(No Model.)

2 Sheets—Sheet 1.

T. C. DEXTER.

SHEET CARRYING AND ADJUSTING DEVICE FOR PAPER FOLDING MACHINES.

No. 287,421. Patented Oct. 30, 1883.

Fig. 2

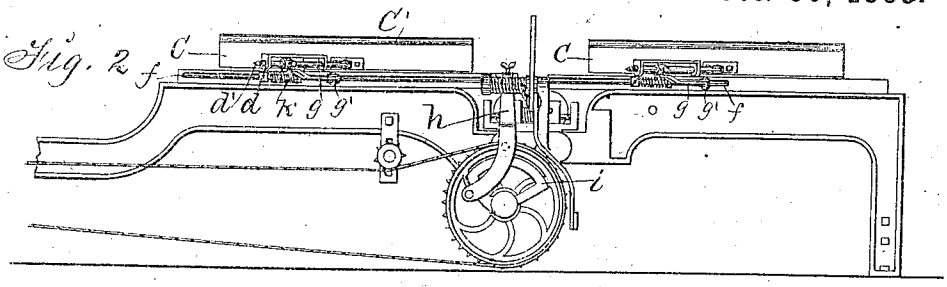


Fig. 1

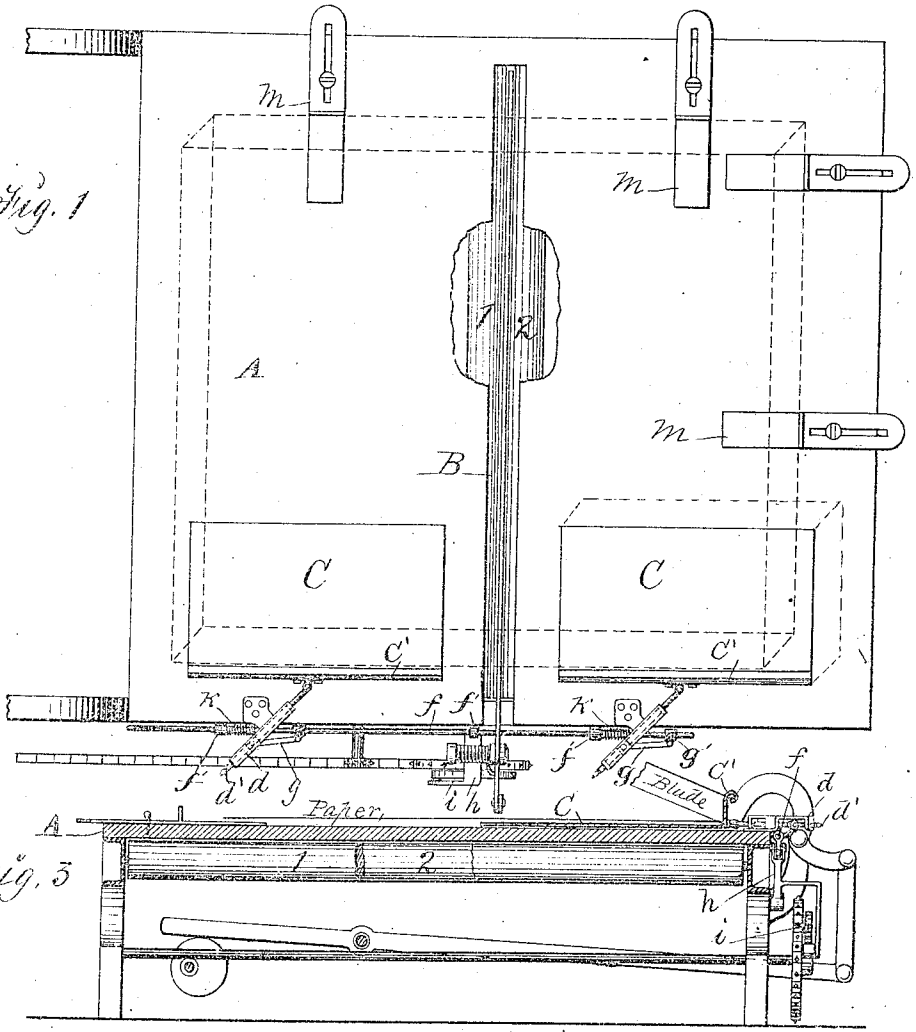


Fig. 3

Witnesses:
James. H. Waters,
F. C. Goldsborough.

