

(No Model.)

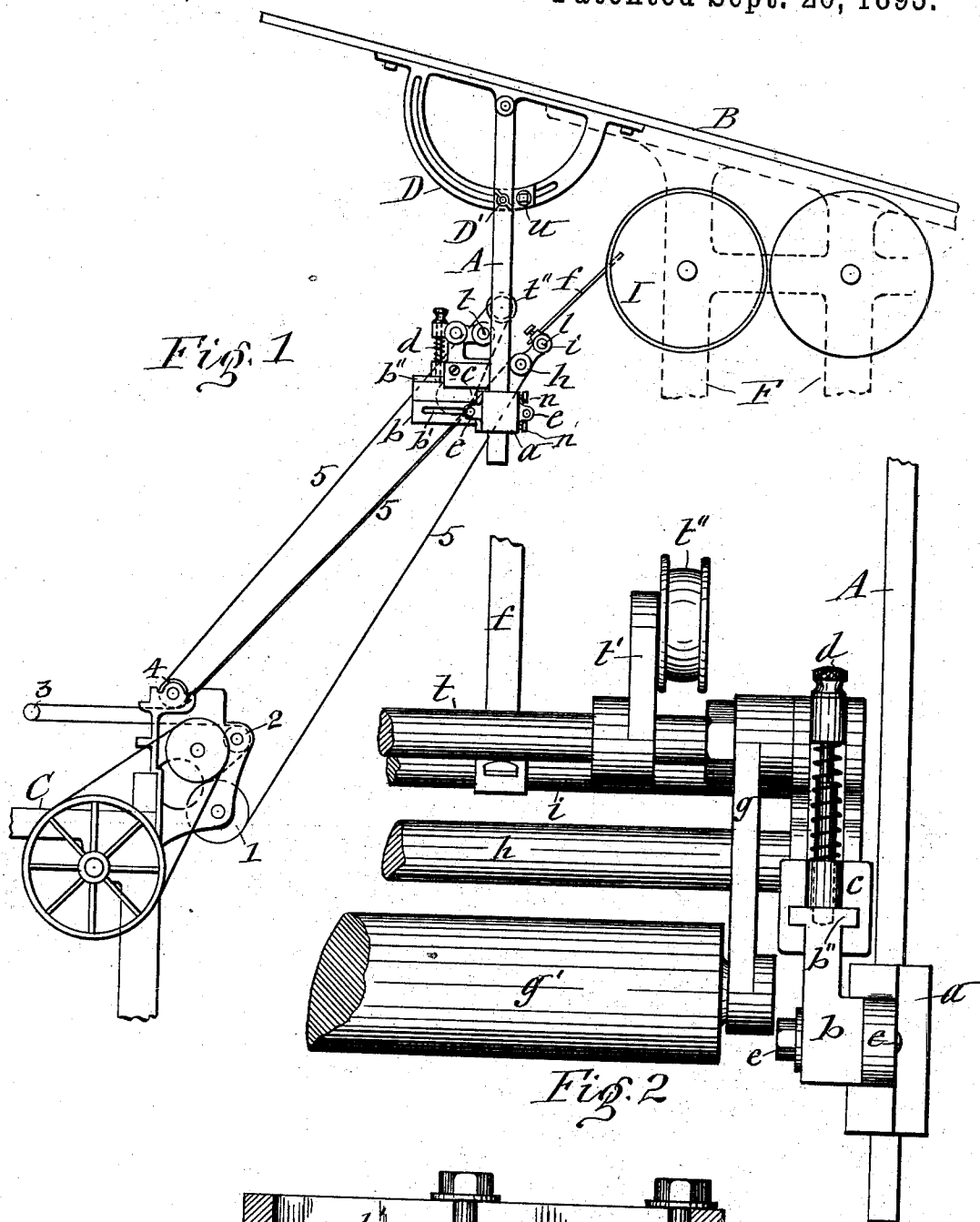
2 Sheets—Sheet 1.

T. C. DEXTER.

PAPER FOLDING MACHINE ATTACHMENT FOR PRINTING PRESSES.

No. 505,509.

Patented Sept. 26, 1893.



WITNESSES:

C. L. Burdison
Edward W. Jensen

INVENTOR:

By *Thos. C. Dexter*
By Hull, Laass & Hull
his ATTORNEYS.

ATTORNEYS.

(No Model.)

