(No Model.)

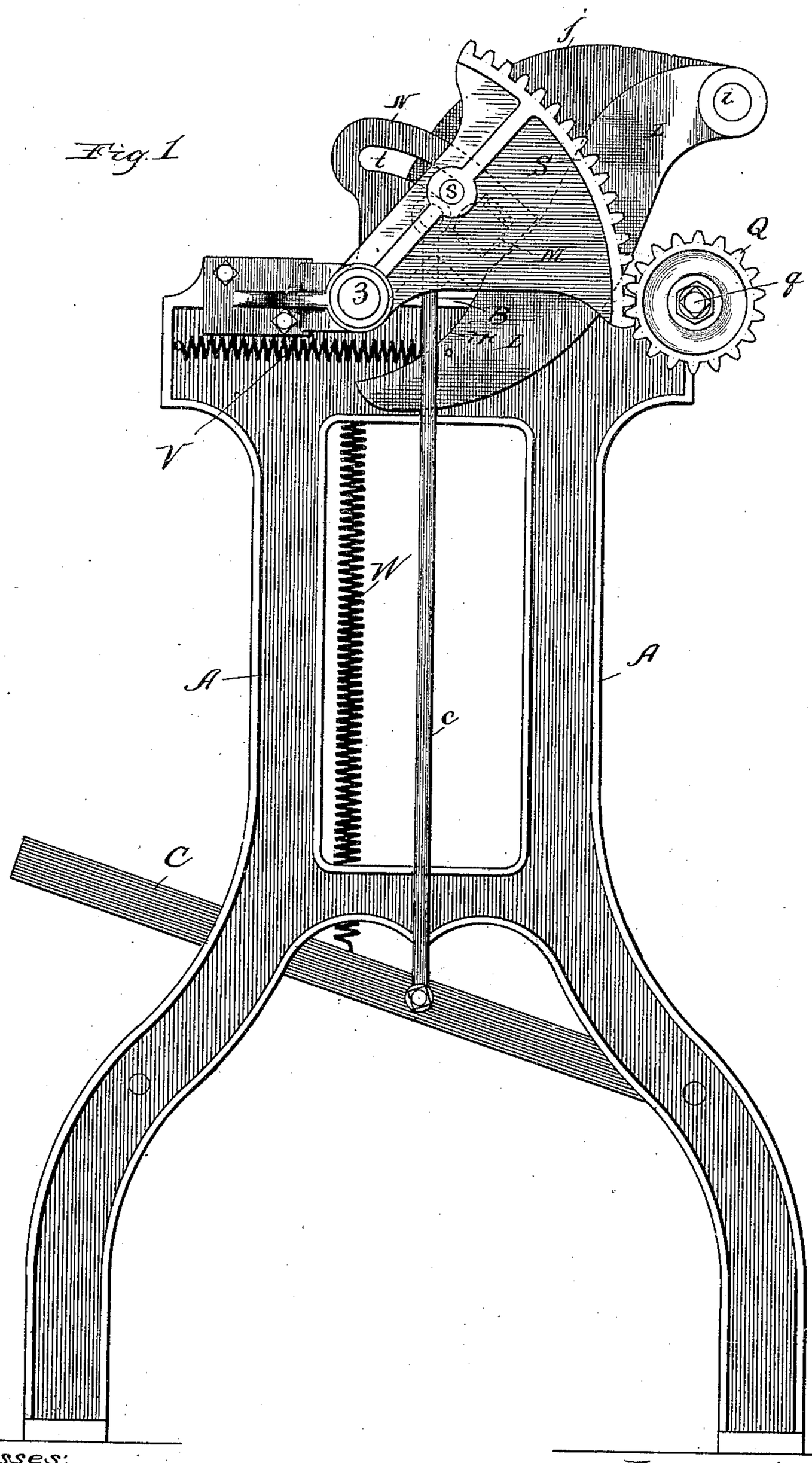
4 Sheets—Sheet 1.

C. R. PEASLEE.

SHEET METAL FOLDING MACHINE.

No. 445,589. Patented Feb. 3, 1891.

