

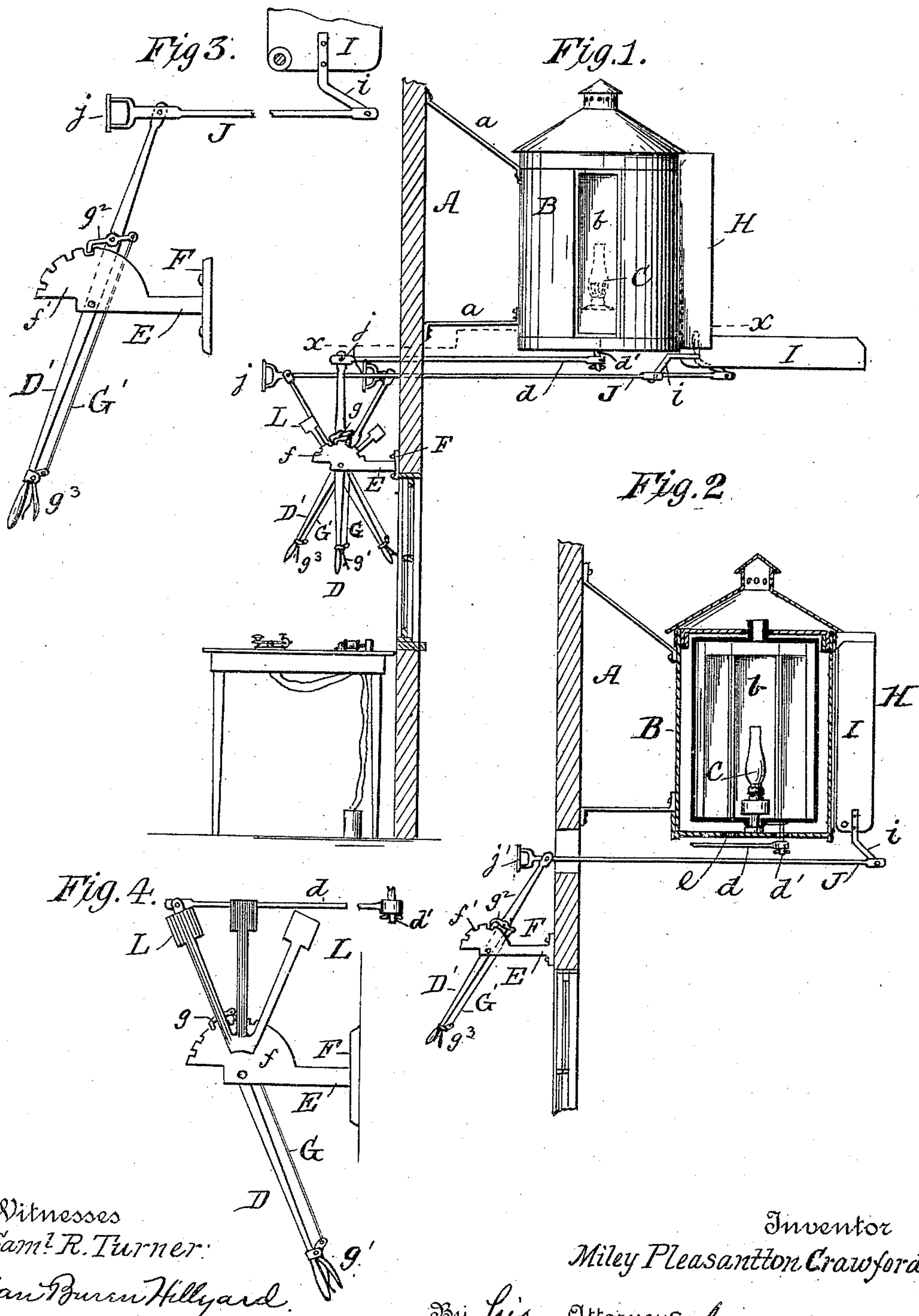
(No Model.)

2 Sheets—Sheet 1.

M. P. CRAWFORD.
BLOCK SIGNAL.

No. 445,928.