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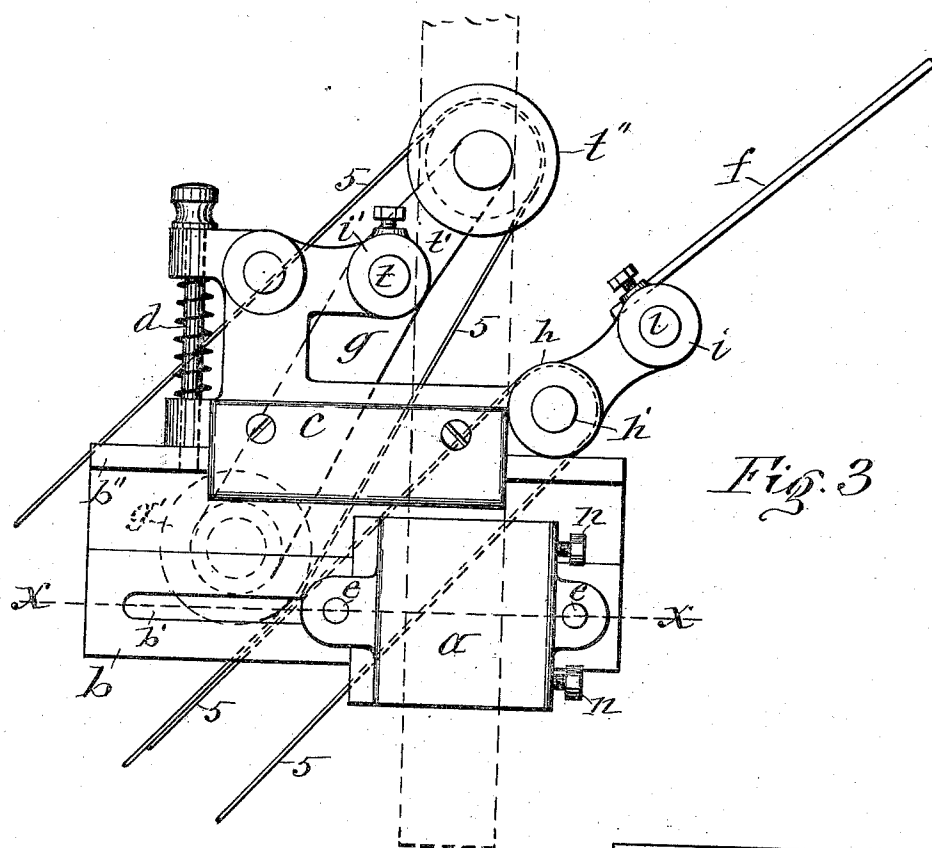


Fig. 3

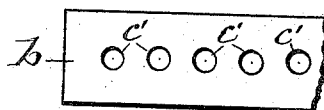


Fig. 6

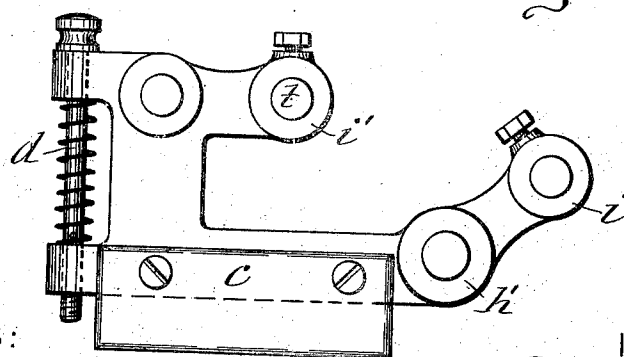


Fig. 4

WITNESSES:

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UNITED STATES PATENT OFFICE.

TALBOTT C. DEXTER, OF FULTON, NEW YORK, ASSIGNOR TO THE DEXTER, FOLDER COMPANY, OF SAME PLACE.

PAPER-FOLDING-MACHINE ATTACHMENT FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 505,509, dated September 26, 1893.

Application filed November 25, 1892. Serial No. 453,046. (No model.)

To all whom it may concern:

Be it known that I, TALBOTT C. DEXTER, of Fulton, in the county of Oswego, in the State of New York, have invented new and useful
5 Improvements in Paper-Folding-Machine Attachments for Printing-Presses, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

15 Manufacturers of paper folding machines have hitherto experienced considerable difficulty in connecting their machines to the so called flat bed printing presses owing to the different styles and proportions of presses of
20 different manufacturers.

The object of this invention is to overcome said difficulty by simple, inexpensive, convenient and efficient means; and to that end the invention consists in the novel construction and combination of parts hereinafter
25 fully described and summed up in the claims.

