

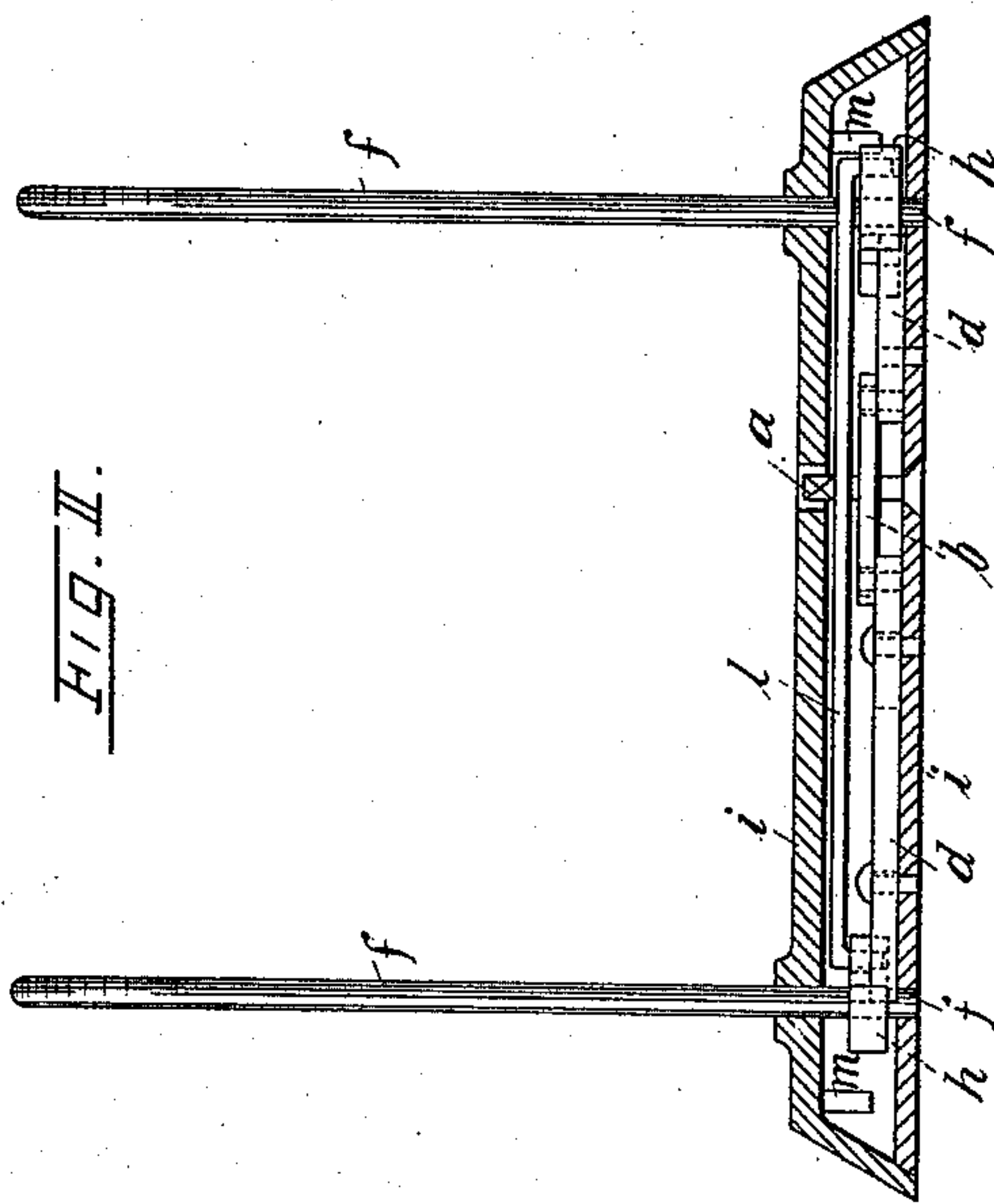
