

J. E. SMITH.

Morse Telegraph-Registers.

No. 147,186.

Patented Feb. 3, 1874.

Fig: 1

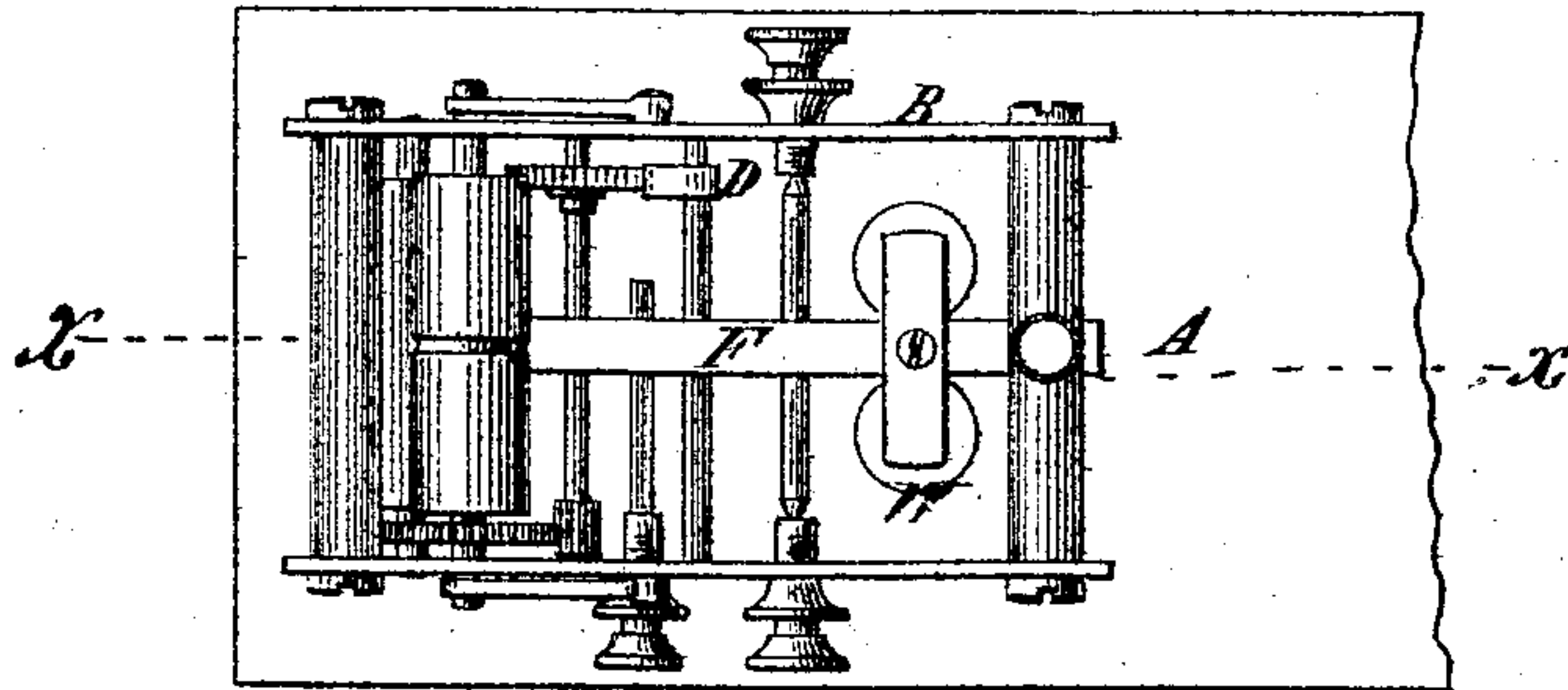