Fig. 1



Witnesses:
Lew. C. Curtis
H. M. Munday.

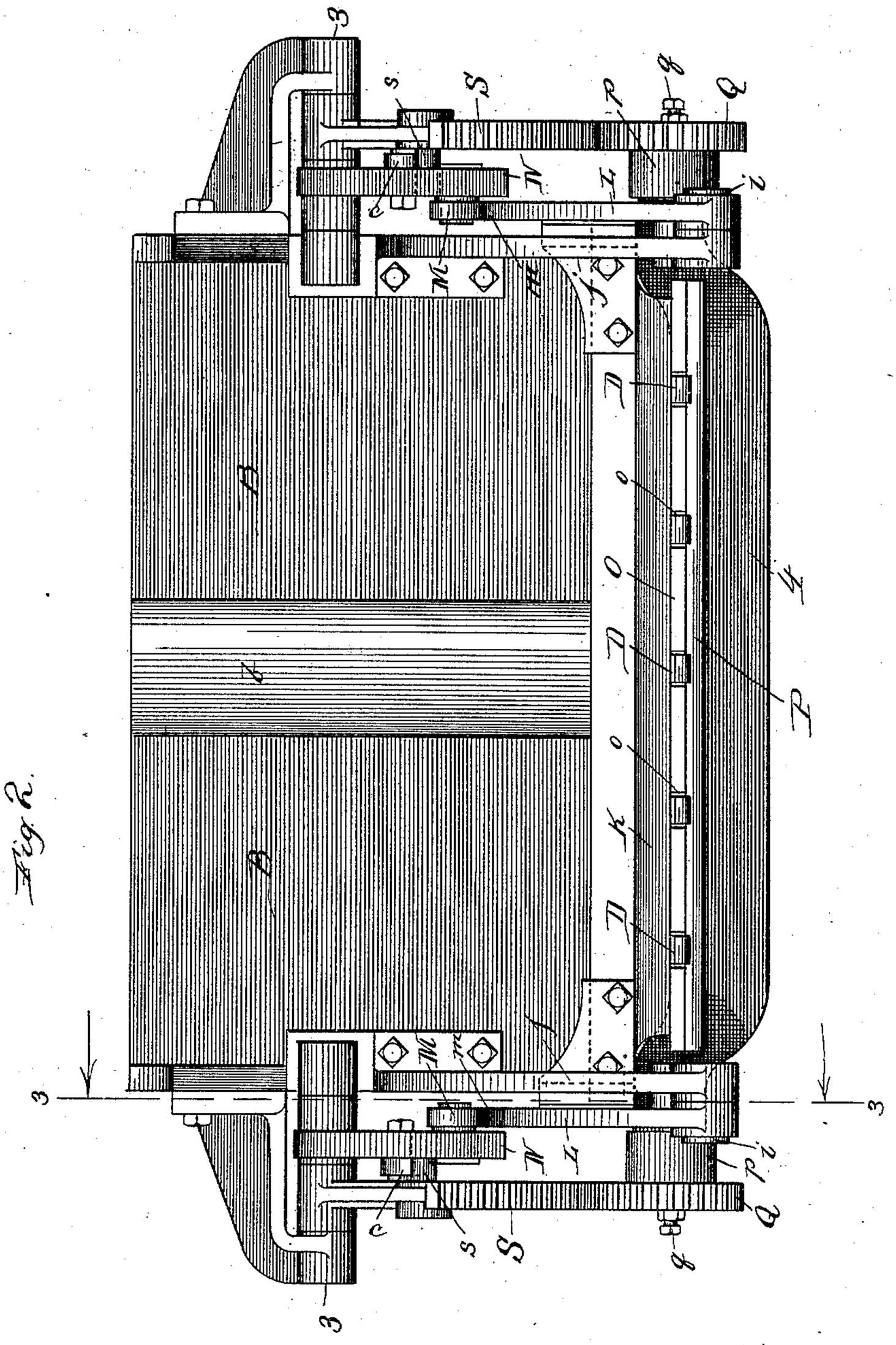
Inventor:
Charles R. Peaslee
By Munday, Evarts & Adcock
His Attorneys.

