F. DAVIS.

RULING MACHINE.

APPLICATION FILED FEB. 25, 1913.

1,067,001. Patented July 8, 1913.

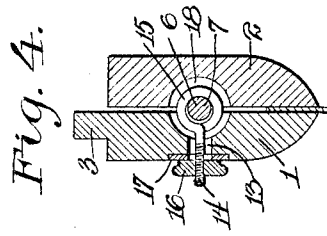


Fig. 4.

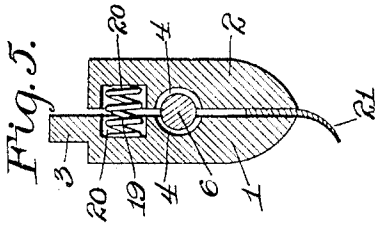


Fig. 5.

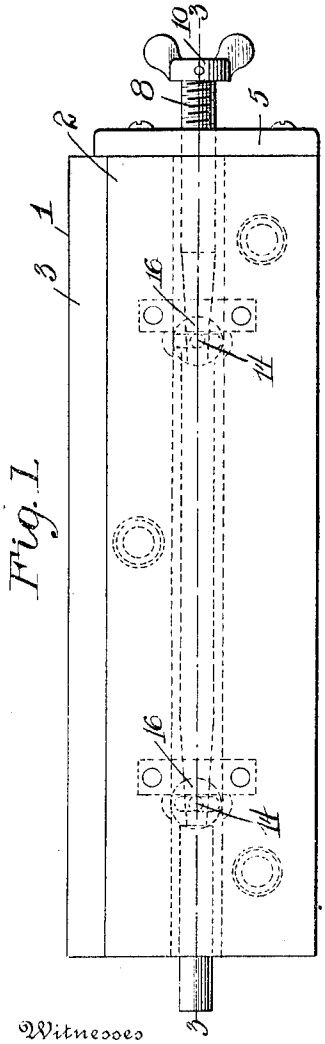


Fig. 1.

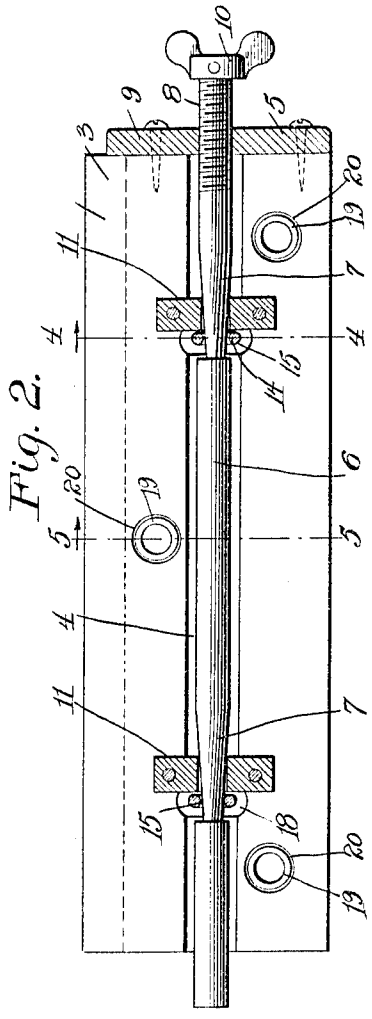


Fig. 2.

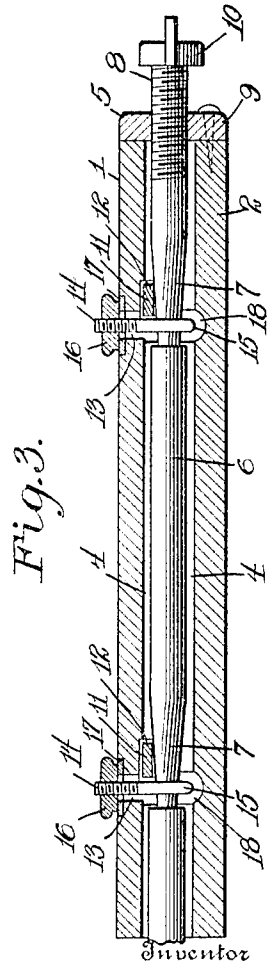


Fig. 3.

Witnesses

Wm. F. Mulligan.

D. W. Gould.

Inventor

Frank Davis.

By Victor J. Evans.

Attorney

UNITED STATES PATENT OFFICE.

FRANK DAVIS, OF ATLANTA, GEORGIA.

RULING-MACHINE.

1,067,001. Specification of Letters Patent. Patented July 8, 1913.

Application filed February 25, 1913. Serial No. 750,645.

To all whom it may concern:

Be it known that I, FRANK DAVIS, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented new and useful Improvements in Ruling-Machines, of which the following is a specification.

The invention relates generally to an improvement in ruling machines and particularly to a pen clamp wherein the clamping and release of the pen may be readily and conveniently effected.