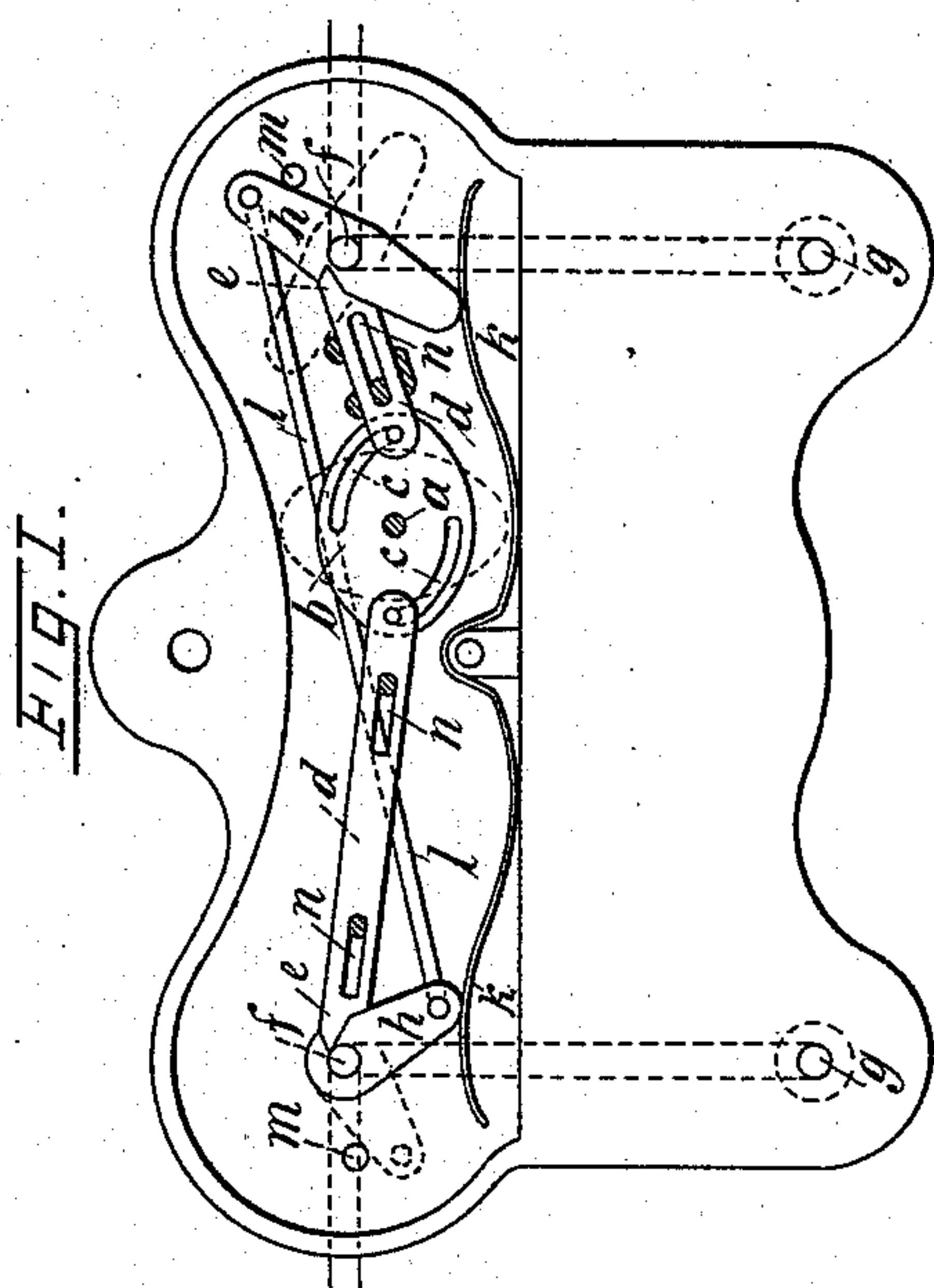
