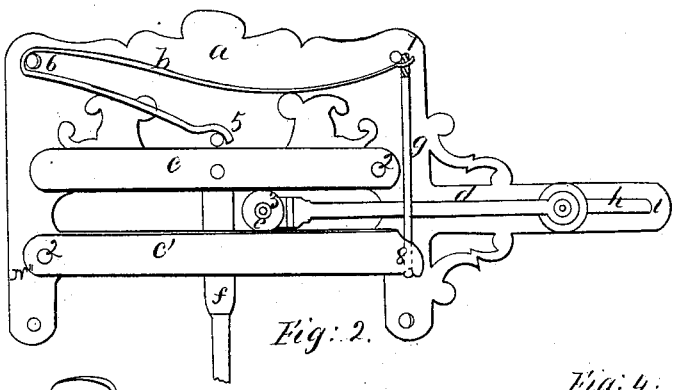


Fig: 2.

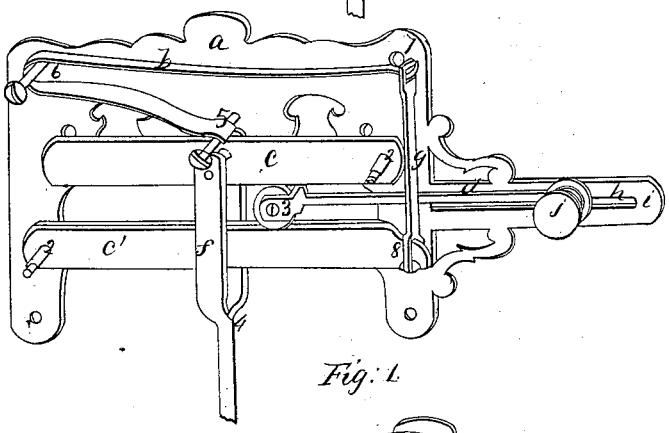


Fig: 1

Fig: 4.

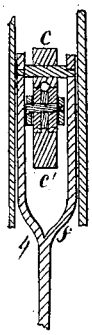
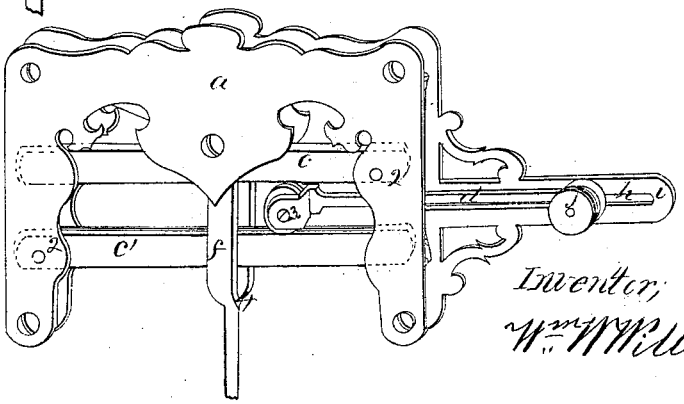


Fig: 5.



Witnesses;
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UNITED STATES PATENT OFFICE.

WILLIAM W. WILLS, OF JANESVILLE, WISCONSIN.

IMPROVEMENT IN LEVERAGE.

Specification forming part of Letters Patent No. **50,409**, dated October 10, 1865.

To all whom it may concern:

Be it known that I, WM. W. WILLS, of the city of Janesville, in the county of Rock and State of Wisconsin, have invented a new and Improved Leverage; and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is also a perspective view with the side of the main frame removed. Fig. 3 is a longitudinal vertical section. Fig. 4 is a cross vertical section. Fig. 5 is a vertical section of a thumb-screw, arm *i*, and sliding bar *d*.

A is the main frame. C′ C are levers. *d* is a sliding bar. *e* is a roller pivoted in the end of the said sliding bar *d*. *f* is a connecting-rod. G is also a connecting-rod. *h* is a slot.

Now, as it regards the mechanical arrangement and construction of this invention, I have adopted a common frame without reference to any particular form or design thereof, and to this said frame I attach the said levers C′ C, as seen in Figs. 1, 2, and 3. These are pivoted at No. 2. Now, between these said levers I insert the sliding bar *d* and roller *e*, which said roller is pivoted at No. 3 in the end of the said sliding bar. The other end of the said bar is attached to the arm *i*, with a common thumb set-screw, and may be moved to any desired position in a longitudinal direction, sliding in the slot *h*, and permanently fixed thereby, tightening the said screw.

The connecting-rod *f* is divided at No. 4 into two branches or arms, passing around the lower lever, C′, and extending to the upper lever, C, to which it is attached, as seen in Fig. 2.

The spring *b* is permanently attached to the main frame at Nos. 5 and 6. The connecting-rod G is hinged to the said spring at No. 7, extending downward to the lever C′, and is attached thereto at No. 8, as seen in Fig. 2. Now, it is manifest that whereas the said spring *b* and the said levers C′ C are thus bound together by the said connecting-rod G, if a force or power be applied to the said connecting-rod *f*, drawing it downward or in the opposite direction to the action of the said spring, the resisting influence thereof will be felt, and a greater or less resistance is manifest at the slightest change of the relative position of the said roller *e*. When moved from the right to the left the resistance increases, and vice versa; and what is most singular is, that the tension of the said spring remains the same through all these mutations or changes.

Now, as it regards the peculiar mechanism of this invention, it does not follow that because I have adopted a peculiar form or design I should confine myself exclusively to it; nor does it follow that because it is represented in the drawings as occupying an upright or vertical position I should confine myself to that alone. I do not confine myself to any of these things, nor to any particular or specific mechanism.

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

The adjustable sliding bar *d*, and roller *e*, in combination with the counteracting-levers C′ C, when arranged substantially as described, and operated in the manner specified.

WM. W. WILLS.

Witnesses:

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