Patented Feb. 3, 1891.



Witnesses
Sam^l R. Turner.
Van Buren Hillyard.

Inventor
Miley Pleasanton Crawford

By his Attorneys
R. A. Lacey

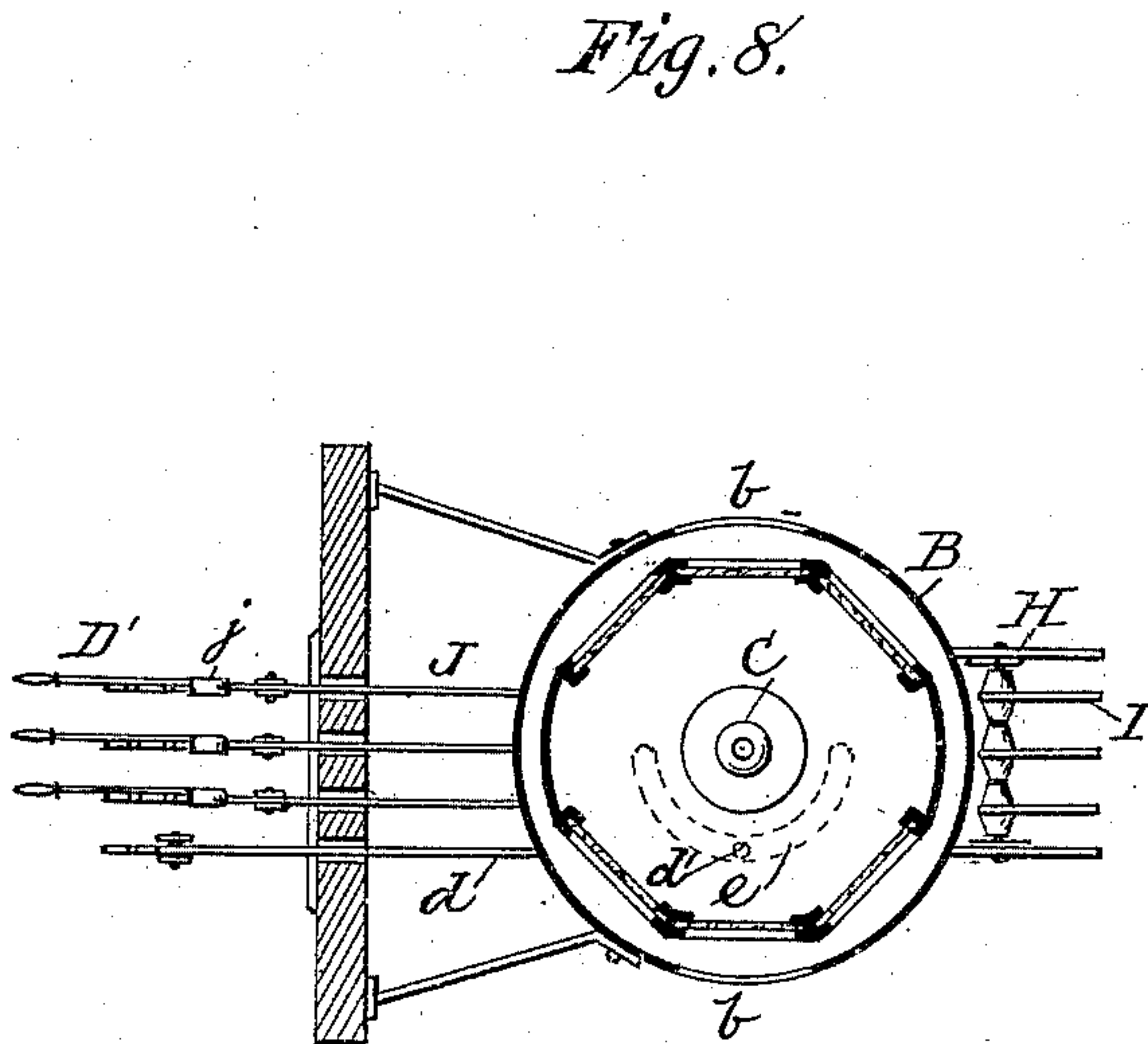