(No Model.) 4 Sheets—Sheet 2.

C. R. PEASLEE.

SHEET METAL FOLDING MACHINE.

No. 445,589. Patented Feb. 3, 1891.



Witnesses:
Lew. E. Curtis
H. W. Munday.

Inventor:
Charles R. Peaslee
By Munday, Evarts & Adcock
His Attorneys.

(No Model.) 4 Sheets—Sheet 3.

C. R. PEASLEE.

SHEET METAL FOLDING MACHINE.

No. 445,589. Patented Feb. 3, 1891.

Fig. 3.

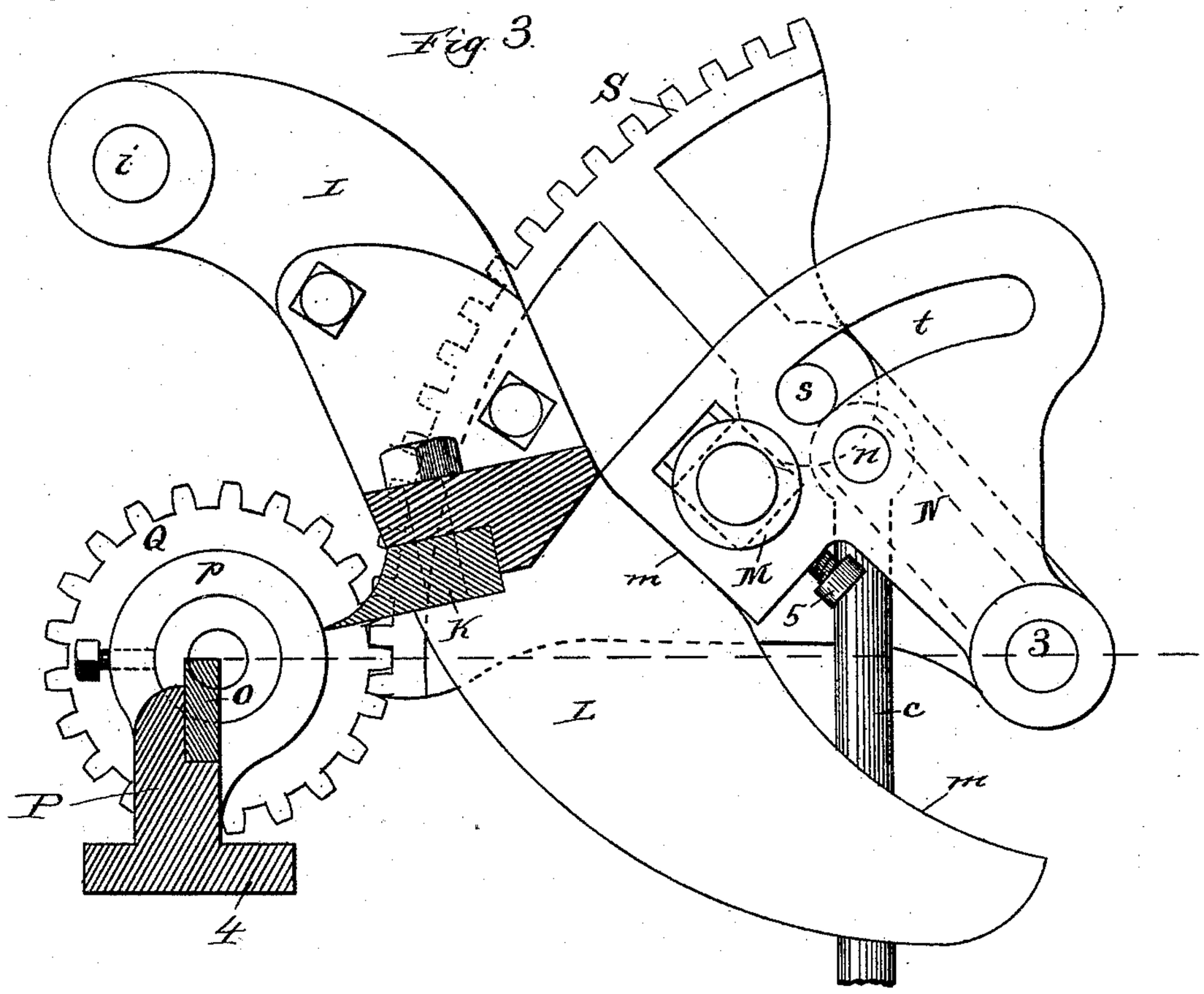
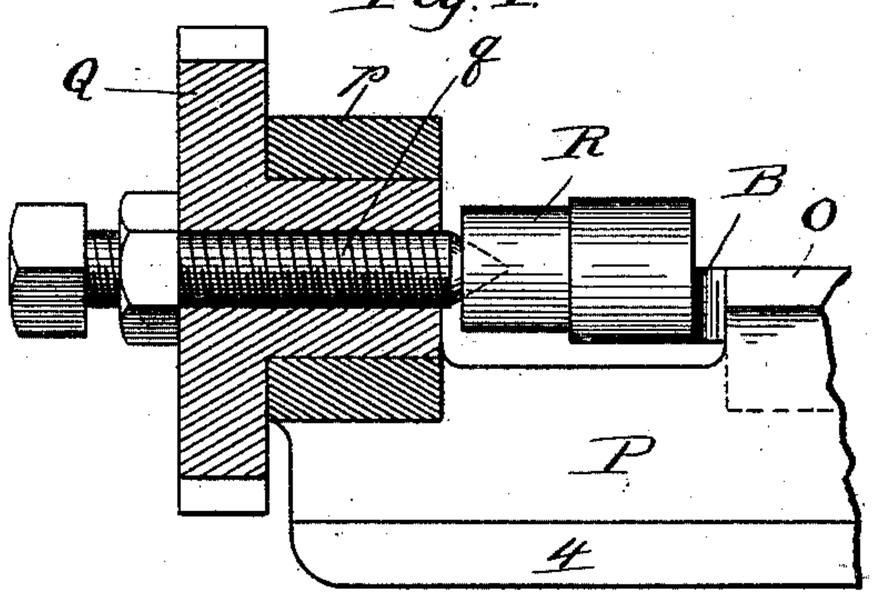