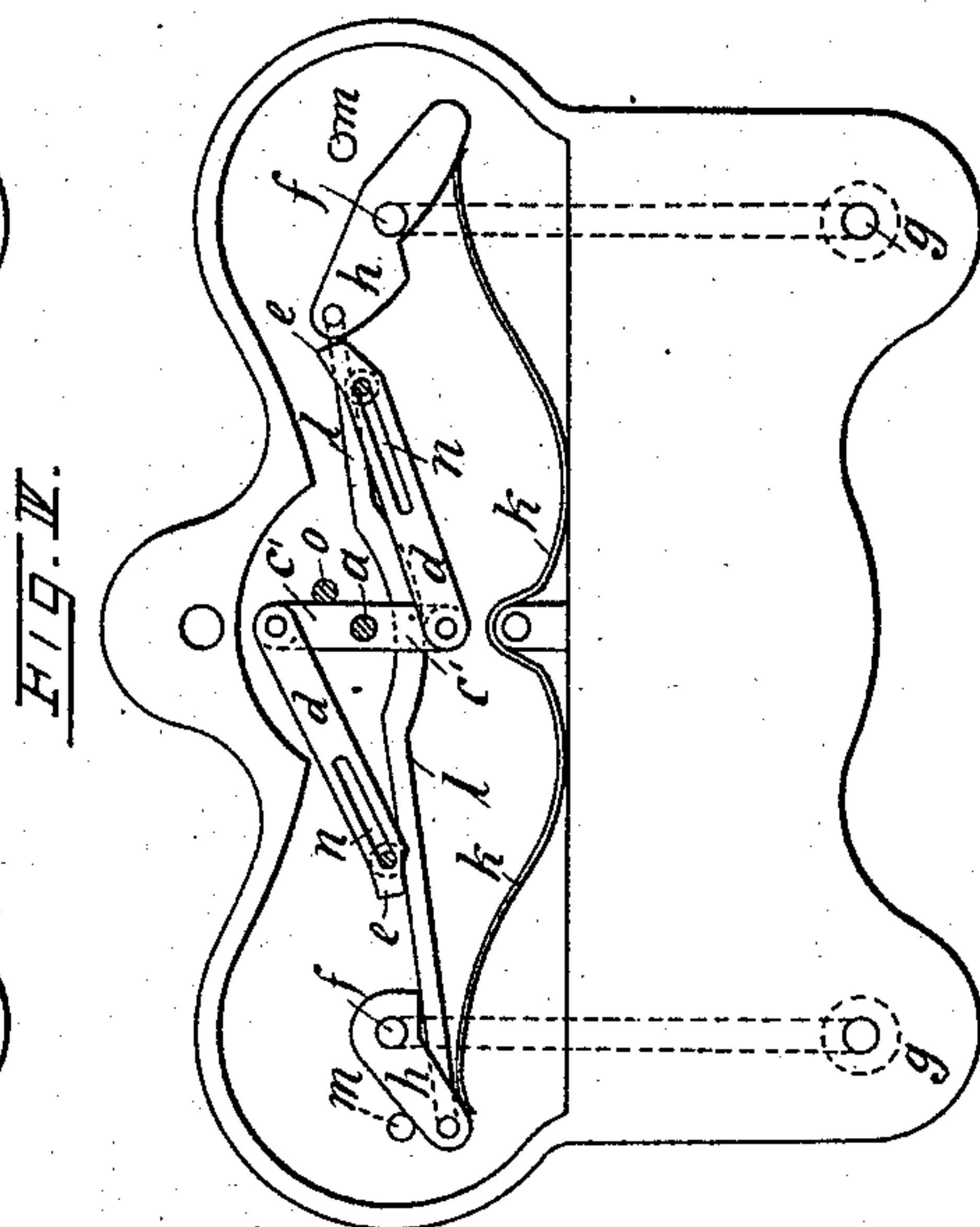
