No. 842,098. PATENTED JAN. 22, 1907.

J. B. KRAUS.

TOOL.

APPLICATION FILED AUG. 4, 1906.

Fig. 1.

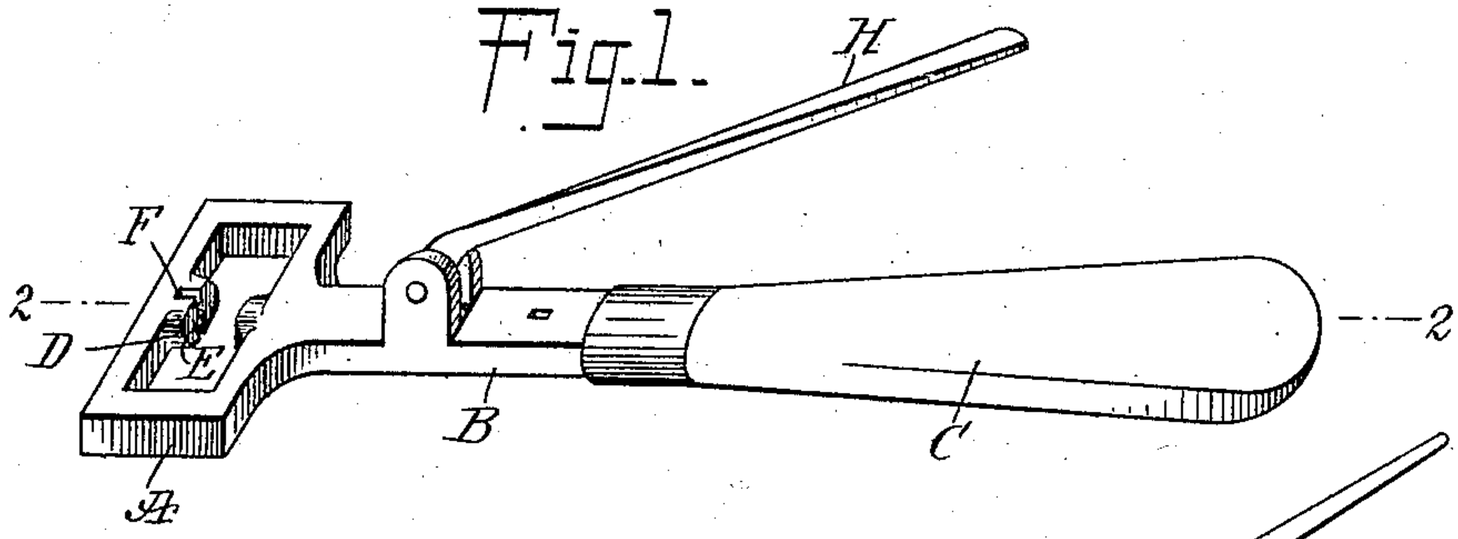


Fig. 2.

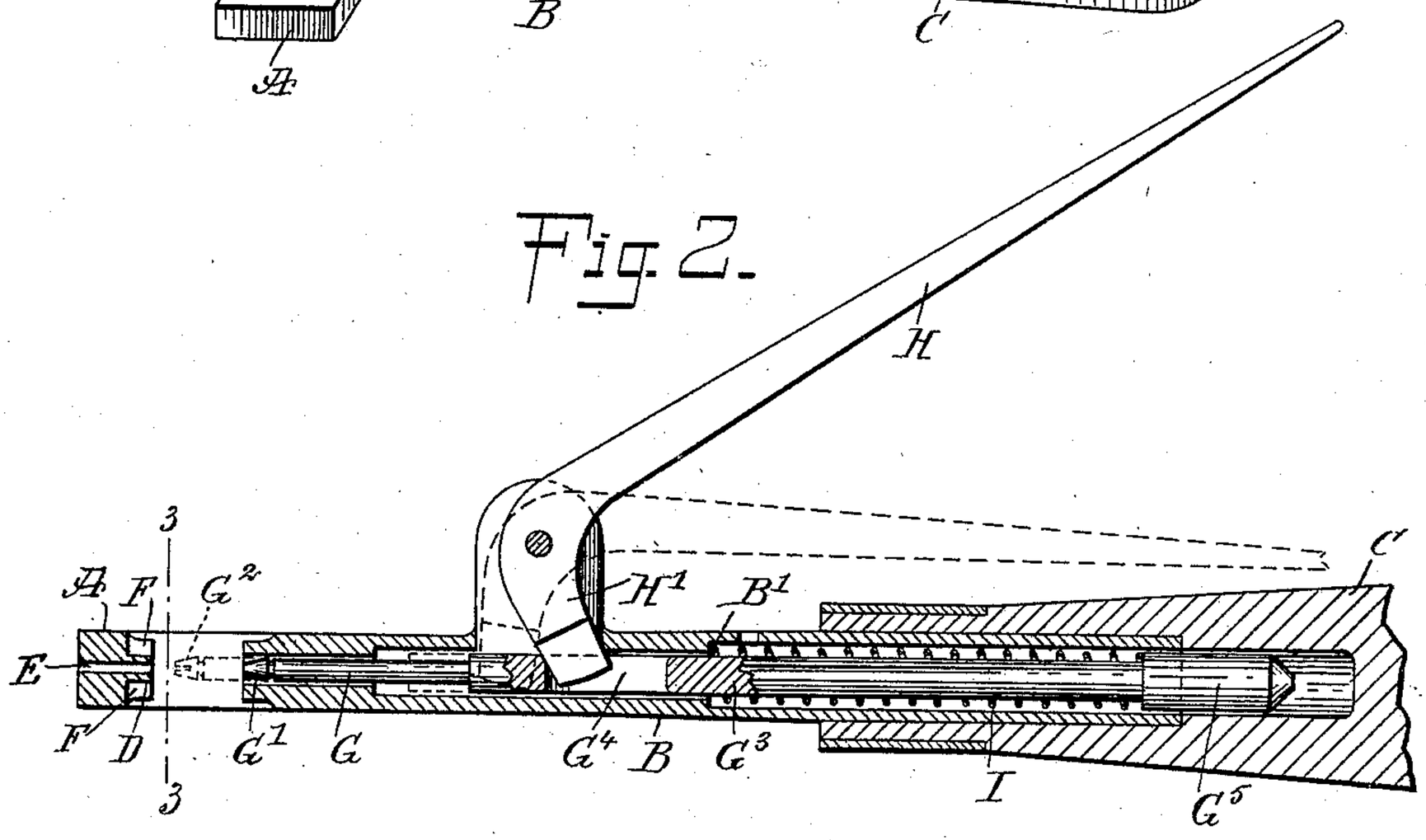
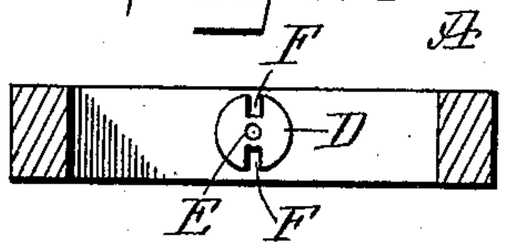