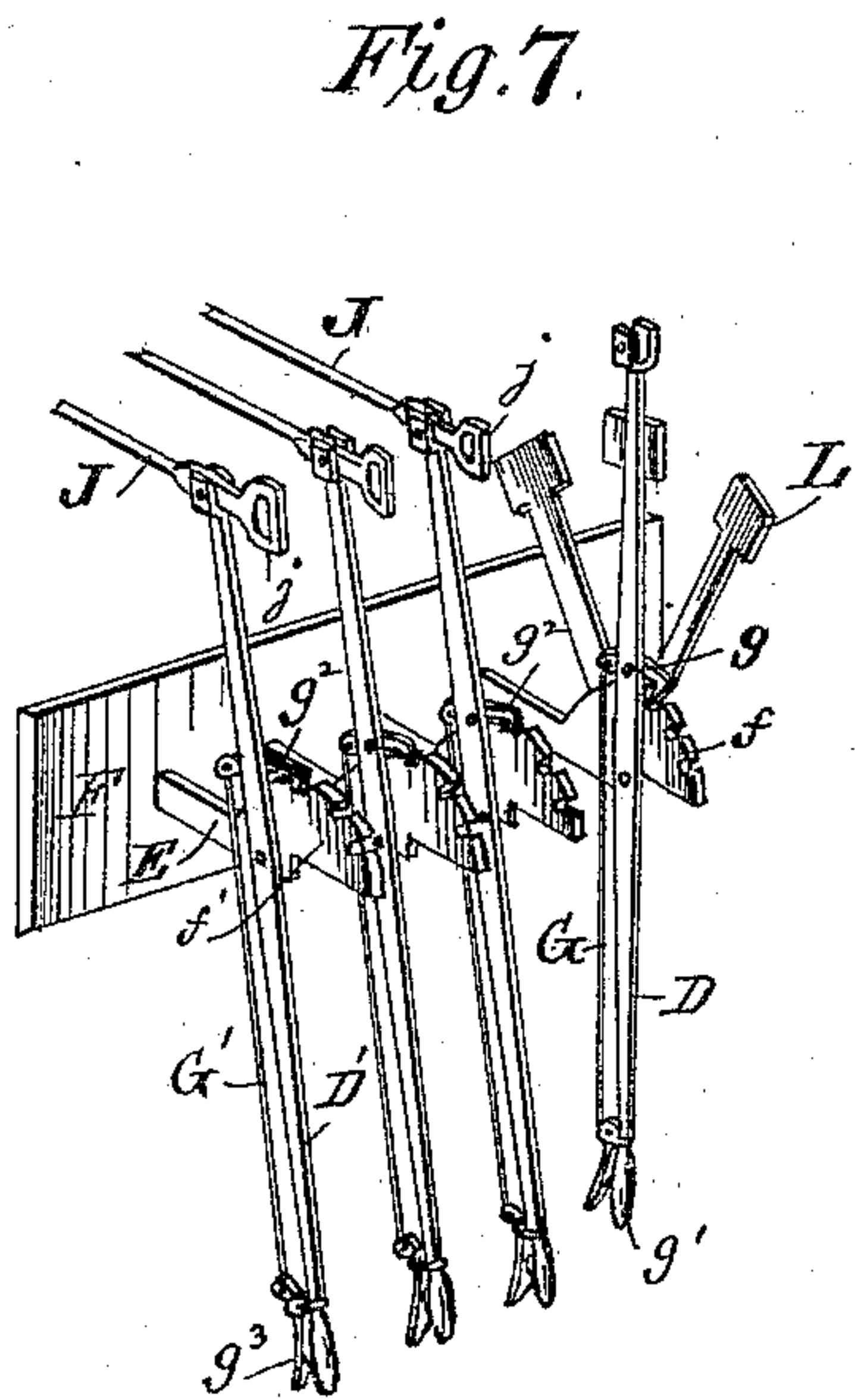
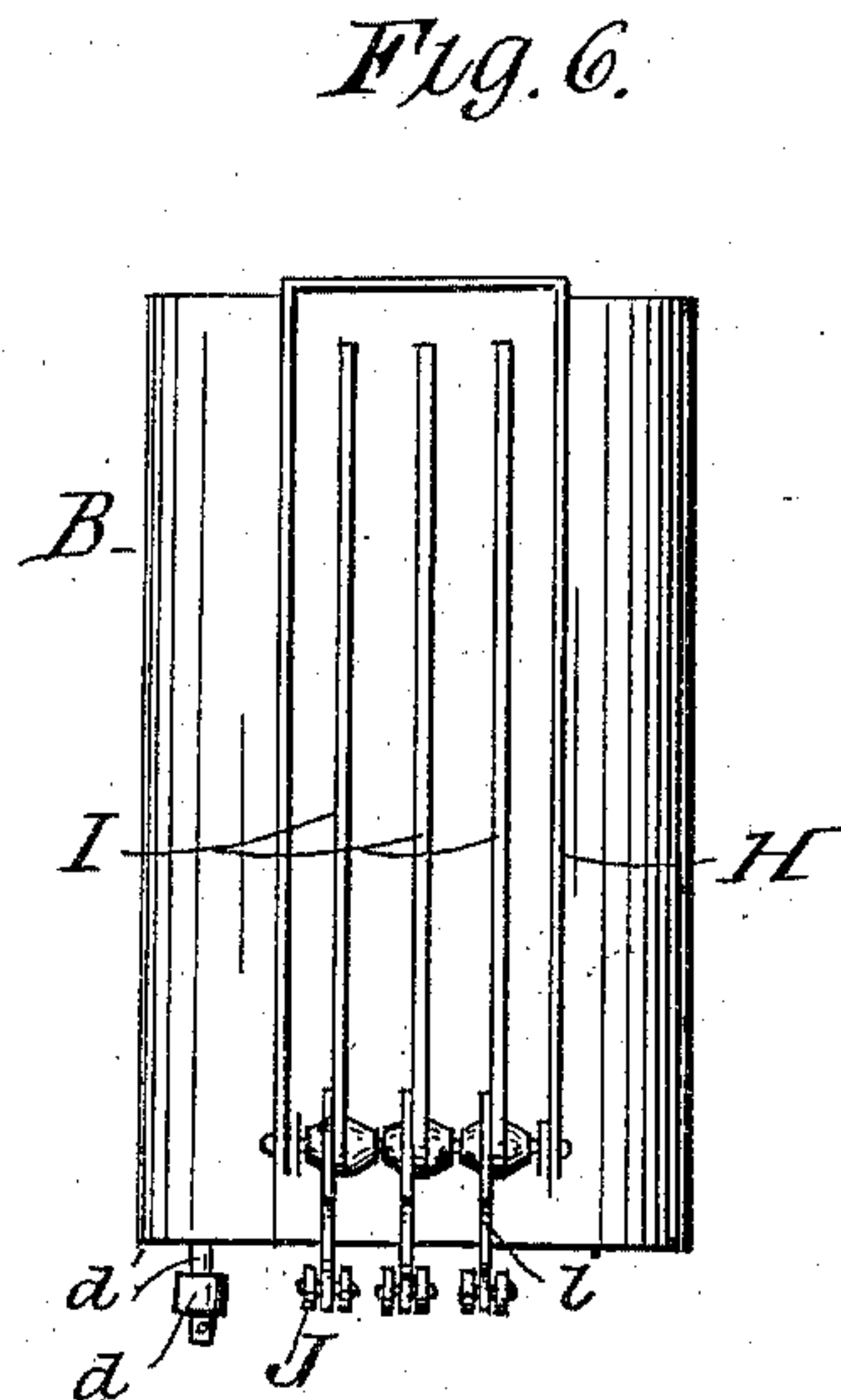
