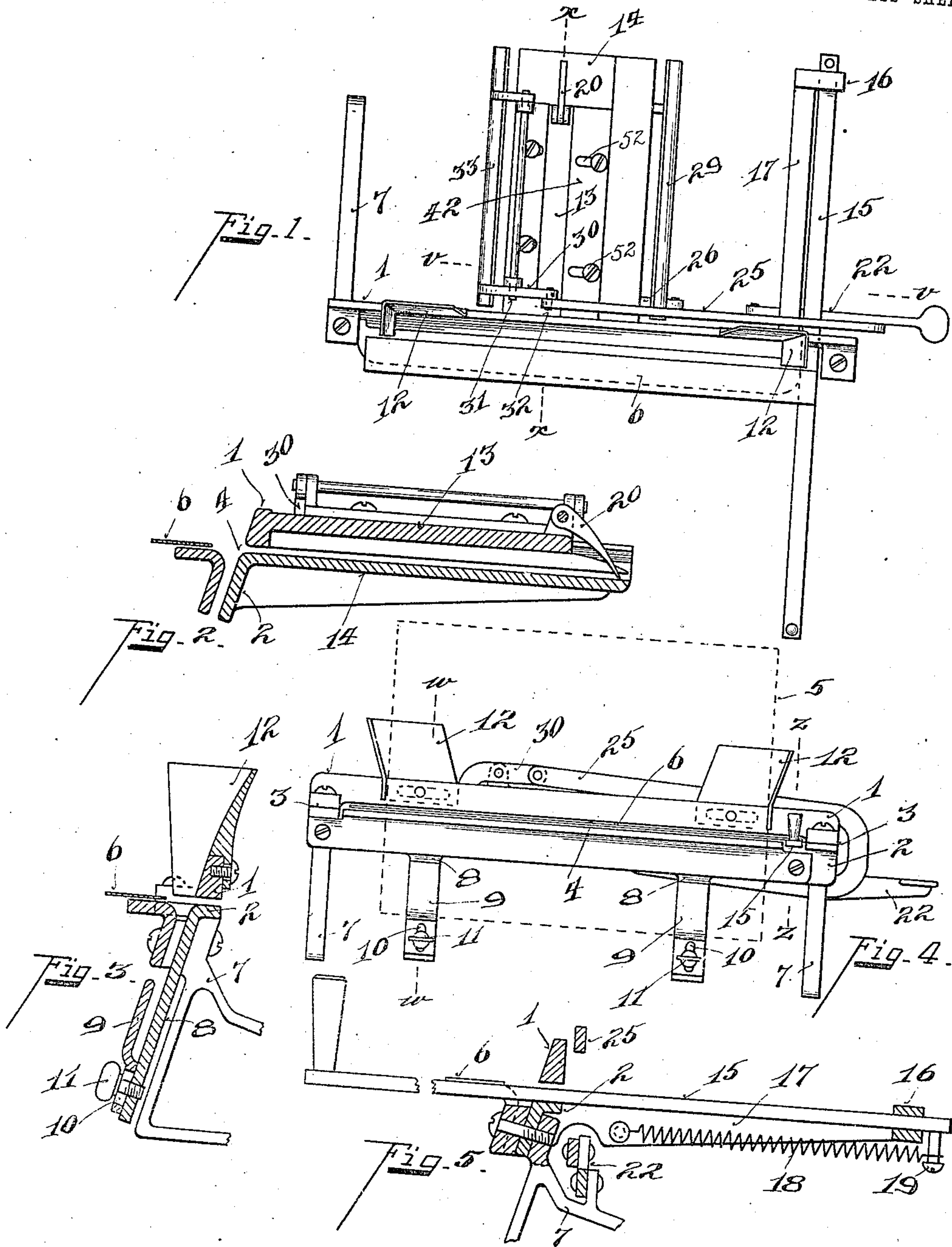


No. 843,571.

PATENTED FEB. 12, 1907.