Fig. 4.



Witnesses:
Lew. C. Curtis
A. W. Munday.

Inventor:
Charles R. Peaslee
By Munday, Evarts & Adcock
His Attorneys.

(No Model.) 4 Sheets—Sheet 4.

C. R. PEASLEE.

SHEET METAL FOLDING MACHINE.

No. 445,589. Patented Feb. 3, 1891.

Fig. 5

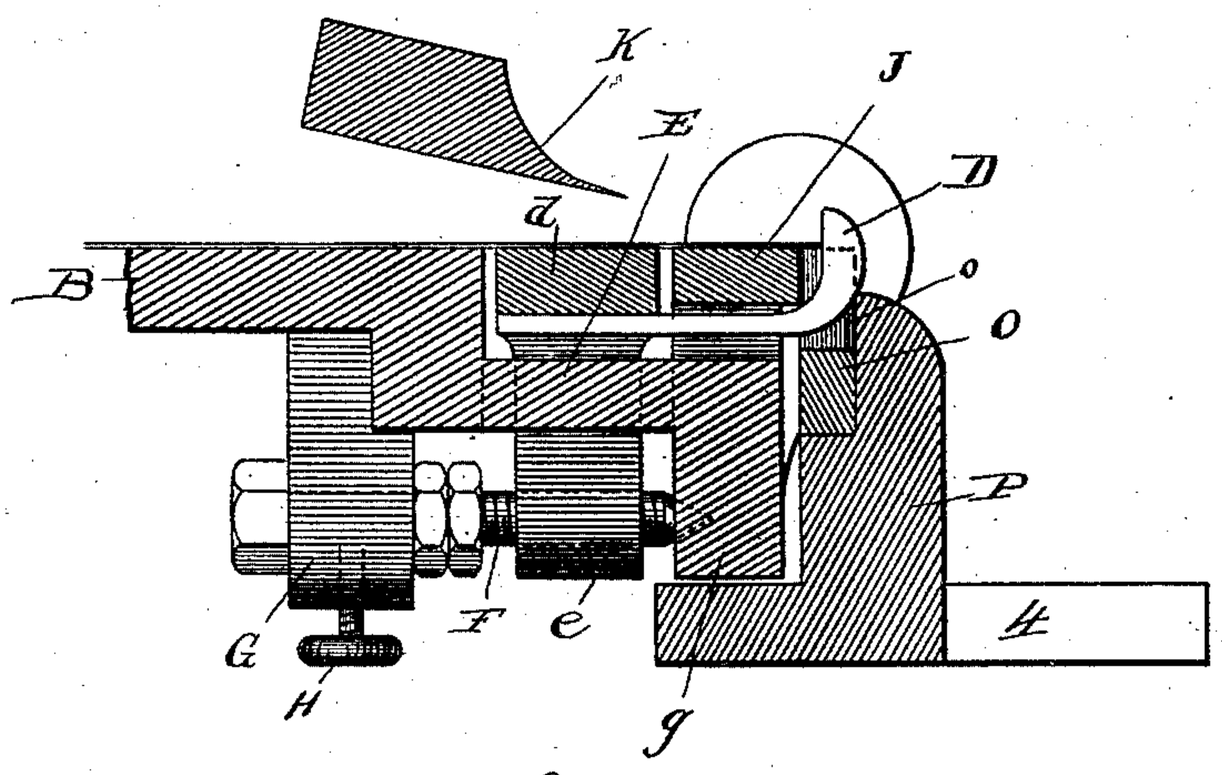


Fig. 6.