In the annexed drawings Figure 1 is a side elevation of a paper-folding machine to a printing press embodying my invention. Fig.
30 2 is an enlarged front view of one of the supports of the tape-carrying devices. Fig. 3 is a side view of the same. Fig. 4 is a detached side view of the rider on which the shafts of the paper conveying devices are mounted.
35 Fig. 5 is a horizontal transverse section on line *x, x*, in Fig. 3, and Fig. 6 is a top plan view of the end portion of the rider-supporting base which is provided with sockets for the rider-retaining bolt.

Similar letters and figures of reference indicate corresponding parts.

B represents the feed-board of a printing press which may be of any style and construction at present in use; said feed-board being firmly secured to the frame —F— of the
40 press as indicated by dotted lines in Fig. 1 of the drawings.

C— denotes the paper folding machine which may also be of any well known construction. On the frame of this machine are mounted the rollers 1, 2, 3, 4, which, with the aid of other rollers hereinafter described, carry the tapes —5— which transfer the paper from the printing press to the folding
50 machine.

The salient features of my present inven-

tion consist, first, in the transmission of the paper from the press to the folding machine by tape carrying mechanisms supported on the press independent of the folding machine, 55 thus obviating the loss of time and expenditure of considerable labor in fitting the folding machine to the printing-press; secondly, in a novel construction of the supports of the aforesaid tape-carrying mechanism which 60 permits the latter to be readily disconnected from the press and also adjusted to its requisite position in relation to the delivery of the press so as to properly transfer the sheets of paper from the press to the folding machine, and in certain peculiarities of the details of the devices employed for the transmission of the paper from the press to the folding machine which I will now describe.

The aforesaid tape-carrying mechanisms 70 may be supported on the printing press independently of the folding machine in various ways and I therefore do not wish to be confined strictly to the construction shown in the annexed drawings, which merely illustrates my preferred construction and which is as follows, to wit: To the feed-board —B— outside of the edges of the path of the paper issuing from the press, I secure pendent arms —A—A— on which the aforesaid tape-carry- 80 ing mechanisms are supported. Inasmuch as the feed board of different printing presses are disposed in different angles of inclination, I render the arms —A—A— adjustable in their inclination in relation to the feed- 85 board by pivoting said arms to the feed-table, preferably by the intervention of segments or semi-circular brackets —D—D— firmly secured to the under side of the feed-board by screws or other suitable means and 90 having the arms —A—A— pivoted to them so as to bring the peripheries of the brackets concentric to the pivots of the arms. Said brackets stand parallel to the line of travel of the paper and the arms —A— are adapted 95 to be swung in planes parallel to the brackets and are clamped thereon adjustably to different angles of inclination by bolts —D'— passing through the arms and through segmental slots in the brackets or other suitable 100 and well known means. The arms —A—A— are thus adapted to be swung toward or from

the delivery cylinder —I— of the press and, in conjunction with other auxiliary devices hereinafter described, bring the paper receiving fingers —f— in proper position in relation to said cylinder.

In order to obviate the necessity of exercising great care and accuracy in placing the brackets with their arms —A—A— in their positions in relation to the line of travel of the paper I support the upper tape-carrying mechanism of the paper transferring apparatus by means of the following adjustable brackets connected to the free ends of the arms —A—A. Each of said arms is loosely embraced by a sleeve —a— which is adapted to be shifted longitudinally on the arm and thus raised or lowered as may be desired, and is retained in its adjusted position by set-screws —n—n— connected to the sleeve and engaging the arm —A. To the sleeve —a— is attached the base —b— consisting of a plate which is elongated at right angles to the arm —A— and at an angle to the plane of the travel of the paper and is connected to the sleeve —a— adjustable laterally in relation to the arm —A— by means of screws —e—e— passing through a longitudinal slot —b'— in the base —b— and entering screw-threaded eyes in ears on the sleeve. The top of the base —b— is provided with a longitudinal way —b''— which is T-shaped in cross-section and on said way is mounted the rider —c— which is adapted to slide thereon and is guided thereby. The top of the base —b— is also provided with one or more of sockets —c'—, and the rider has connected to it a spring-bolt —d— which enters one of the sockets and thereby retains the rider in its requisite position. Said rider is provided with sockets —i— and —i'— in one of which is secured one end of the bar —l— to which the paper-receiving fingers —f— are attached, and to the other of said sockets is attached one end of the bar —t— on which are mounted the brackets —t'— to which are pivoted the rollers —t''— carrying the tapes which bear on top of the paper in transit from the press to the folder. Arms —g— depending from the rider have journaled to their free ends the roller —g'— which bears on the aforesaid tapes and holds the same in contact with the paper passing between them and the subjacent tapes, which latter run on a roller —h— journaled in bearings —h'— on the riders —c— at opposite ends of the said roller. The aforesaid tapes pass around the usual rollers connected to the folding machine —C. It will be observed that the paper-receiving fingers —f— and paper-carrying tapes, which transfer the paper from the press to the folder, are readily adjusted to the delivery of the press and to a proper plane between said delivery and folding machine, first by the adjustment of the arms —A— as hereinbefore described, secondly, by raising or lowering the sleeves —a— on the said arms, and thirdly by shifting the base —b— on the sleeve —a.