Fig: 2

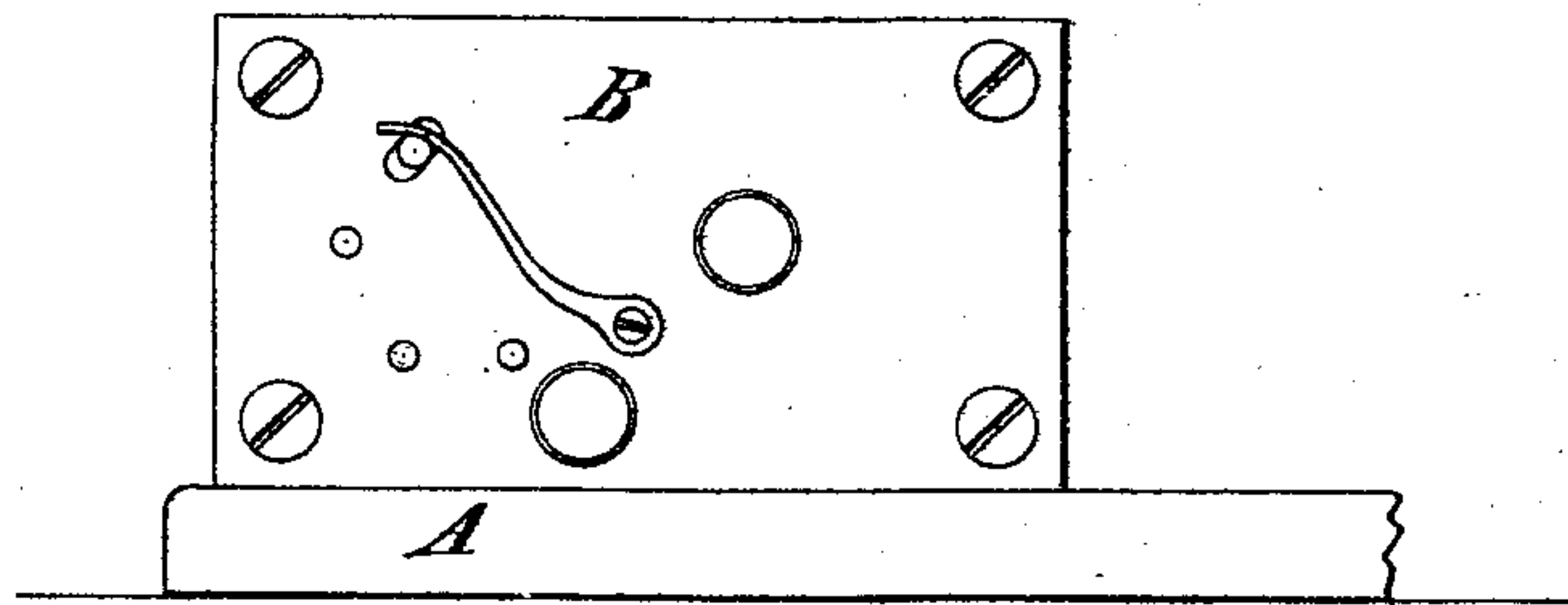
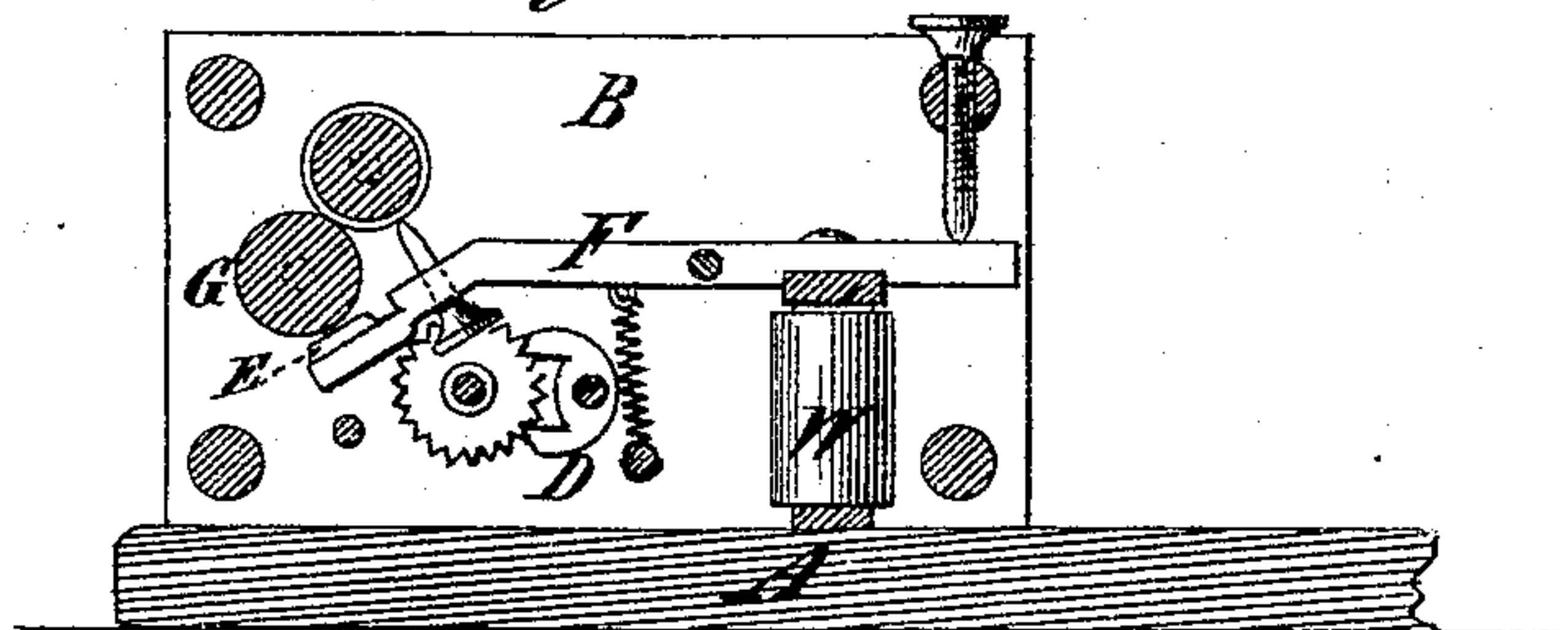


