(No Model.)

J. NEIFING.

CIRCUIT CLOSER FOR TELEGRAPHIC INSTRUMENTS.

No. 294,259. Patented Feb. 26, 1884.

Fig. 1.

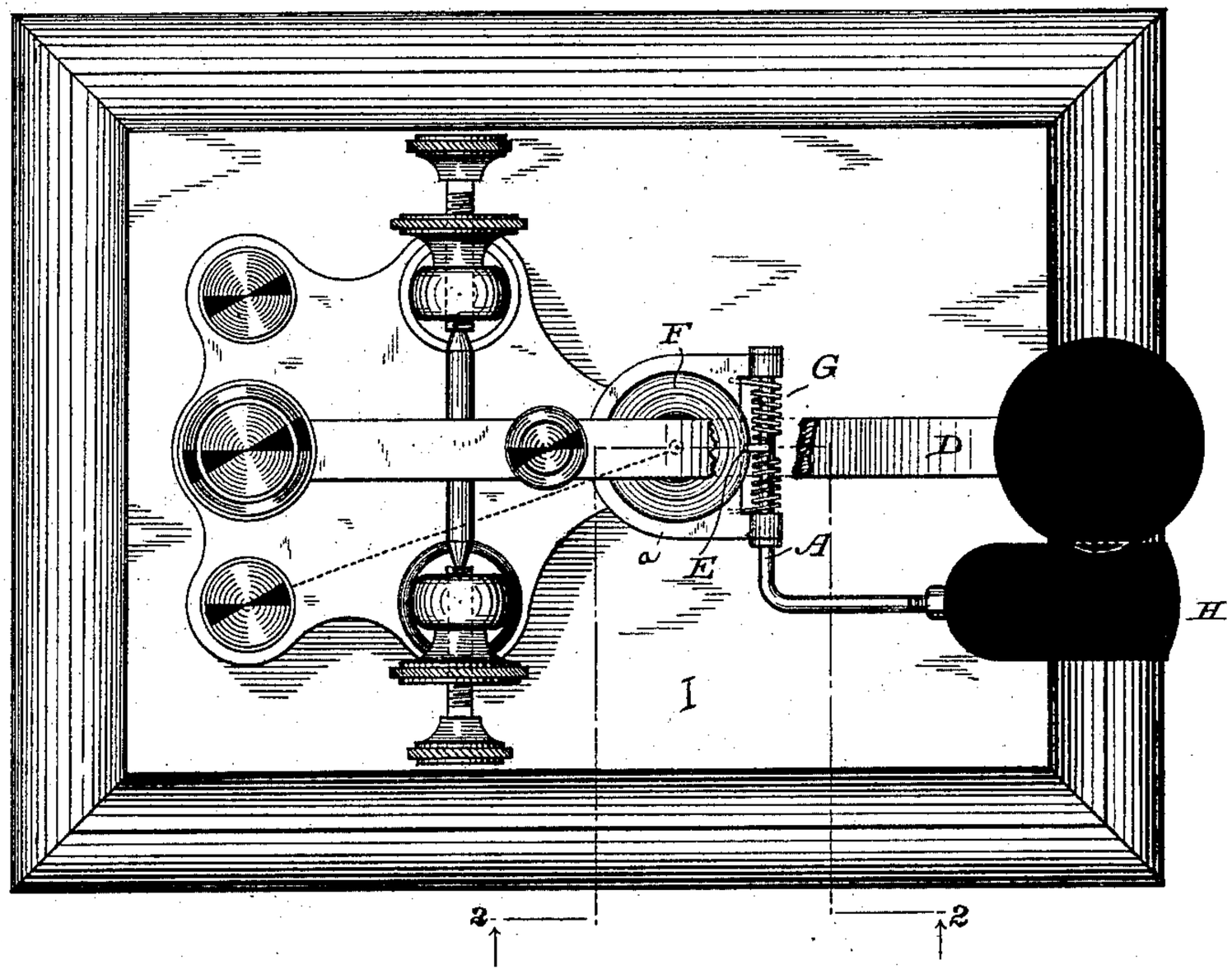
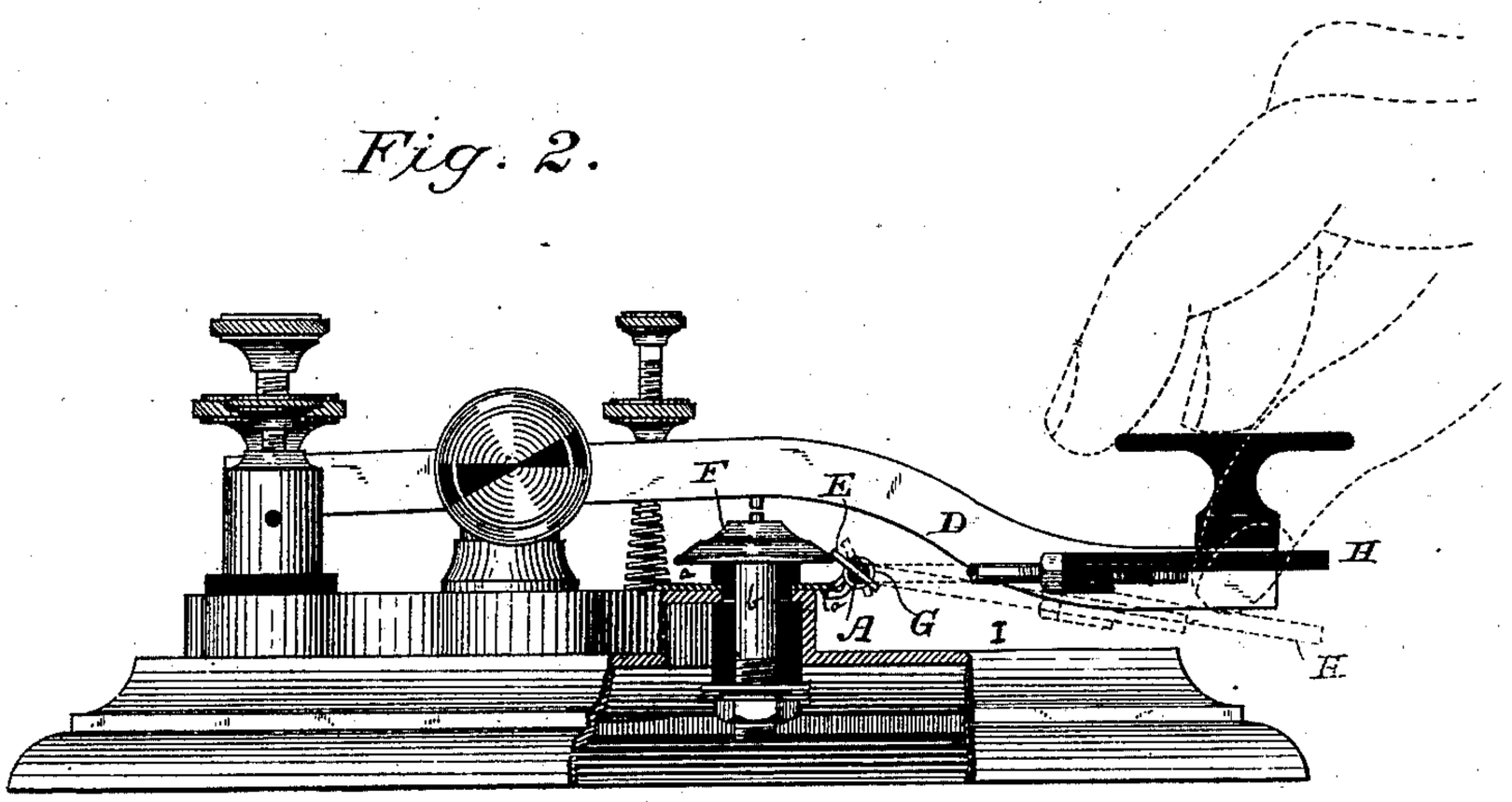


Fig. 2.