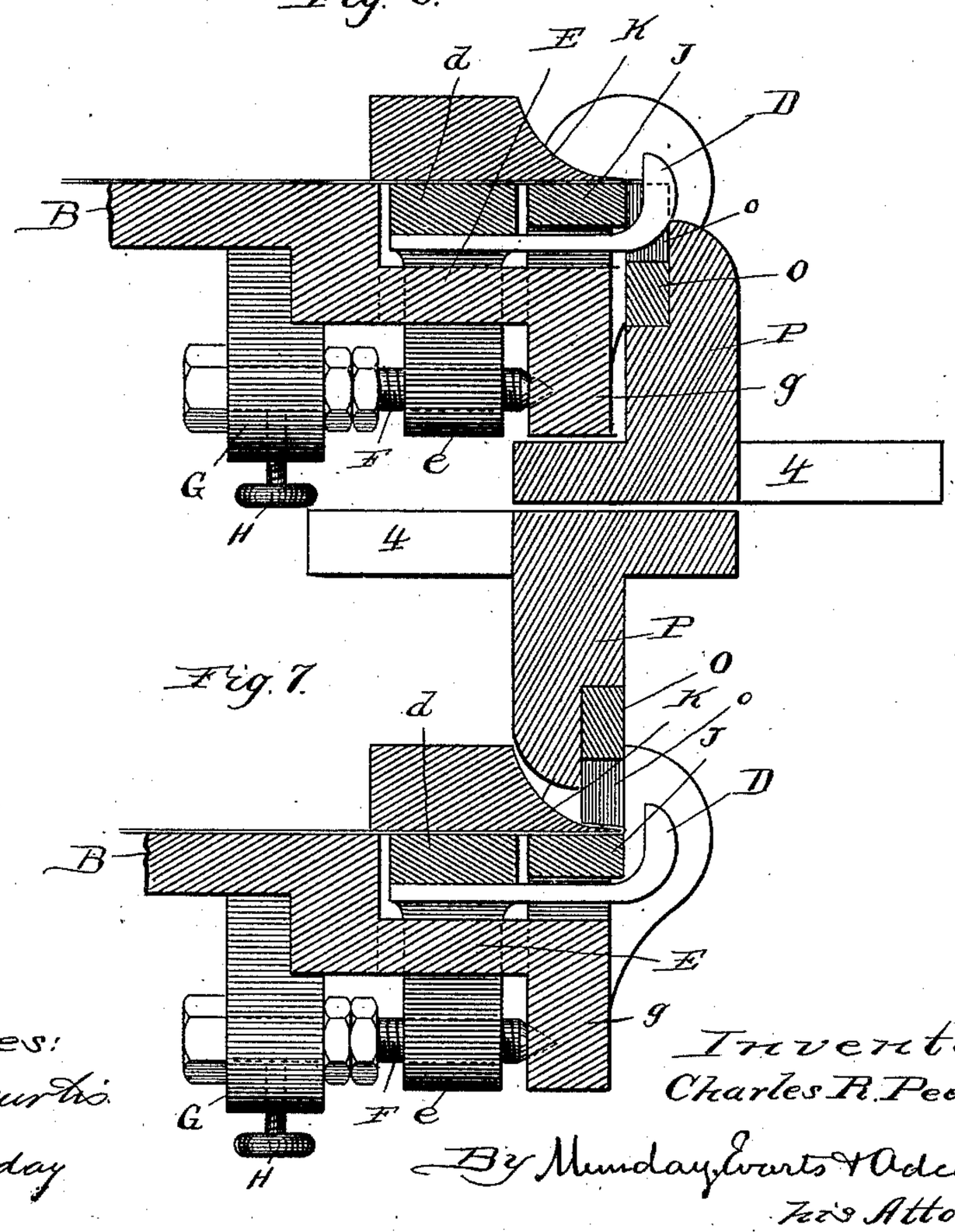


Fig. 7.

Witnesses:
Saw. E. Curtis.
H. W. Munday

Inventor:
Charles R. Peaslee
By Munday, Evarts & Adcock,
His Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES R. PEASLEE, OF LOUISVILLE, KENTUCKY.

SHEET-METAL-FOLDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 445,589, dated February 3, 1891.

Application filed August 11, 1890. Serial No. 361,627. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. PEASLEE, a citizen of the United States, residing in Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Improvement in Sheet-Metal-Folding Machines, of which the following is a specification.

This invention relates to machines for folding sheet metal. Its object is to obviate some of the objections to the old construction of these machines, and especially to prevent the wear and friction on the gages existing in old constructions; also, to enable the operator to have full use of both hands in handling the stock.

The nature of the invention as well as the operation and construction of the machine I will now describe, reference being had to the accompanying drawings, in which similar letters and figures of reference indicate like parts, and wherein—

Figure 1 is an end elevation, and Fig. 2 a plan, of my improved machine. Fig. 3 is a section on line 3 3 of Fig. 2. Fig. 4 is a partial longitudinal section of one of the pivotal supports of the folding-bar. Figs. 5, 6, and 7 are vertical sectional views of the folding devices, showing the same in different positions. Figs. 3 to 7, inclusive, are considerably enlarged.

In the drawings, A A represent the end standards, and B the table, of the machine.

C is the foot-treadle, and *c c* the connecting-rods by which power is carried from the treadle to the folding mechanism.

