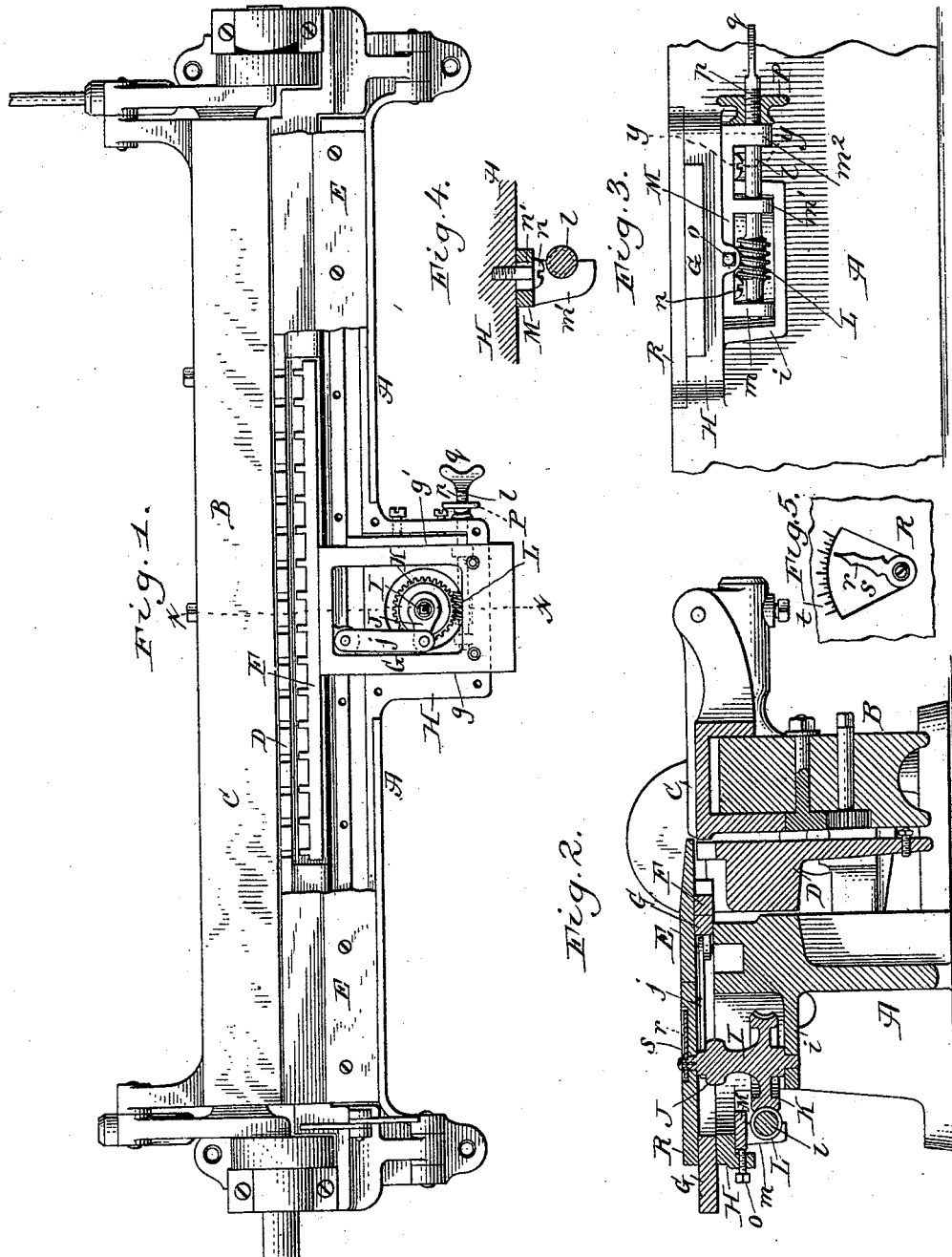


(No Model.)

F. A. JUERGENS.
SHEET METAL FOLDER.

No. 421,722.

Patented Feb. 18, 1890.



witnesses:

Chas. J. Buchheit.
Emil J. Neuhart

F. A. Juergens Inventor.

By Wilhelm Bonnet

Attorneys.

UNITED STATES PATENT OFFICE.

FREDERICK A. JUERGENS, OF BUFFALO, NEW YORK, ASSIGNOR TO THE
NIAGARA STAMPING AND TOOL COMPANY, OF SAME PLACE.

SHEET-METAL FOLDER.

SPECIFICATION forming part of Letters Patent No. 421,722, dated February 18, 1890.

Application filed December 19, 1889. Serial No. 334,254. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK A. JUERGENS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Sheet-Metal Folders, of which the following is a specification.