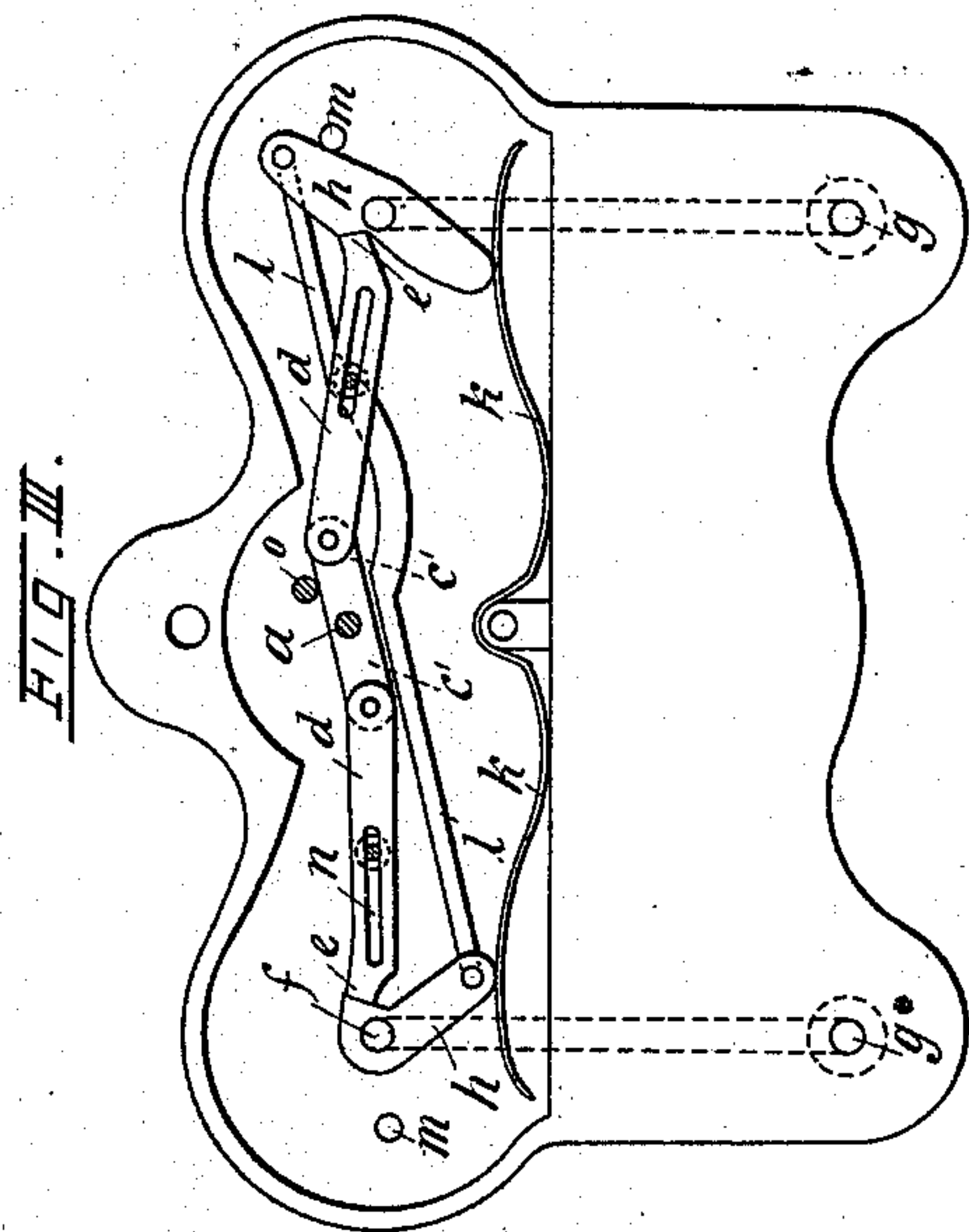
(No Model.)