J. BAUM.
LETTER FOLDING DEVICE.
APPLICATION FILED JUNE 19, 1906.

3 SHEETS—SHEET 1.



Witnesses
Chas. B. Kaiser
Luise Beck

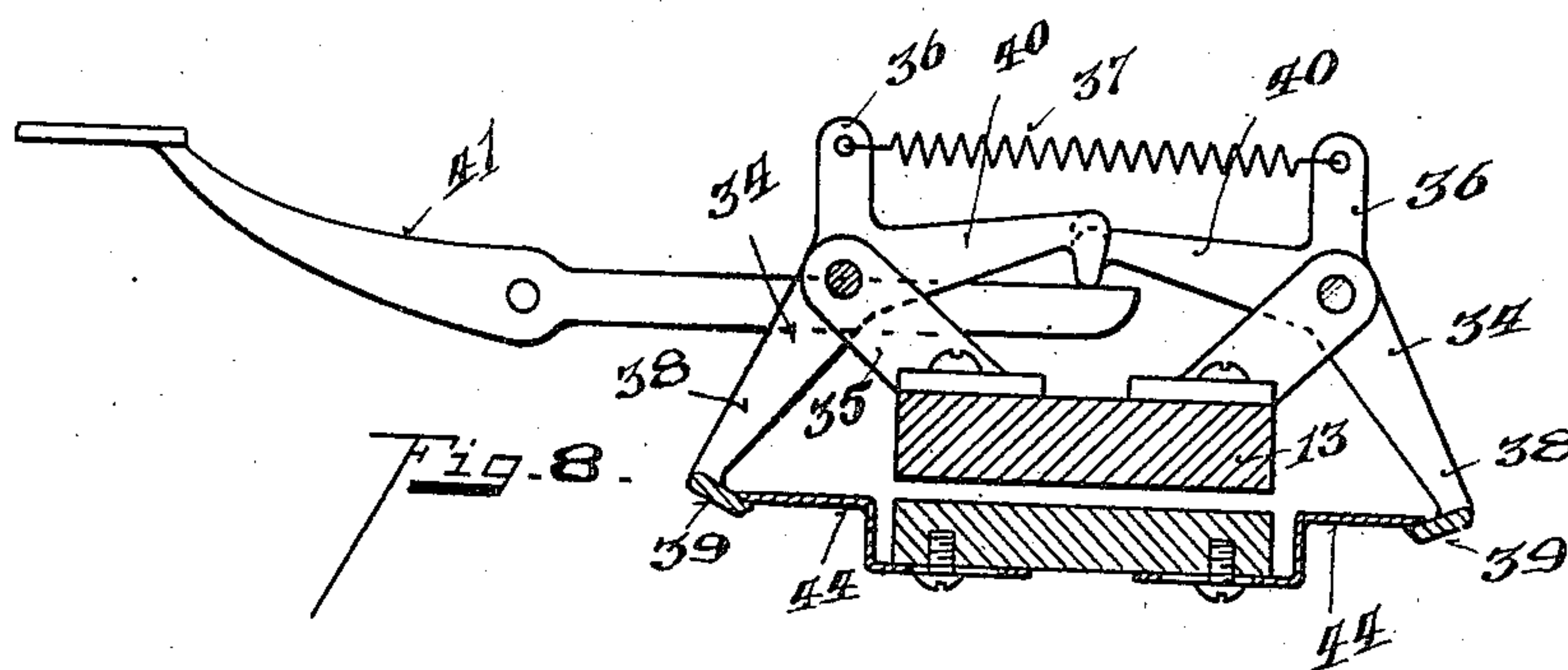