Fig: 3



Witnesses:  
Michael Ryan  
Fred Haynes

John E. Smith  
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# UNITED STATES PATENT OFFICE.

JOHN E. SMITH, OF NEW YORK, N. Y.

## IMPROVEMENT IN MORSE TELEGRAPH-REGISTERS.

Specification forming part of Letters Patent No. **147,186**, dated February 3, 1874; application filed May 2, 1873.

*To all whom it may concern:*

Be it known that I, JOHN E. SMITH, of the city, county, and State of New York, have invented certain Improvements in the Morse Register for use in Electro-Magnetic Telegraphs, of which the following is a specification:

This invention is mainly designed for use in district and fire-alarm telegraphs, although it may be employed for recording any telegraphic characters composed wholly of dots and spaces. The invention generally consists in an automatic Morse register, made self starting and stopping by a simple device, which causes the marking or embossing lever to act directly on the train of clock-work that moves the ribbon of paper.

In the accompanying drawing, which forms part of this specification, Figure 1 represents a plan of a Morse register constructed in accordance with my invention; Fig. 2, a side view of the same, and Fig. 3 a longitudinal vertical section on the irregular line *x x*.

Similar letters of reference indicate corresponding parts.

A is a wooden or other suitable base for supporting the apparatus; and B, the frame of a Morse register, which differs in the following respects from other instruments of that description. Thus, instead of the fly usually employed at the fast end of the train of clock-work, I substitute a pallet, D. This pallet regulates the motion of the clock-work, and allows it to start suddenly with nearly full speed. The end of the lever F, which carries the embossing-style, is extended underneath the roller G, and to its upper surface is fixed a pad, E, of rubber or other elastic material.

Whenever the style is moved by the action of the electro-magnet W, to mark the paper ribbon, the elastic pad or spring E is simultaneously pressed against the roller G, thereby stopping the clock-work, and holding it in check as long as the magnet W remains charged. It accordingly follows that only dots can be recorded by an instrument thus constructed. The drum and weight for giving motion to the clock-work are not shown in the drawing. The lever F may be made flexible, and arranged to press against any of the wheels of the train with like results, or an independent lever and magnet may be used for this purpose. The pad also may be placed on the clock-work, instead of on the lever F. Either of these I regard as equivalents of the arrangement shown in the drawing.

When used on a long line, the register may be operated by means of a relay and local battery, precisely like the ordinary Morse instrument; but for a short distance, one simple circuit only is required, and the battery may be located wherever it is most convenient.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The pad or spring E, in combination with the lever F of an electro-magnet and the clock-work of a recording-telegraph, substantially as and for the purpose described.

2. The pallet D, in combination with the pad or spring E, the lever F, and the clock-work of a recording-telegraph, essentially as herein set forth.

J. E. SMITH.

Witnesses:

MICHAEL RYAN,  
FRED. HAYNES.