2 Sheets—Sheet 1.

W. STIER.
LETTER FILE.

No. 412,562.

Patented Oct. 8, 1889.



Witnesses:
E. J. Griswold.
John Revell

Inventor:
Wilhelm Stier,
By his Attorneys,
Howson and Howson

(No Model.)

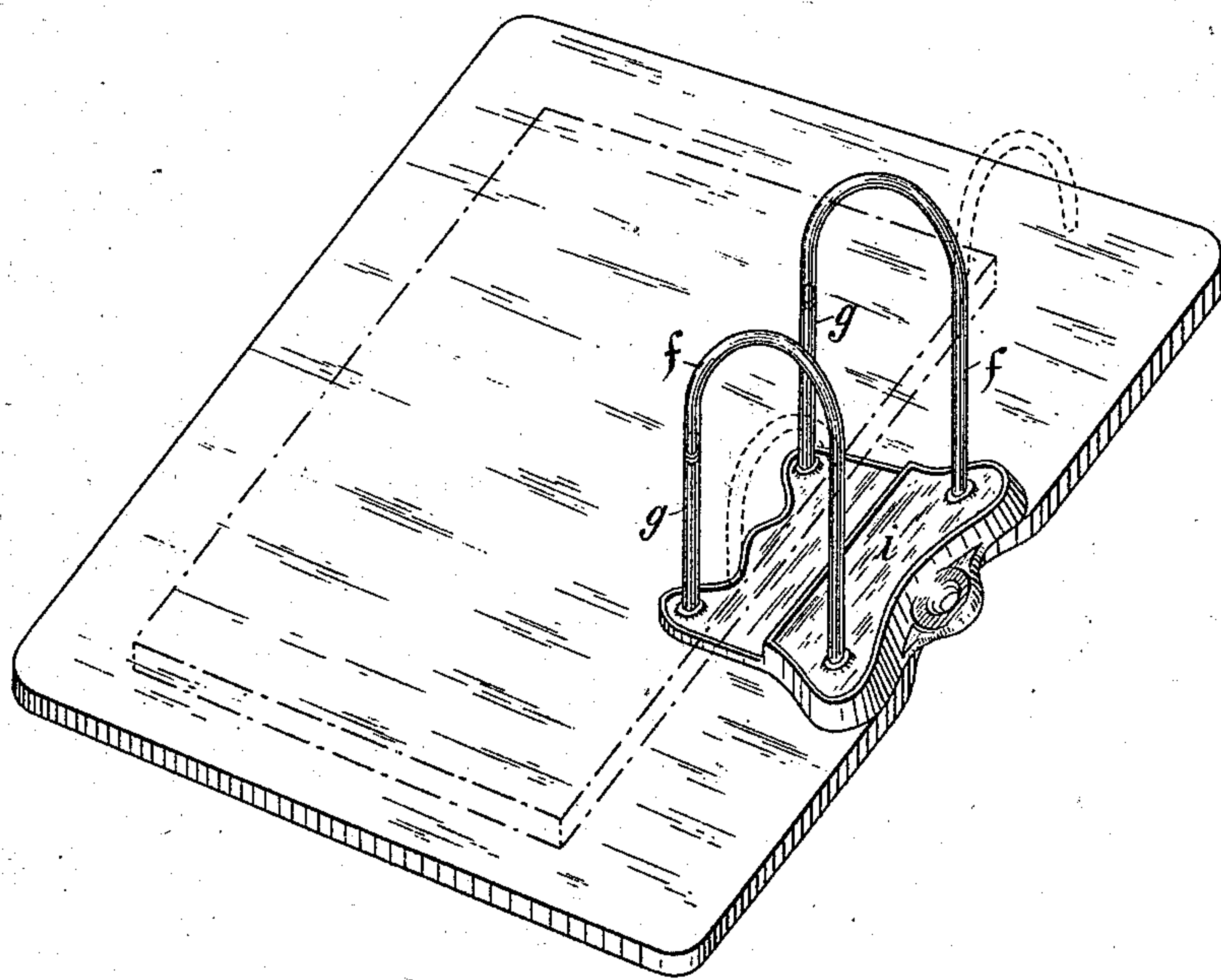
2 Sheets—Sheet 2.

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FIG. V.



Witnesses:
E. J. Griswold
John Revell

Inventor:
Wilhelm Stier,
By his Attorneys,
(Howe and Howe)

UNITED STATES PATENT OFFICE.

WILHELM STIER, OF LEIPSIC, GERMANY.

LETTER-FILE.

SPECIFICATION forming part of Letters Patent No. 412,562, dated October 8, 1889.

Application filed January 29, 1889. Serial No. 297,933. (No model.) Patented in Germany August 10, 1888, No. 47,147; in England November 14, 1888, No. 16,565; in Switzerland November 21, 1888, No. 176, and in Austria-Hungary February 15, 1889.