The main object of the present invention is the provision of a pen clamp in which the sections thereof are automatically and normally held in non-clamping relation by springs or the equivalent, a simple type of adjusting means being provided for inducing clamping action of the sections against tension of the springs.

The invention in its preferred form of details will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a plan of the pen clamp the operating mechanism being shown in dotted lines. Fig. 2 is a horizontal section. Figs. 3, 4 and 5 are vertical sections taken respectively on the lines 3—3, 4—4 and 5—5 of Figs. 1 and 2.

Referring particularly to the accompanying drawings, the improved pen clamp comprises the usual sections 1 and 2 adapted at 3 for connection of the clamp to the beam in any usual or preferred manner. The sections which are approximately of rectangular outline are each formed with longitudinally extending semi-circular depressions 4 adapted when the sections are in clamping relation to form a circular opening through the clamp. Secured to one of the sections is a head plate 5 having a height corresponding to the combined similar dimension of both sections as shown in Fig. 1.

An adjusting shaft 6 is loosely arranged in the circular opening formed in the clamp, said shaft having at spaced intervals conical or wedge shaped sections 7, preferably formed by appropriately reducing the diameter of the shaft as will be obvious. The operating end of the shaft is threaded at 8 and extends through a threaded opening 9 in the head plate 5, the outer terminal of the threaded end being provided with fixed wing nut 10 whereby the shaft may be rotated. The shaft is preferably held against separation from that section of the clamp carrying the head plate by means of bridge blocks 11 which are secured to the relatively inner face of the section and overlie the semi-circular depression therein, the bridge blocks being formed with a continuation of said depression to complete therewith a circular opening throughout the plane of the bridge block. The opposing section of the clamp is formed with a rectangular depression 12 to receive the bridge blocks when the parts are connected so that the proximate surface of the section may be drawn into bent holding contact without interference from the bridge blocks. In the section formed with the depressions 12 are also formed adjacent the said depressions openings 13 which extend in the relatively outer surface of the section to and into communication with the semi-circular depression therein. In these openings are loosely arranged clamp members 14 comprising threaded bolts terminally formed with eyes 15 which rest within the depressions 4 when the sections are assembled, the outer end of the bolts being provided with adjusting nuts 16 bearing upon wear plates 17 secured to the section surrounding the openings 13. The eyes of the adjusting members receive the conical sections of the adjusting shaft, and if desired the depression 4 in the section carrying the shaft may be enlarged and depend as at 18 to provide for the reception of the eyes.

Coil springs of any usual or preferred type as 19 are secured to one of the sections and bear against the proximate surface of the opposing section, the respective sections being if desired formed with depressions 20 to receive the springs. The depressions are of such size with relation to the springs that the springs will normally operate to spread the sections apart or move them into non-clamping relation, the adjusting shaft through its connection with the blocks 11 and eyes 15 acting as a hinge. The pin 21 is designed to be arranged in the usual way between the proximate edges of the clamping sections and the nuts 16 are adjusted so that the normal movement of the sections under the influence of the springs is sufficient to space the pen engaging edges of the sections apart to release the pen.

When it is desired to clamp the pen in place the adjusting shaft is moved longitudinally by obvious operation of the wing nut 10 forcing the conical section 7 of said shaft

lengthwise the eyes 15. This movement tends to draw the sections together to clamp a pen in place. In a reverse movement the shaft release sections will be influenced by the springs to free the pen.

From the above description it will be obvious that I have provided a pen clamp in which the pen may be readily and securely clamped by a simple movement of the shaft and as readily released by opposite movement of the shaft, the springs serving to at all times space the sections in position to receive the pen when the parts are so arranged as to permit the springs to act.

What is claimed is:—

1. A pen clamp including clamping sections, springs interposed between said sections and operating to move them to non-clamping relation, a shaft movable longitudinally of one section, means carried by the other section to engage the shaft and move toward the first mentioned section in the movement of the shaft, said latter means being adjustable with relation to the section by which it is carried.

2. A pen clamp for ruling machines comprising clamping sections, a shaft movable longitudinally of one section and formed with conical adjusting portions, and eye members carried by the opposing section and coöperating with the conical portions of the shaft.

3. A pen clamp for ruling machines comprising clamping sections, a shaft movable longitudinally of one section and formed with conical adjusting portions, eye members carried by the opposing section and co-operating with the conical portions of the shaft, said eye members being adjustable with relation to the section by which they are carried.

4. A pen clamp for ruling machines including clamping sections, a shaft mounted for longitudinal movement in and otherwise held against movement with relation to one of the sections, said shaft being formed with conical portions, eye members adjustably mounted in the other clamping section, said eye members encircling said conical portions of the shaft, and springs carried by one section and operating to spread the sections.

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

FRANK DAVIS.

Witnesses:
A. J. MANNING,
F. L. CAPLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."