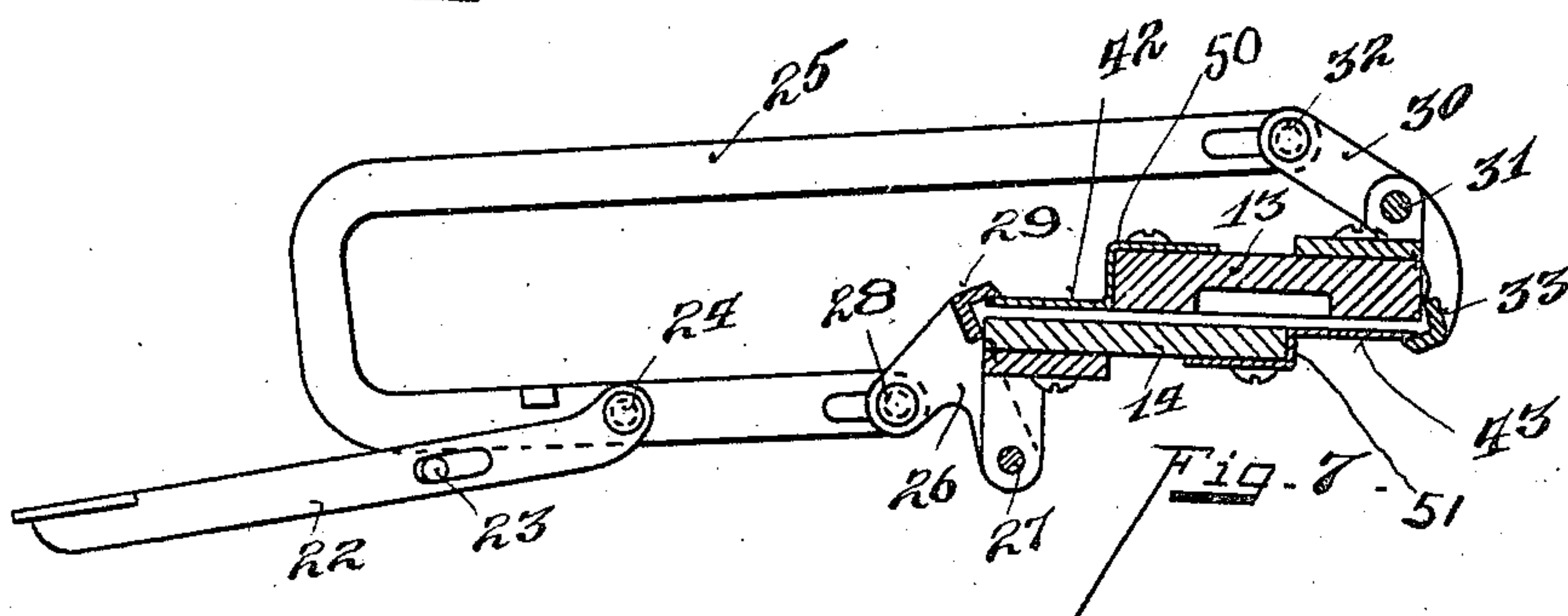
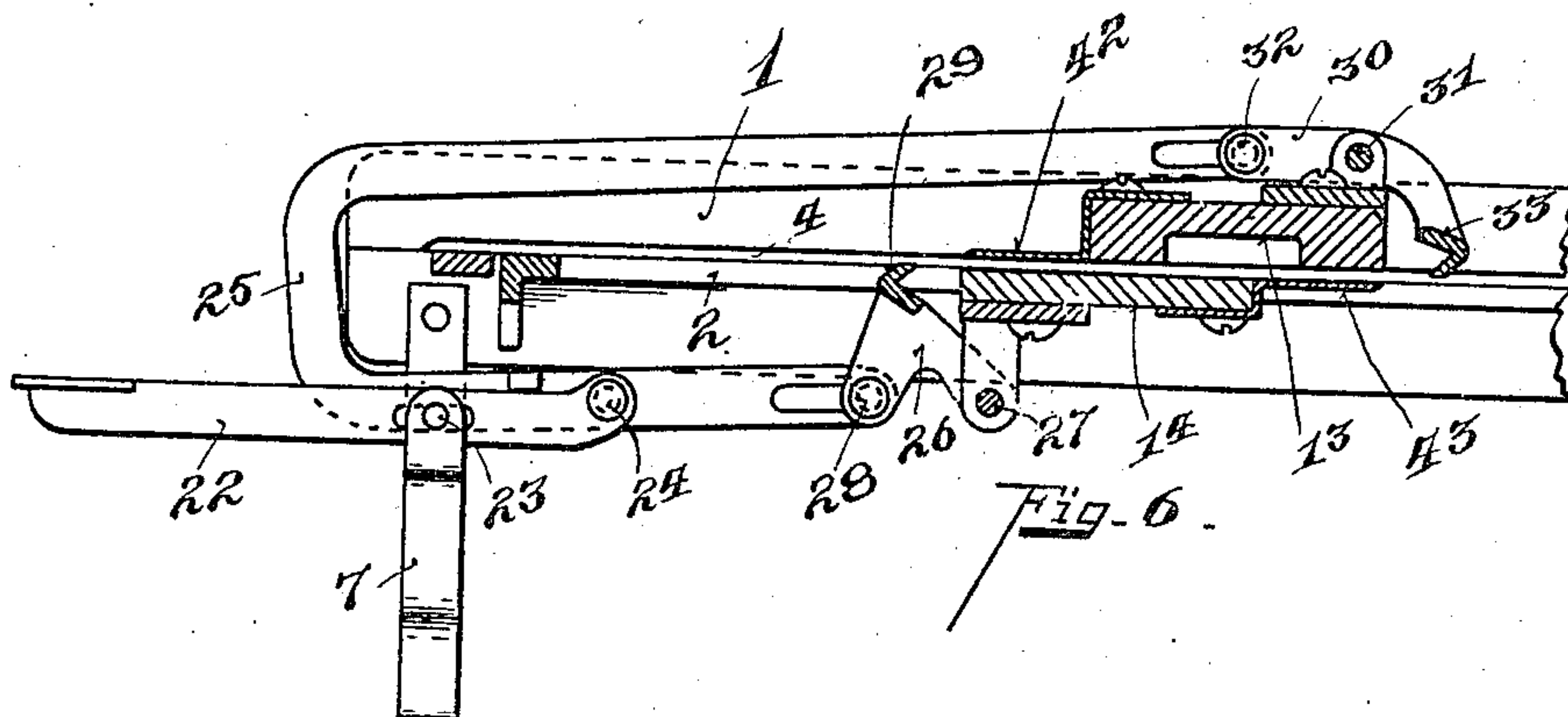
Inventor
Jacob Baum
By *[Signature]*
Attorney