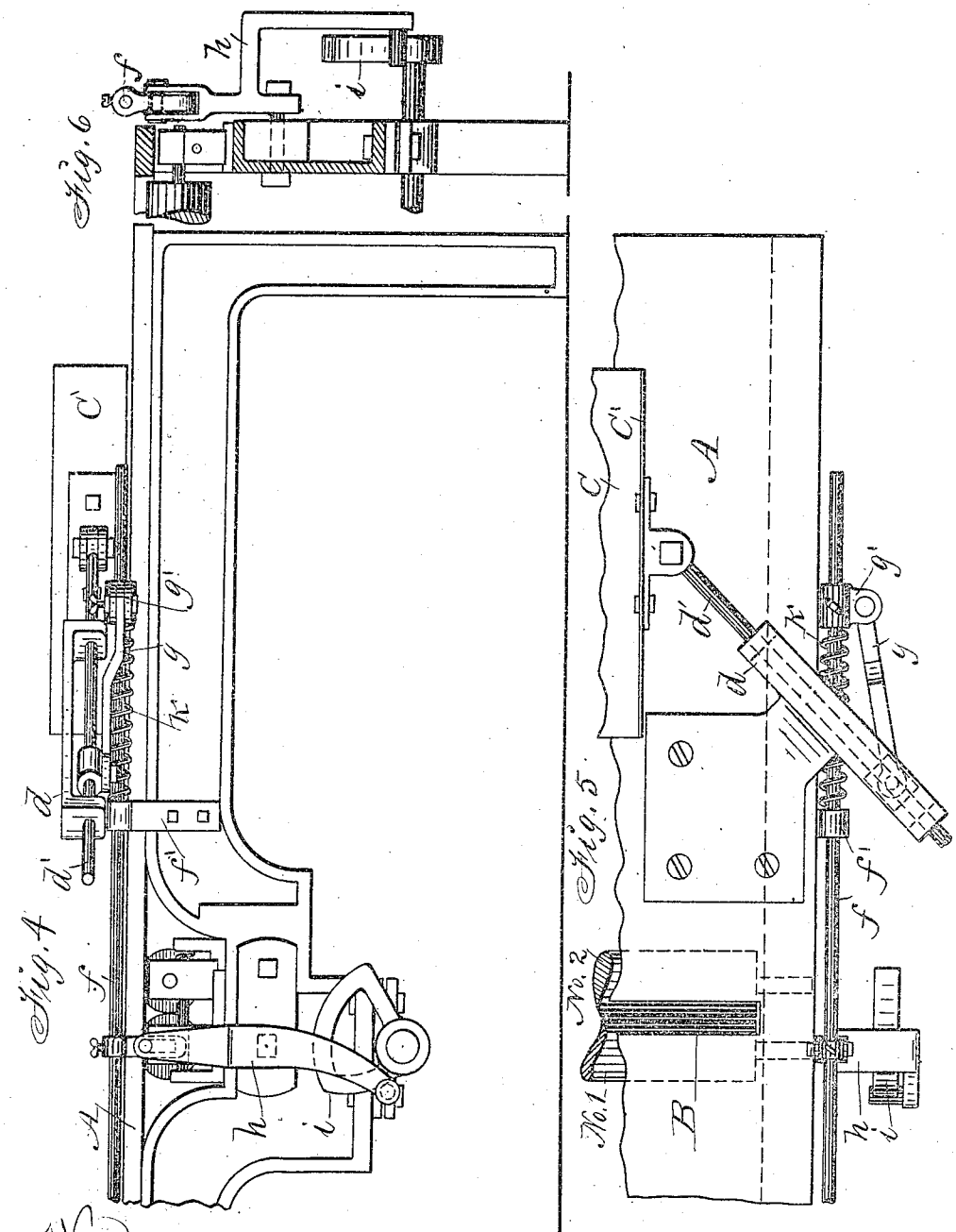
Inventor:
Talbot C. Dexter,
By Thomas G. Orwig, Attorney.

(No Model.) 2 Sheets—Sheet 2

T. C. DEXTER.

SHEET CARRYING AND ADJUSTING DEVICE FOR PAPER FOLDING MACHINES.

No. 287,421 Patented Oct. 30, 1883.



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Inventor:
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UNITED STATES PATENT OFFICE.

TALBOT C. DEXTER, OF DES MOINES, IOWA.

SHEET CARRYING AND ADJUSTING DEVICE FOR PAPER-FOLDING MACHINES.

SPECIFICATION forming part of Letters Patent No. 287,421, dated October 30, 1883.

Application filed November 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, TALBOT C. DEXTER, of Des Moines, in the county of Polk and State of Iowa, have invented a Sheet Carrying and Adjusting Device for Paper-Folding Machines, of which the following is a specification.

