

(No Model.)

J. W. SHRYOCK.
TELEGRAPH TRANSMITTER.

No. 353,715.

Patented Dec. 7, 1886.

Fig. 1

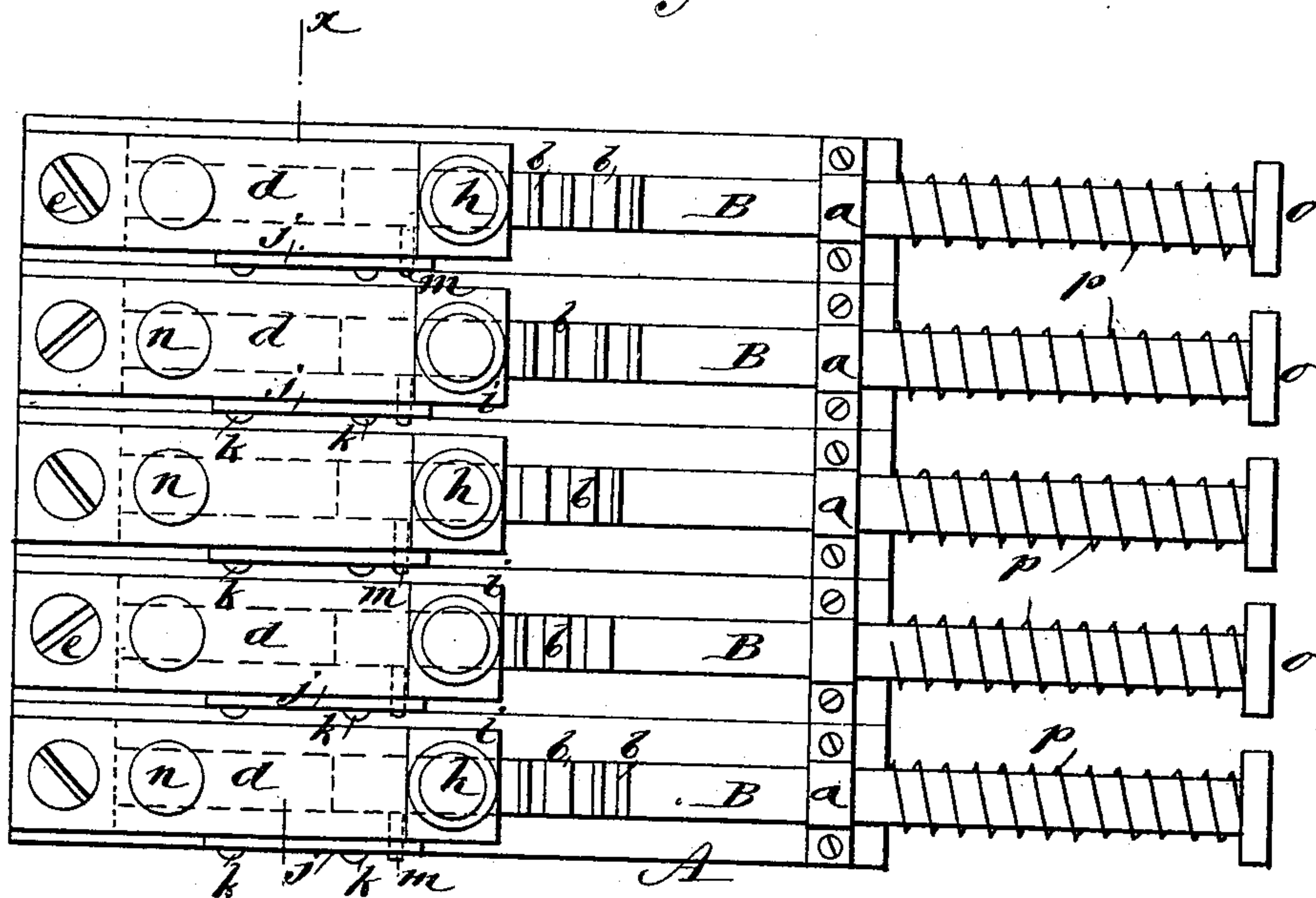


Fig. 2

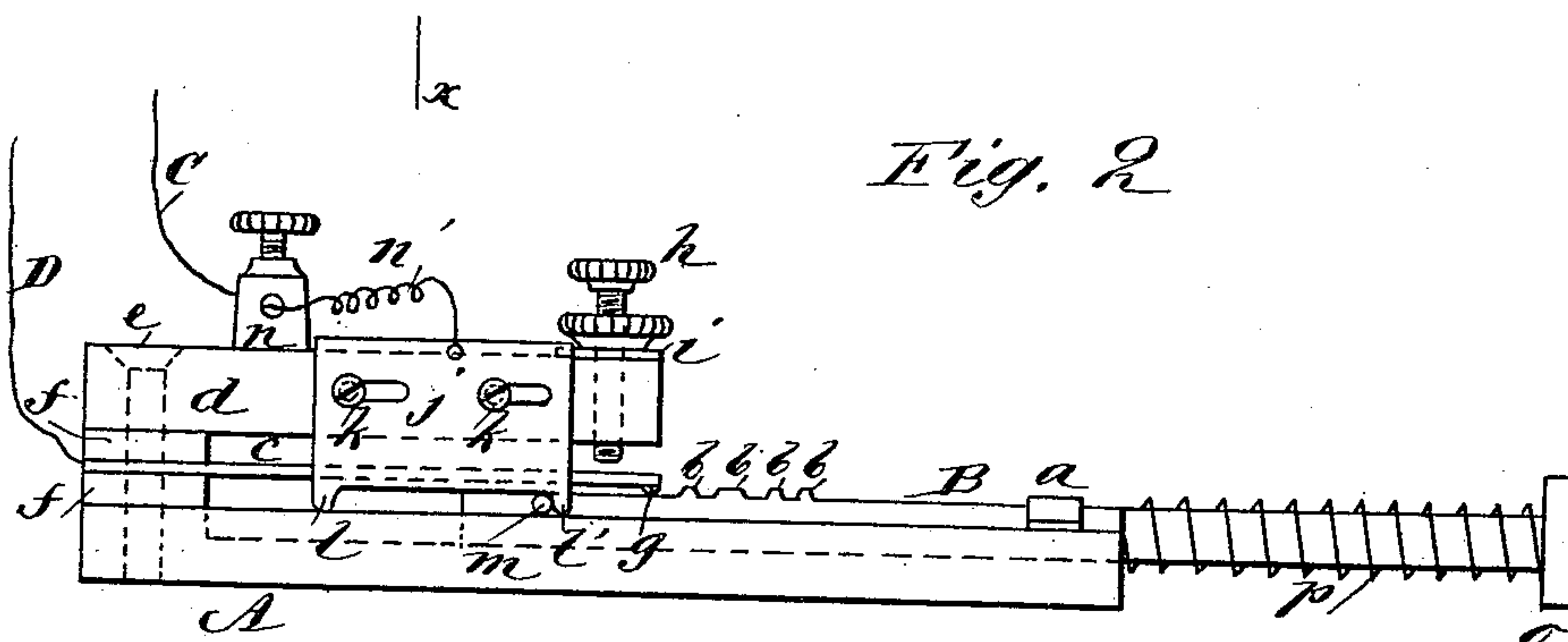
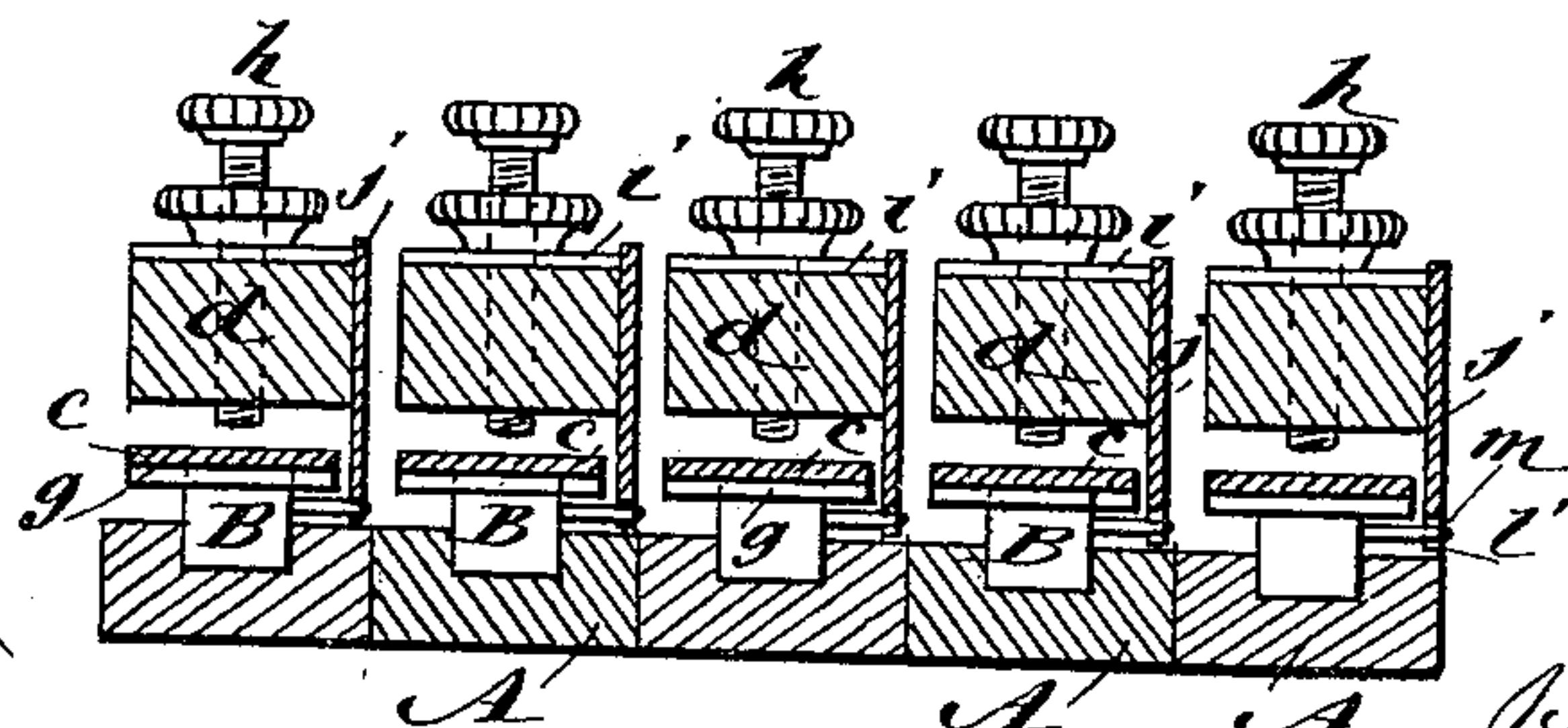