No. 843,571.

PATENTED FEB. 12, 1907.

J. BAUM.
LETTER FOLDING DEVICE.
APPLICATION FILED JUNE 19, 1906.

3 SHEETS—SHEET 2.



Inventor

Witnesses

Charles B. Kaiser
Louis Beck

Jacob Baum
By *Wm. H. Brown*
Attorney

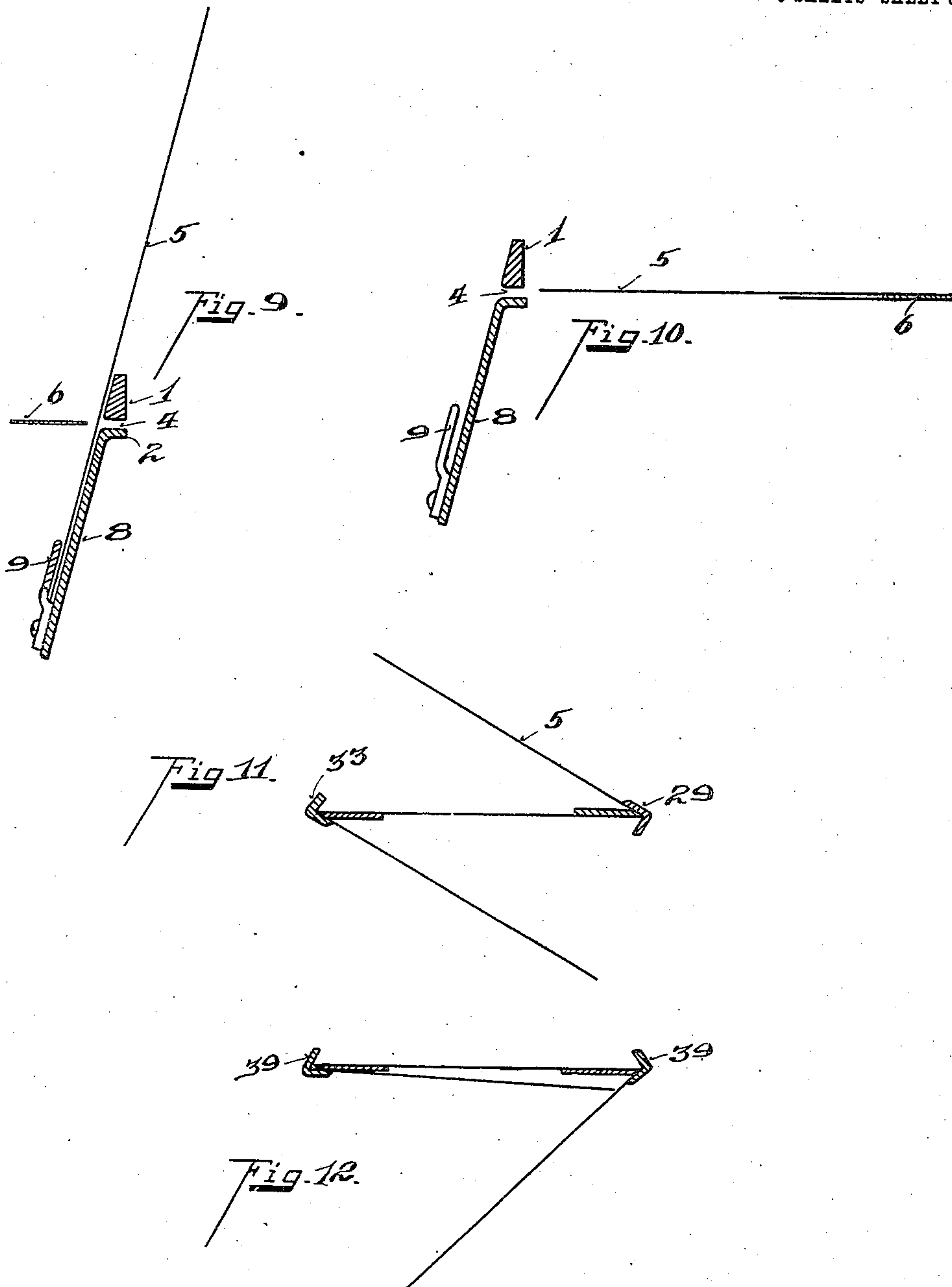
No. 843,571.

PATENTED FEB. 12, 1907.

J. BAUM.
LETTER FOLDING DEVICE.

APPLICATION FILED JUNE 19, 1906.

3 SHEETS—SHEET 3.



Inventor

Witnesses

Charles B. Kaiser
Louis Beck

By

Jacob Baum

Wm. W. Horn

Attorneys

UNITED STATES PATENT OFFICE.

JACOB BAUM, OF CINCINNATI, OHIO.

LETTER-FOLDING DEVICE.

No. 843,571.

Specification of Letters Patent.

Patented Feb. 12, 1907.

Application filed June 19, 1906. Serial No. 322,492.

To all whom it may concern:

Be it known that I, JACOB BAUM, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Letter-Folding Devices, of which the following is a specification.

The object of my invention is to produce a letter-folding device which is simple and light in construction, so as to be adapted to conveniently occupy a position on the desk and to be manually operated. It is preferably desirable that the letter have three folds, one of which is transverse to the other two. This is a particular advantage in folding letters or circulars on the top fold of which is written or printed the address in position to be exposed through the "lookout" of an envelop designed for this purpose.

As I have illustrated my device it is manually operated. Three movements complete the folding operation and deliver the folded letter from the machine, so that the folding operations may be carried on very rapidly.

The features of the invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a top plan view of my improved device. Fig. 2 is an enlarged section on line *x x*, Fig. 1, with the paper-guides omitted. Fig. 3 is an enlarged section on line *w w*, Fig. 4. Fig. 4 is a front elevation of the machine. Fig. 5 is an enlarged section on line *z z*, Fig. 4. Fig. 6 is an enlarged section on line *v v*, Fig. 1, showing the parts in normal position. Fig. 7 is a detailed sectional view similar to Fig. 6, showing the actuating mechanism for producing a cross-fold in its folding position. Fig. 8 is a modified view illustrating mechanism for obtaining a different fold from that shown in Figs. 6 and 7. Fig. 9 is a diagrammatic view illustrating the paper in position for first folds. Fig. 10 is a diagrammatic view illustrating the first fold completed. Fig. 11 is a diagrammatic view illustrating the cross-folds. Fig. 12 is a diagrammatic view illustrating the cross-folds of the modified form of apparatus.