The object of my invention is to overcome the difficulty in placing a large thin piece of paper in proper position relative to a pair of folding-rollers as required to double a sheet in its center and fold it squarely. Heretofore adjustable and reciprocating guides have been combined with a receiving-table and fly-board of a printing-press to push and straighten sheets relative to each other as they were delivered in succession from a press; but a large sheet, especially when moist, cannot be pushed by lateral pressure against its edges.

My invention consists in forming, arranging, and combining auxiliary, adjustable, and reciprocating plates or tables with a receiving-table, a series of adjustable standards or stops, a pair of folding-rollers, and operative mechanism, as hereinafter fully set forth, in such a manner that sheets will be automatically carried by the reciprocating tables, and thereby adjusted relative to the folding-rollers, so that the folding-blade will double each sheet exactly in its center to produce square and uniform folds.

Figure 1 of my accompanying drawings is a top view of a folding-machine having my sheet carrying and adjusting mechanism attached. Fig. 2 is a side view showing the operative mechanism. Fig. 3 is a detail view and transverse section of the complete device. Fig. 4 is an enlarged side view, Fig. 5 a top view, and Fig. 6 a transverse view, of a section of my machine. Jointly considered these figures clearly illustrate the construction and operation of my complete invention.

A is the top surface of a folding-machine.

B is a transverse opening, through which sheets of paper are passed downward to a pair of folding-rollers, 1 and 2, that extend parallel with the opening B.

C C are my auxiliary receiving-tables and sheet-carriers. They are preferably made of light sheet metal, and bent upward at their rear edges to produce backs *c'*, adapted to engage a sheet of paper and to aid in adjusting and squaring it relative to the complete machine.

d d are shaft-bearings fixed to the top of the machine at an angle of about forty-five degrees relative to the edge of the top surface, A, as shown.

d' are reciprocating rods or shafts that extend through the bearings *d*, and are hinged to the backs C' of the plates C.

f is a reciprocating shaft mounted in bearings *f'*, attached to the side and top portions of the machine.

g g are links that are flexibly and adjustably connected with the shafts *d'* and the shaft *f* by means of adjustable collars *g'*, to which their ends are hinged, or in any suitable way, so that the rectilinear motion of the shaft *f* will be thereby transmitted to the shafts *d'*.

h is an arm pivoted to the frame and flexibly connected at its top end with the shaft *f*. Its lower end engages a rotating cam, *i*, in such a manner that it will be vibrated thereby as required, to impart a rectilinear motion to the shaft *f*.

K K are coiled springs placed between collars on the shaft *f* in such a manner that they will engage the shaft-bearings *f'*, and exert their force to move the shaft in an opposite direction from that in which it is moved by means of the arm *h* and rotating cam *i*.

In the practical operation of my invention, when a sheet is placed upon the auxiliary receiving-tables C by means of the fly of a printing-press, or in any other way, and motion imparted to the folding mechanism, the reciprocating shaft *f* (actuated by means of the rotating cam *i* and arm *h*) will be automatically operated, and power and motion transferred therefrom by means of the links *g* to the shafts *d'*, to thereby move the plates or tables C diagonally relative to the square top of the machine and the folding-rollers 1 and 2, that extend parallel with the opening B, and to carry the sheet in the same direction until its edges come in contact with a series of standards or stops, *m*, that have horizontal branches to extend under the sheets, and are adjustably connected with the top A, as required to automatically adjust and square the sheets relative to the folding-rollers, so that a folding-blade operated in concert with the rollers will double

the sheets in their centers, as required, to produce straight folios and squarely-folded papers.

I claim as my invention—

1. In a paper-folding machine, the combination of a movable auxiliary receiving table or plate with the stationary top surface of the machine, having stops or gages attached, and a pair of folding-rollers to carry and adjust sheets of paper relative to the rollers and complete machine, for the purposes specified.

2. The combination of the auxiliary receiving-tables and sheet-carriers C C′, the fixed shaft-bearers *d*, the shafts *d′*, the shaft *f*, and links *g*, substantially as shown and described, to operate in the manner set forth, for the purposes specified.

3. The sheet carrying and adjusting device for paper-folding machines, composed of the movable plates C C′, fixed shaft-bearings *d*, reciprocating shafts *d′* and *f*, adjustable links *g*, and operating mechanism *h i* K, substantially as shown and described.

TALBOT C. DEXTER.

Witnesses:

P. L. COOK,

H. W. BROWN.