Fig. 3



WITNESSES:

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JAMES WILLARD SHRYOCK, OF TRINIDAD, COLORADO.

TELEGRAPH-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 353,715, dated December 7, 1886.

Application filed February 15, 1886. Serial No. 191,953. (No model.)

To all whom it may concern:

Be it known that I, JAMES WILLARD SHRYOCK, of Trinidad, in the county of Las Animas and State of Colorado, have invented a new and useful Improvement in Telegraph-Transmitters, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view of part of a series of telegraph-transmitters. Fig. 2 is a side elevation. Fig. 3 is a transverse section taken on line *xx* in Fig. 1.

Similar letters of reference indicate corresponding parts in the different figures of the drawings.

The object of my invention is to provide an instrument for the transmission of electric signals and characters by a single motion of the finger for each character transmitted.

My invention consists in a series of sliding bars or rotating disks, (but in this case sliding bars preferred,) carrying transverse ribs corresponding in width to the dots and dashes of the characters to be transmitted, a contact-spring moved by the ribs of the bar and making electrical contacts corresponding in duration with the width of the ribs, and in the combination with the bar of a circuit opener and closer for completing the circuit for sending the signal and breaking the circuit while the transmitting-bar is being returned to its position of starting.

The transmitter consists of a series of bars, contact-springs, and contact openers and closers, there being one set of apparatus for each signal to be sent; and, as these parts of the apparatus are alike, except the ribs, which determine the character of the signal, a description of the parts necessary for the transmission of a single character or signal will answer or the whole.

In the grooved base-plate *A* is fitted a sliding bar, *B*, which is confined in the groove by an offset-strap, *a*, secured to the base-plate and extending over the top of the bar *B*. The upper surface of the bar *B* is provided with a series of transverse ribs, *b*, which correspond in width and position to the dots and dashes of the character to be transmitted or the signal to be sent.