13 14 represent plates bolted together at 3, the intermediate portions of the plates being separated to form a slideway 4. These plates form a table on which the folding is done.

1 2 represents the front of the plates, and

they are extended rearwardly in horizontal plane.

6 represent a folding-blade adapted to be reciprocated in slideway 4 to form the first fold. (See Figs. 2, 4, and 9.)

The table stands on legs 7.

The front end 2 of the bottom plate 14 has the downward extension 8, (see Fig. 3,) to which are adjustably secured brackets 9 for supporting the sheet of paper 5 in the initial upright position shown in Fig. 9. Brackets 9 are provided with slots 10 and clamping-bolts 11 for vertically adjusting brackets 9 relative to the table.

12 represents guides for directing the paper to its initial position. (Shown in Fig. 9.)

The first fold is formed by moving the blade 6 forward into the slideway 4, which doubles over the paper and slides it rearwardly longitudinally of the plates 13 14. The two subsequent transverse folds are formed by bending the letter transversely over the opposite edges of the table, as indicated in Figs. 11 and 12. In order to give the table lateral adjustment, I provide the top plate 13 with an adjustable bracket 42 and the bottom plate 14 with an adjustable bracket 43 for the table shown in Figs. 6 and 7, and for the modification shown in Fig. 8 I provide the bottom member 14 with the laterally-adjustable brackets 44. The transverse folds are formed by bending the letter over or crimping it against the outer edges of these brackets 42 43 44, which brackets form laterally-adjustable extensions of the table.

15 represents a slide-rod held in the bearing 16, formed on the end of a rigid supporting-rod 17. (See Fig. 1.)

18 represents a spring, one end of which is fixed to rod 17 and the other end to a bolt 19 on the end of rod 15, the spring holding the rod 15 normally in initial position. The blade 6 is attached to and actuated by rod 15. Depending from the rear end of plate 13 is a pawl 20, the depending end of which rests on the rear face of plate 14 to prevent a backlash of the paper.

I will first explain the folding of the letter where it is desired to have the address written on the letter and the letter so folded that the address will register with the exposing-orifice of the envelop when the letter is inserted. (See Fig. 11.) Brackets 9 are adjusted to support the paper in the position shown in Fig. 9, in which the first fold will be

formed on a line about one-third of the distance from the bottom. Blade 6 is reciprocated, leaving the paper in the slideway 4 with the first fold formed, as indicated in Fig. 10, but with the folding-blade withdrawn from the slideway 4. The mechanism for imparting the two transverse folds is shown in Figs. 6, 7.

22 represents an actuating-lever having a pivot-and-slot connection 23 with the supporting-frame. The front end of lever 22 is pivoted at 24 to the bottom member of a U-shaped link 25.

26 represents a bell-crank lever, one end of which is pivoted at 27 to the lower plate 14, the other end of which lever has a pivot-and-slot connection 28 with the end of the lower member of the U-shaped link 25. The upper end of lever 26 is provided with a V-clamp 29, which lies adjacent to and slightly under one edge of the table.

30 represents a lever pivoted at 31 to the top member 13. One end of said lever has a pivot-and-slot connection 32 with the top arm of the U-shaped link 25. The other end of lever 30 depends and is provided with the V-clamp 33 adjacent to and slightly above the upper edge of the table. It is obvious that the paper which has received its first fold in the slideway 4 lies between the V-clamps 29 33, which extend lengthwise of the table, and which clamps or crimping members constitute the fold-forming devices for the two transverse folds. When lever 22 is depressed, the previously - described lever mechanism brings the clamps 29 33 from the bottom and top, respectively, to the clamping position upon the opposite sides of the table. (Shown in Figs. 7 and 11.) Lever 22 returns by gravity to normal position when released, and another reciprocation of the blade 6 delivers the letter from the rear end of slideway 4. To fold the letter conventionally, the brackets 9 are adjusted to form the first fold about midway of the length of the letter. The two transverse folds are formed by bending the opposite ends of the letter toward one another, as indicated in Fig. 12. The arrangement of lever mechanism for forming this fold is shown in Fig. 8.