At *b* is a recess in the table to enable the operator to grasp the plate of sheet metal 6 easily. When the sheet is placed upon the table, it is moved forward until the edge thereof which is to be folded rests against the gages D. A number of these gages are employed, and they are distributed along the front edge of the table, as shown. They are secured to and supported by a bar *d*, which extends across the table, as illustrated at Fig. 5. This part of the table is provided with an offset E, and the bar *d* is located over the same. At its ends said bar *d* carries depending brackets or feet *e*, passing through and in threaded engagement with which are adjusting-screws F, seated at one end in the legs G, depending from the table or attached to some other stationary part of the machine, and at its other end in the legs *g*, depending from the offset portion of the table. Set-screws H control these adjusting-screws and hold them positively in any position to which they may be turned in effecting the adjustment of the gage-bar *d*. It will be readily seen from Fig. 5 that the adjustments effected by means of the screws F are horizontal and in a direction either forward or backward. The bar *d* forms a support for the sheet metal; but a stationary bar J, adapted to support the edge near the gages, is also placed in front of bar *d*. The plate of sheet metal being positioned as stated, a knife-edged bar K, commonly called the "knife," is brought down into position thereon and so as to hold it firmly during the folding operation. The normal position of this knife is indicated in Fig. 5, and it is supported at its ends by the swinging arms L, pivoted at *i* upon brackets *j*, extending up from the table. The arms L are depressed at each folding operation by the engagement with their upper cam-shaped edges *m* of the rollers M, borne upon the oscillating pieces N, turning upon pivotal supports 3, receiving power from the rods *c*, united to said pieces at *n*. The cam-shaped edges *m* are partly curved, so that during a portion of the time the roller M is in contact therewith the arms L will be held stationary by the rollers. The arms L carry the knife forward and downward to the position shown at Figs. 6 and 7, in which position the knife bears upon and holds the sheet-metal plate. There is left, however, in front of the knife a margin of the plate, which is now doubled over by the folding-bar O. Said folding-bar is notched at *o* to give room to the gages D, and is supported in a metal frame-piece P, which carries at each end a sleeve *p*, adapted to receive the hubs of gears Q, whereby the folding-bar is turned, and which are supported upon pivotal screws *q*, having their points seated in brackets R, supported from the stationary part of the machine. The normal position of the folding-bar is indicated at Figs. 3 and 5, and power is now applied to it, whereby it will be turned over upon said pivotal screws, the axial line of which corresponds with the front edge of the knife, to the position indicated at

Fig. 7, carrying with it in this movement the margin of the sheet metal which projects in front of the knife and doubling over said margin, as indicated at Fig. 7. The folding-bar is made to perform this work by the meshing with the gears Q of the segments S, swinging upon said pivots 3, said segments being actuated by the arms N through the medium of the wrist-pins *s*, working in slots *t* of the arms N. This movement of the folding-bar does not commence until after the knife is in position; but the continued descent of the treadle after the knife has been lowered (the pins *s* having reached the upper ends of their slots) causes a movement of the segments S and the consequent turning over or partial rotation of the folding-bar. The curved portions of the cam-faces *m* are traversed by the rollers M after the knife has reached its operative position and act to retain it in that position during the operation of the folding-bar, which immediately follows the positioning of the knife.

Upon the conclusion of the folding operation the operator releases the treadle and the springs V, attached to the lower ends of arms L, and the springs W, attached to the treadle, return the parts to their normal position ready for another operation. In this return movement the knife moves back and up, so as to draw out from under the folded edge of sheet metal without injury to the fold.

It will be noticed that in the operation of the machine the operator is not obliged to hold the metal while the fold is being made and that the metal moves away from the gages as soon as the folding-bar begins its work, so that the gages are saved from most of the wear to which they are subjected in ordinary machines.

The operating mechanism at each end of the machine is the same and is connected to the treadle at each end, so that the movements imparted to the knife and the folding-bar may exactly correspond at the two extremities of those parts. The folding-bar frame is preferably stiffened, so as to avoid any springing at the center, by a longitudinal flange or ridge 4. The stud-bearing of rollers M in pieces N may be adjusted by the set-screws 5.

I claim—

1. The combination, in a folding-machine, of the table having the offset E, the gages and gage-bar, and the bar J, both said bars acting to support the material, both the gage-bar and the bar J being located over said offset and supporting the sheet material, substantially as specified.

2. The combination, with the table, the knife, and the folding-bar pivotally supported and provided with actuating-gears at its pivots, of the segments S, meshing with said gears and provided with pins *s*, and the slotted oscillating pieces N, receiving said pins, substantially as set forth.

3. The combination, with the knife and folding-bar, of the swinging arms L, having cam-shaped edges *m*, the slotted oscillating pieces N, having rollers impinging upon said arms L, the segments S, actuated by said pieces N, and gears carrying power from said segments to the folding-bar, substantially as set forth.

CHAS. R. PEASLEE.

Witnesses:
J. D. COOPER,
ED. E. METZ.