To the base-plate *A* is secured the spring *c* and the arm *d* by the screw *e*, insulating-

plates *f* being placed between the spring *c* and the base *A* and arm *d*. The free end of the spring *c* extends over the top of the bar *B*, and is provided with a convex transverse rib, *g*, on its under side, which rides upon the upper surface of the bar *B* in position to be engaged by the transverse ribs *b* of the bar *B* as the bar is pushed forward under the spring *c*.

The arm *d* is of insulating material, and is provided in its free extremity with a contact-screw, *h*, which passes through the arm in position to be touched by the back of the spring *c* when the spring is raised by contact with the transverse ribs *b*. A metallic plate, *i*, secured to the top of the arm *d* and in electrical communication with the contact-screw *h*, projects slightly beyond the side of the arm *d* in position to be touched by the slotted plate *j*, sliding on the screws *k*, projecting from the arm *d*. The lower edge of the plate *j* is provided with ears *l l'* at opposite ends thereof, which extend into the path of a pin, *m*, projecting from the side of the sliding bar *B* and above the base *A*. The pin *m* is received between the ears *l l'*, and the plate *j* is connected by the wire *n'* with a binding-post *n* at the top of the arm *d*.

The bar *B* is prolonged beyond the end of the base *A* and is provided with a head, *o*, between which and the end of the base *A* and around the bar is placed a spiral spring, *p*, which returns the bar *B* to the position of starting after it has been pushed forward in the operation of transmitting a signal. The line-wire is connected with the binding-post *n* upon the arm *d* by the wire *C*, and the spring *c* is connected with the ground through the battery and the wire *D*. When the bar *B* is in its normal position, the plate *j* touches the edge of the plate *i* and the line-connection with the contact-screw *h* is completed through the wire *C*, binding-post *n*, wire *n'*, the sliding plate *j*, and the plate *i*, so that when the bar *B* is pushed forward to transmit a signal the ribs *b* are brought into contact with the transverse rib *g* on the spring *c*, forcing the spring upward into contact with the screw *h*, sending an electrical impulse over the line at every contact of the spring with the screw, the duration of the impulse being governed by the width of the rib *b*, by which the spring *c* is moved. After the signal is sent the pin *m*, car-

ried by the bar B, strikes the ear *l* and pushes the plate *j* back out of contact with the plate *i*, so that as the bar B is returned to the position of starting by the spring *p*, and the spring *c* is again brought into contact with the screw *h* by the ribs *b*, the circuit will be broken so that the contact of the spring with the screw on the return of the bar B produces no effect on the line; but as the bar B reaches the extreme outward limit of its excursion the pin *m*, projecting from the side of the bar, strikes the ear *l'* and moves the plate *j* forward into engagement with the plate *i*, where it remains until after another signal is sent, when the circuit will be again broken in the manner previously described.

By placing upon the heads *o* of the bars B characters corresponding with the signals or characters to be sent an inexperienced person will be able to transmit messages composed of uniform and readable characters, and experienced operators will be able to secure a uniformity in their work, and will be enabled to execute their work more rapidly than is possible with the ordinary Morse key.

In the line with which the wires D C are connected the usual receiving-instruments are placed.

My improved transmitter may be used in connection with a recorder or sounder, or it may be employed for sending signals to be received on a bell.

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

1. The combination of the sliding bar B, provided with transverse ribs *b*, and having the pin *m*, projecting from the side thereof, the contact-spring *c*, arranged to be moved by the ribs *b*, the contact-screw *h*, supported in the path of the spring *c*, the plate *i* in electrical communication with the screw *h*, the sliding plate *j*, provided with ears *l l'*, projecting into the path of the pin *m*, and means for returning the bar B to the point of starting, substantially as herein shown and described.

2. The combination, in a telegraph-transmitter, of the base A, sliding bar B, provided with transverse ribs *b*, and the pin *m*, the spring *c*, rigidly supported by the base, with its free end in the path of the ribs *b*, the arm *d*, contact-screw *h*, carried thereby, the metallic plate *i* in electrical communication with the screw *h*, the sliding plate *j*, provided with ears *l l'*, and the spring *p*, arranged to return the bar B to the position of starting, substantially as herein shown and described.

JAMES WILLARD SHRYOCK.

Witnesses:

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