34 represents two three-arm levers fulcrumed to the support 35 on plate 13. Arms 36 of said lever are connected by spring 37. Arms 38 of said levers are downwardly projected and provided with clamping members 39. Arms 40 of said levers project toward one another and terminate over and in position to be actuated by the rear end of operating-lever 41. When lever 41 is actuated, the clamping members 39 move to the position indicated in Fig. 12, forming transverse folds by bending the opposite ends of the letter toward one another.

In order to make the table extensible, I provide an angle-strip 50, bolted to the top member 13, and a similar angle-strip 51, bolted to the bottom member 14. It is against the outer edges of these strips or plates that the clamping members 39 engage to impart the transverse folds to the letter, so that the outer edges of these plates 50 51 (see Figs. 6 and 7) are to be considered as the outer edges of the table. The attachment is of the usual slot-and-bolt construction 52. (See Fig. 1.)

It will be seen that this device is very simple structurally and adapted to stand on a desk and to be manually operated. The device can be readily adjusted to give different foldings, and the operation is extremely rapid as well as efficient.

Having described my invention, I claim—

1. In a letter-folding device, a table formed with a slideway, a folding-blade, means for reciprocating said blade in said slideway, folding devices adapted to bend the paper over the opposite edges of said table to form two folding-lines transverse to the first fold, and means for actuating said folding devices, substantially as described.

2. In a letter-folding device, a table formed with a slideway, means for supporting the letter in front of and transversely to the slideway, a folding-blade between which blade and the table the letter is initially supported, means for reciprocating said blade in said slideway, folding devices adapted to bend the letter over the side edges of said table to form two folding-lines transverse to the first fold, and means for reciprocating said folding devices, substantially as described.

3. In a letter-folding device, a table formed with a slideway, means for adjustably supporting the letter in front of and transversely to the slideway, a folding-blade between which blade and the table the letter is initially supported, means for reciprocating said blade in said slideway, folding devices adapted to bend the letter over the side edges of said table to form two folding-lines transverse to the first fold, and means for reciprocating said folding devices, substantially as described.

4. In a letter-folding device, a table formed with a slideway, means for adjusting the width of the table, means for adjustably supporting the letter in front of and transversely to the slideway, a folding-blade between which blade and the table the letter is initially supported, means for reciprocating said blade in said slideway, folding devices adapted to bend the letter over the side edges of said table to form two folding-lines transverse to the first fold, and means for reciprocating said folding devices, substantially as described.

5. In a letter-folding device; a table com-

posed of two plates suitably secured together with a space between them to form a slideway horizontally extended, a folding device, means for supporting the letter initially between said device and the slideway, means for reciprocating the said device whereby it moves into and out of said slideway, folding devices adapted to crimp the paper against the opposite edges of the table to form two folding-lines transverse to the first, and lever mechanism for simultaneously operating the said transverse folding devices, substantially as described.

6. In a letter-folding device, a table, a slideway formed therein, a folding-blade, means for reciprocating said blade in the slideway to impart the first fold to the letter, folding devices adapted to crimp the paper against the opposite edges of the table to impart two transverse folds to the letter, and lever mechanism adapted to simultaneously

actuate said folding devices, substantially as described.

7. In a letter-folding device, top and bottom members forming a slideway between them, a folding-blade, means for reciprocating the blade in the slideway to impart the first fold to a letter, plates extensibly attached to said top and bottom members, crimping devices adapted to crimp the paper against the outer edges of said plates to impart two transverse folds to the letter, and lever mechanism adapted to operate the said crimping members, substantially as described.

In testimony whereof I have hereunto set my hand.

JACOB BAUM.

Witnesses:

OLIVER B. KAISER,
ANTON MILL.