WITNESSES

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CIRCUIT-CLOSER FOR TELEGRAPHIC INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 294,259, dated February 26, 1884.

Application filed September 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, JULIUS NEIFING, of Dyer, in the county of Lake and State of Indiana, have invented a certain new and useful Improvement in Telegraphic Instruments, of which the following is a specification, reference being had to the accompanying drawings.

In the ordinary telegraphic instruments now in use by operators in sending dispatches, there is a switch which is pivoted so as to turn horizontally to one side to open the circuit while the key is being used for sending, and which is turned back to close the circuit for receiving signals. It frequently happens in practice that an operator, after using his key to send a message, forgets to turn the switch back to close the circuit. The consequence is that mischievous delays occur in receiving signals and messages. Means have heretofore been devised for automatically closing the circuit; but such devices have not been generally adopted, owing to numerous imperfections in their organization.

The object of my invention is to prevent such evils by providing an improved automatic-closing switch that may be readily applied to any key, that will always keep the circuit closed when the key is not being used for sending, and that can readily be moved to open the circuit by the act of operating the key.

In the appended drawings, Figure 1 is a plan view, and Fig. 2 a side elevation, partly in section, of an ordinary telegraphic operator's instrument with my improvement applied.

As the instrument is so well known it will be unnecessary to describe it in detail.

A indicates the arm of my improved switch, which is pivotally secured to a metallic plate, *a*, that is attached to the bed-plate of the instrument, preferably by means of the spindle *b*, that secures the anvil F to the bed-plate I. The plate *a* is insulated from the anvil by suitable packing. The switch is oscillated alongside of the key D. The platinum contact-stud E on the inner end of the switch-arm normally bears upon the anvil F by force of a spring, G, secured to the plate *a*, thus closing the circuit with the same effect as by means of the ordinary switch. When the circuit is closed by my improved switch, it runs from the anvil through the contact-stud and the switch to the plate *a*, and thence to the bed-plate of the instrument, or vice versa.

It will be observed that the switch is provided with a thumb-piece, H, located to one side of and in close proximity to the thumb-piece of the key, and in Fig. 2 the method of operating it to open the circuit is clearly shown. The tension of the spring, tending to keep the switch closed, can be regulated so that only a very slight pressure will be required to press down the thumb-piece and open the circuit. The result is that every time an operator uses his key for sending he can, without extra effort and with entire convenience and certainty, open the circuit in the very act of touching and using the key. Then the instant he removes his hand from the key the switch will, with perfect certainty, automatically close the circuit. Thus the delays and disturbances of the working of instruments which now occur will be wholly avoided.

My improved switch is readily applied to any operator's instrument without materially altering its structure. To most readily accomplish this result, the plate *a* is bifurcated, so that the position of the contact-stud E may be regulated relatively to the anvil, to accommodate anvils of different sizes. The thumb-piece H is also adjustable on the arm A by means of a set-screw, as shown, to accommodate keys of different lengths.

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

1. An improved circuit-closing switch adapted to be applied to an ordinary operator's instrument, so that the circuit is opened by the hand of the operator in the act of manipulating the key and automatically closed when his hand is removed, said switch consisting of the combination of the securing-plate *a*, the spring-arm A, pivoted thereon, and the contact-stud E, carried by the spring-arm, substantially as set forth.

2. The herein-described circuit-closing switch adapted to be applied to an operator's

instrument, consisting of the combination of the bifurcated securing-plate *a*, the spring-arm A, pivoted thereon, and the contact-stud *c*, carried by the spring-arm, substantially as set forth.

3. The combination of the securing-plate, the spring-arm pivoted thereon, the adjustable thumb-piece mounted on the outer end of the spring-arm, and the contact-stud carried on the inner end of the arm, substantially as and for the purpose specified.

In testimony whereof I have hereunto subscribed my name this 7th day of September, A. D. 1883.

JULIUS NEIFING.

Witnesses:

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