This invention relates to the mechanism by which the gages of sheet-metal folders are adjusted, and has the object to produce an adjusting mechanism by which the position of the gage can be nicely regulated, and by which the gage can be securely held in position when adjusted.

In the accompanying drawings, Figure 1 is a top plan view of a sheet-metal folder containing my improvements, part of the device being broken away to expose the adjusting mechanism. Fig. 2 is a cross-section in line *x x*, Fig. 1, on an enlarged scale. Fig. 3 is a front elevation of the adjusting mechanism, partly in section. Fig. 4 is a cross-section in line *y y*, Fig. 3, on an enlarged scale. Fig. 5 is a top plan of the gage-indicator.

Like letters of reference refer to like parts in the several figures.

A represents the stationary main frame of the folder, B the pivoted folder-bar, C the wing attached to the folder-bar, D the clamping-bar arranged between the main frame and the folder-bar, and E the folding-blade secured to the top of the main frame, all of any ordinary or suitable construction.

F represents the gage arranged in the top portion of the main frame underneath the folding-blade, and G a horizontal slide attached to the front side of the gage. This slide has the form of an open frame and is arranged in ways *g g'*, formed in a forward extension H of the main frame. The way *g* is formed in the extension H, and the way *g'* by an adjustable gib, whereby the wear of the parts can be taken up.

I represents a vertical rotary post journaled with its lower end in a bracket *i*, formed on the front side of the main frame and provided at its upper end with a crank J, which is connected with the slide G by a link *j*, so that

the slide is moved back and forth by turning the post I in one or the other direction.

K represents a worm-wheel formed on the post I, and L is a worm which engages with said wheel and is formed on a horizontal shaft *l*. The latter is journaled in bearings *m m' m²*, formed on a frame M, which is secured to the under side of the extension H of the main frame in front of the worm-wheel. The bearings *m m' m²* are half-bearings, which open inwardly, as represented in Fig. 4, so that the shaft can be inserted into these bearings and be retained therein by the contact of the worm with the worm-wheel. The frame M is attached to the frame-extension H by screws *n*, passing through slots *n'*, which permit the frame to be moved toward and from the worm-wheel, and whereby the wear of the parts can be taken up. The frame is adjusted by a set-screw *o*, passing through a depending lug on the frame-extension and bearing against the front side of the frame M. The portion *p* of the shaft *l* which projects beyond the bearing *m²* is screw-threaded and provided with a jam-nut P, by which the shaft can be locked against turning. The outer end of the shaft is provided with a thumb-piece *q*.

R represents the cover, which extends over the slide G and is secured to the frame-extension H on both sides of the slide. The post I extends through this cover and is provided on the upper side thereof with an index-finger *r*, which moves in a recess *s*, formed in the cover, and indicates the position of the gage on a graduated segment *t*.

Upon releasing the jam-nut P the gage can be nicely adjusted by turning the worm-shaft *l*. The adjustment of the gage is greatly facilitated by the indicator *r*. The parts of the adjusting device are so arranged that they do not project forwardly from the folder, but are out of the way of the operator, and consequently not liable to be accidentally moved or displaced. The worm and worm-wheel will hold the gage securely in position under ordinary circumstances; but, if preferred, the shaft of the worm-wheel may be securely locked by the jam-nut.

I claim as my invention—

1. The combination, with the main frame and the gage and slide, of a rotary post provided with a crank connected with the slide,
5 a worm-wheel attached to said post, and a worm meshing with said worm-wheel, substantially as set forth.
2. The combination, with the main frame and the gage and slide, of a rotary post pro-
10 vided with a crank connected with the slide, a worm-wheel attached to said post, a horizontal actuating-shaft provided with a worm and having a screw-threaded portion, and a jam-nut applied to said screw-threaded por-
15 tion, substantially as set forth.
3. The combination, with the main frame and the gage and slide, of a rotary post provided with a crank connected with the slide, a worm-wheel attached to said post, a worm
20 and actuating-shaft, and a frame in which

the worm-shaft is mounted and which is made adjustable toward and from the worm-wheel, substantially as set forth.

4. The combination, with the main frame provided with a front extension and the gage
25 having a slide arranged in said extension, and a cover extending over said slide, of a rotary post connected with the slide and arranged in the main frame underneath said cover and projecting with its upper end
30 through said cover, and an indicator secured to the upper end of said post, substantially as set forth.

Witness my hand this 10th day of December, 1889.

FREDERICK A. JUERGENS.

Witnesses:

C. F. GEYER,
ALICE G. CONNELLY.