Fig. 3.



WITNESSES

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TOOL.

No. 842,098. Specification of Letters Patent. Patented Jan. 22, 1907.

Application filed August 4, 1906. Serial No. 329,193.

To all whom it may concern:

Be it known that I, JOHN B. KRAUS, a citizen of the United States, and a resident of Puyallup, in the county of Pierce and State of Washington, have invented a new and Improved Tool, of which the following is a full, clear, and exact description.

The invention relates to watchmakers' tools; and its object is to provide a new and improved tool for accurately and quickly placing the roller-table in position on the balance-staff in a very convenient manner and without danger of injuring the roller-jewel, pivots, or balance-wheel.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement. Fig. 2 is an enlarged sectional side elevation of the same on the line 2 2 of Fig. 1, and Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 2.

The frame A, preferably of rectangular shape, is provided with a shank B, onto which fits a handle C, adapted to be taken hold of by the watchmaker for conveniently manipulating the tool, as hereinafter more fully described. The frame A is provided with a bearing D, preferably in the form of a boss, integrally formed on the inner side of the forward member of the frame A, and the said bearing D is provided with a central aperture E for the convenient passage of the balance-staff, and the said bearing is also provided, preferably at top and bottom, with recesses F, arranged on opposite sides of the central aperture E. Either of the recesses F is adapted to receive the roller-jewel on the roller-table, held against the face of the bearing D, with the aperture of the roller-table in register with the central aperture E. The balance-staff is pushed onto the roller-table, held stationary against the bearing D, and for this purpose a punch G is provided, mounted to slide lengthwise in the inner member of the frame A and the shank B thereof, and the said punch G is provided with a conical head G′, having its central recess G^2 for the reception of the pivot of the balance-staff abutting against the end of the head G′. Now the punch G is in axial alinement with the central aperture E, previously mentioned, and when the roller-table is in position on the face of the bearing D and the balance-staff is engaged with its pivot-pin in the recess G^2 and the punch G is moved outward then the balance-staff is pushed through the central aperture of the roller-table and into the central aperture E until the roller-table is in the desired position on the balance-staff. When this has been done, the punch G is retracted to disengage the staff and allow the operator to now remove the staff and roller-table thereon from the device. In order to impart the desired movement to the punch G, the shank G^3 thereof is provided with a slot G^4, into which projects one end H′ of a lever H, fulcrumed on the shank B and adapted to be pressed by the operator having hold of the handle C. Thus when the lever H is pressed a forward sliding motion is given to the punch G to force the staff onto the roller-table, as previously explained. A spring I, coiled on the shank G^3, presses with its rear end against a collar G^5, held in the said shank, the other end of the spring abutting against a shoulder B′, formed in the shank B. Thus when the operator presses the lever H and moves the punch G outward then the spring I is pressed, and when the operator releases the lever H then the spring I causes a return movement of the punch G and the lever H.

From the foregoing it will be seen that the tool shown and described is very simple and durable in construction, composed of but few parts, not liable to easily get out of order, and by the use of the tool the roller-table can be quickly and accurately placed in position on the balance-staff without danger of injuring the pivots, balance-wheel, or roller-jewel, as the latter are safely contained within either of the recesses F during the operation.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A tool of the class described, comprising a rectangular frame having at one side an outwardly-projecting shank provided with a longitudinal opening and having on the inner face of the opposite side an inwardly-projecting boss provided with a longitudinal opening in alinement with the opening in the shank, said boss having recesses above and below the opening for re-

ceiving the roller-jewel of a roller-table, the aperture of the table being adapted to register with the opening through the boss, a punch slidably mounted in the opening of the shank, said punch being provided with a vertical slot, a spring normally retaining the punch in its retracted position, and a lever pivoted on the shank and having one end engaging the slot whereby to manipulate said punch.

2. A tool of the class described, comprising a rectangular frame, having at one side an outwardly-projecting shank provided with a longitudinal opening, and having on the other side an inwardly-projecting boss provided with a longitudinal opening in alinement with the opening in the shank, said boss having recesses above and below the opening for receiving the roller-jewel of a roller-table, the aperture of the table being adapted to register with the opening through the boss, and a punch in the opening of the shank and movable toward and from the boss.

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

JOHN B. KRAUS.

Witnesses:
ROBERT WILSON,
W. A. MILLER.