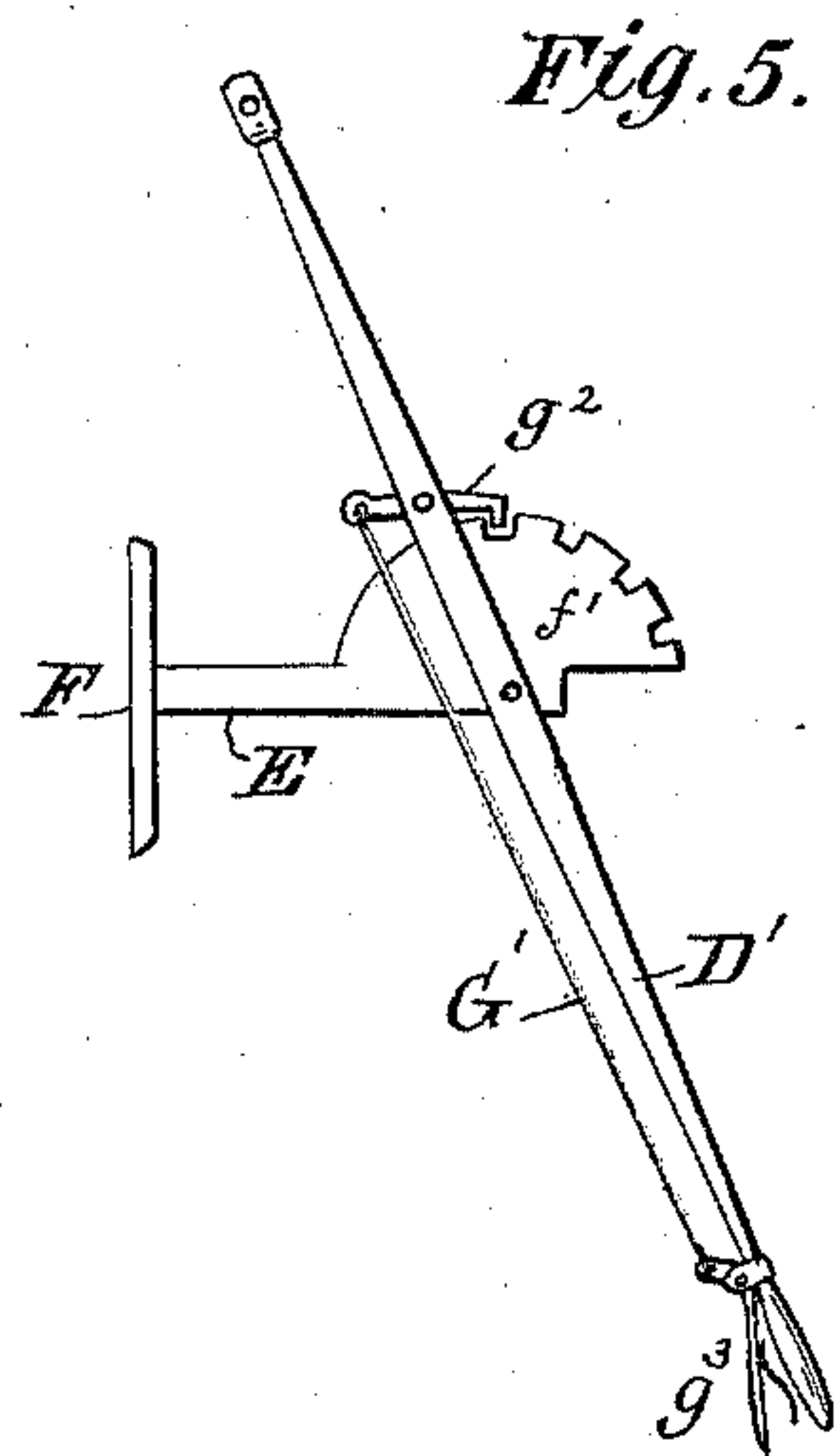
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