The folding machine is readily disconnected from the press when desired by simply removing the riders —c—c— from the bases —b—b—, said riders carrying all the paper transferring devices as hereinbefore described. The sleeves —a—a— with the bases —b—b— remain on the arms —A—A— and the latter are left in their adjusted position; hence when it is desired to connect the folding machine to the press, it is readily accomplished by simply slipping the riders —c—c— onto the bases —b—b— where they are retained by the spring-bolts —d—d— entering the sockets in the top of the bases as hereinbefore described.

In order to guard more effectually against the displacement of the arms —A—A— from their requisite angle in relation to the feed-board —B— I attach to the segments —D— D— adjustable stops or jam-nuts —u— against which the arms rest.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the printing press and paper folding machine, tape-carriers mounted on the frame of said folding machine, arms supported on the press independent of the folding machine, brackets detachably secured to said arms, and tape-carrying mechanism supported on said brackets, as set forth.

2. In combination with a printing press and paper-folding machine, arms supported on the press independent of the folding machine and adjustable in their position in relation to the paper-delivery of the press, and tape-carrying mechanism supported on said arms, as set forth.

3. In combination with a printing press and paper-folding machine, arms suspended from the feed-board of the press and sustained adjustably in their angle of inclination to said board, and tape-carrying mechanism supported on said arms and conveying the paper to the folding machine as set forth.

4. In combination with a printing press and paper folding machine, arms pivoted to and hanging from the feed-board of the press, segmental brackets secured to said board concentric to the pivots of the arms, screws clamping the arms on the segments, and tape-carrying mechanism supported on said arms and conveying the paper to the folding machine, as set forth.

5. In combination with a printing press and paper-folding machine, pendent arms secured to the feed-board of the press, and tape-carrying brackets connected to said arms adjustable lengthwise thereof, and tapes conveying the paper from the press to the folding machine as set forth.

6. In combination with a printing press and paper-folding machine, arms suspended from the feed-board and sustained adjustably in their angle of inclination to said board, and tape-carrying mechanism connected to said

arms adjustable lengthwise thereof and conveying the paper from the press to the folding-machine, as set forth.

7. In combination with a printing press and paper-folding machine, arms sustained in pendent position on the feed-board of the press, and tape-carrying mechanisms connected to said arms adjustable laterally thereon as set forth.

8. In combination with the printing press and paper-folding machine, arms suspended from the feed-board of the press and sustained adjustably in their angle of inclination to the said feed-board, and tape-carrying mechanism connected laterally adjustable to said arms as set forth.

9. In combination with a printing press and paper folding machine, arms suspended from the feed-board of the press and sustained adjustably in their angle of inclination to said board, and tape-carrying mechanism connected to said arms adjustable lengthwise and laterally thereon as set forth.

10. In combination with a printing press and paper folding machine, arms secured in pendent positions to the feed-board of the press, two brackets, each composed of a base connected to one of said arms, a rider mounted on said base adjustable laterally in relation to the arm, and paper conveying devices connected to said rider as set forth.

11. In combination with a printing-press and paper folding machine, arms secured in pendent positions to the feed-board of the press, two brackets, each composed of a base connected to one of said arms adjustably in its elevation thereon, a rider mounted on said base adjustable laterally in relation to the arm, and paper conveying devices connected to said rider as set forth.

12. In combination with a printing press and paper-folding machine, the arm—A—secured in a pendent position to the feed-board of the press, the sleeve—*a*—loosely embracing the arm and clamped adjustably thereon, the base—*b*—connected to said sleeve adjustable laterally in relation to the arm, and provided with a series of sockets in its top at different points in the length thereof, the rider—*c*—mounted movable longitudinally on said base, the spring-bolt—*d*—connected to said rider and engaging the sockets of the base, shafts mounted on the rider, and paper conveying devices connected to the shafts as set forth.

In testimony whereof I have hereunto signed my name this 5th day of November, 1892.

TALBOTT C. DEXTER. [L. s.]

Witnesses:

H. M. SEAMANS,
J. J. LAASS.