To all whom it may concern:

Be it known that I, WILHELM STIER, a subject of the King of Saxony, residing at Leipsic, Dörienstrasse 9, Saxony, German Empire, have invented certain new and useful Improvements in Letter-Files, (for which patents have been obtained in Germany, No. 47,147, dated August 10, 1888; Great Britain, No. 16,565, dated November 14, 1888; Switzerland, No. 176, dated November 21, 1888; Austria-Hungary, dated February 15, 1889;) 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to apparatus for filing letters, bills, and other documents of a like nature, and is especially applicable to the apparatus known as the "Shannon bill and letter file," in which letters or other loose sheets of paper are temporarily filed on two fixed wires, over the ends of which are the curved ends of two movable wires, so as to allow the letters to be turned over from the fixed to the movable wires and any desired paper to be taken out of the file without disturbing the order or removing any of the others. Files of this kind possess the disadvantage that the papers can be easily removed by unauthorized persons; and the object of my invention is to obviate this objection by providing suitable mechanism whereby the apparatus can be locked and can only be unlocked by means of a key.

I will describe my invention, by way of example, as applied to a Shannon bill-file, for which it is especially suited. As is well known, the movable wires in this file are connected by means of cranks and a connecting-rod, and they are secured in their open and closed positions by a spring and stops. In order to lock them in their closed position, I provide a rocking bar or lever or a pivoted disk having eccentric slots, the said bar or disk being adapted to be moved by a key in such a man-

ner as to operate two sliding bars, the free ends of which form stops for locking the cranks when the wires have been closed.

In order to enable my invention to be fully understood, I will describe how it can be carried into practice by reference to the accompanying drawings, in which—

Figure I is a plan of the under side of a Shannon bill-file provided with my improvements, the bottom covering-plate being removed to show the interior mechanism. Fig. II is a vertical longitudinal section of the file. These figures illustrate the use of a slotted disk for actuating the sliding locking-bars, which are shown in their locking position. Fig. III is a similar view to Fig. I, but showing the sliding bars actuated by a rocking bar or lever. Fig. IV is a similar view to Fig. III, but showing the position occupied by the parts when the file is unlocked and open. Fig. V is a perspective view of the file.

Similar letters in all the figures indicate similar parts.

Referring to Figs. I, II, and V, *i* is the case or box inclosing the mechanism for simultaneously operating the movable wires of the file. *g g* are the fixed wires. *f f* are the movable wires, connected by means of cranks *h* and a connecting-rod *l*. *k* is the spring, and *m m* the stops for securing the cranks in their closed position, as indicated by the full lines of the drawings, and in their open position, as indicated by the dotted lines.

The foregoing parts constitute an ordinary Shannon bill-file.

I will now describe my improvements.

b is the disk, pivoted at *a* and having the eccentric slots *c c*, the pivot *a* being formed with a square, as shown in Fig. II, to allow of its being moved by means of a key.

d d are the two sliding bars, provided at one end with studs working in the slots *c c*. The bars *d d* are formed with guiding-slots *n n*, moving over fixed studs. The free ends *e e* of the bars are adapted to engage in notches formed in the cranks *h h*, so as to form stops for locking the cranks when the wires *f* and *g* have been closed.

The file being opened by moving the wires

ff in the direction of the arrows into the position indicated by the dotted lines in Fig. V, the bills or papers are filed on the two fixed wires *g g*, and the ends of the movable wires 5 *ff* are brought over those of the fixed wires, in the usual manner, into the position indicated by full lines of the said Fig. V. The disk *b* will then be in the position shown by the dotted lines in Fig. I.

10 In order to lock the file, a key is placed over the square of the pivot *a*, and, being turned, will rotate the disk *b*, and thereby move the bars *d d* until their ends *e e* enter the notches in the cranks *h h*. The key is then removed 15 and the movable wires *ff* cannot then be turned to open the file without the application of the said key or a similar one.

The locking mechanism illustrated in Figs. III and IV is the same as hereinbefore de- 20 scribed with reference to Figs. I and II, with the exception that a rocking bar or lever *c'* is employed instead of an eccentrically-slotted disk for operating the sliding bars *d d*, which

for this purpose are jointed to the rocking bar, as shown. 25

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. The combination of the movable portions of the filing-wires of a letter-file with mechanism adapted to be operated by a key to lock the said wires in their closed positions, all substantially as described. 30

2. The combination of the movable portions of the curved filing-wires of a letter-file and crank-levers carrying said movable parts with mechanism adapted to be operated by a key to lock the said wires in their closed positions, all substantially as described. 35 40

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

WILHELM STIER.

Witnesses:

CARL BORNGRAEBER,
AUGUST LANGY.