MILEY PLEASANTTON CRAWFORD, OF LOGAN, OHIO.

BLOCK-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 445,928, dated February 3, 1891.

Application filed April 28, 1890. Serial No. 349,732. (No model.)

To all whom it may concern:

Be it known that I, MILEY PLEASANTTON CRAWFORD, a citizen of the United States, residing at Logan, in the county of Hocking and State of Ohio, have invented certain new and useful Improvements in Block-Signal Combinations; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to block-signals, and has for its purpose to provide a signal apparatus for displaying the required signals by day and by night, and which will be compact in form and easily operated.

The improvement consists of the novel features and the peculiar construction and combination of the parts which hereinafter will be more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a side view of a signal appliance embodying my invention. Fig. 2 is a vertical central section of the signal. Fig. 3 is a side view, parts being broken away, of the devices for operating the day-signals. Fig. 4 is a detail view of the inner end of the lamp-operating lever and the segment having the indicating-arms. Fig. 5 is a detail view of the inner end of the day-signal-operating lever and the segment. Fig. 6 is a front view of the apparatus. Fig. 7 is a perspective view of the operating-levers and their support, showing their connection with the connecting-bars. Fig. 8 is a horizontal section on the line X X of Fig. 1.

A represents a side of a block-station from which project suitable brackets *a a*, to which is fastened the housing B, in which is mounted the signal-lamp C, which is journaled in the base of the housing and in a cross-bar extending across the upper end of the housing. The housing has side openings *b b*, through which the lamp may be seen from up or down the track. The lamp is provided with two sets of differently-colored glasses, which are so arranged that the same color glass will come opposite the openings *b b*. The lamp is rotatable in the housing, being turned on its journals by the lever D, which is connected by

rod *d* and crank-pin *d'* with the said lamp. The crank-pin *d'* projects through a curved slot *e* in the bottom of the housing, and the lever D is mounted on one of a series of arms E, which extend from the plate F. The segment *f* has a series of notches which are adapted to be engaged by the pawl *g* to hold the lamp in the required position. The pawl *g* is connected by bar G with the hand-latch *g'*.

The hood H on the front side of the housing is open on its front side and is adapted to receive the day-signals I, which are boards or metal painted to correspond with the colors of the glass in the signal-lamp—red, white, and green. These boards I are pivoted at their lower ends to the sides of the hood and have depending arms *i*, which are connected by bars J with operating-levers D', which are mounted on the arms E. These levers D' are held in a located position by the notched segments *f'* and the pawls *g''*, the latter being controlled in their movements by the rods G' and the hand-latches *g'''*. The several levers D and D' are provided for convenience of operation, so that the operator need not leave his seat. The ends of the bars J terminate in handles *j*, which can be readily grasped by the operator when standing or sitting.

The segment *f* is provided with three arms L, which correspond with the three positions of the lamp. When the lever D corresponds in position with one of these indicating-arms L, the color of light displayed may be determined by the color of the arm standing opposite the said lever, the arms being painted to correspond with the color of the glasses in the lamp.

The lamp is to be used exclusively by night and in foggy weather, and the boards I in clear weather and by day.

There is an extra indicator or register to work independent from the color signals on the levers on the inside of the office, so that the operator can be doubly sure that he has the right color of signal displayed for approaching train by day or night, and I can make them work on top of the building or on a post between the tracks.

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

1. A railway-signal comprising a housing, signal-boards adapted to fold within the housing, an operating-rod J for each board, having a handle at its outer end, a lever connected
5 with said rod J and having a latch, a notched segment having radial arms in sufficient number and of a color to correspond with the signal-boards, whereby on operating the proper lever or rod J and bringing it in the proper
10 position, which is determined by the radial indicating-arms on the said segment, the proper signal may be displayed, substantially as described.

2. The combination, with the housing and
15 the lamp journaled therein, of the crank-pin connected with the lamp and projecting through a curved slot in the said housing, and

the rod connected with the said crank-pin for operating the lamp, substantially as described.

3. The hereinbefore-described signal, comprising the housing which is provided with a
hood, the lamp journaled in the housing, the operating-lever having connection with a crank-pin provided on the lamp, the indicating-arms, the signal-boards, and the operating-levers connected with the said signal-
boards, substantially as described. 25

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

MILEY PLEASANTTON CRAWFORD.

Witnesses:

L. S. BORTS,
GRANT WRIGHT.