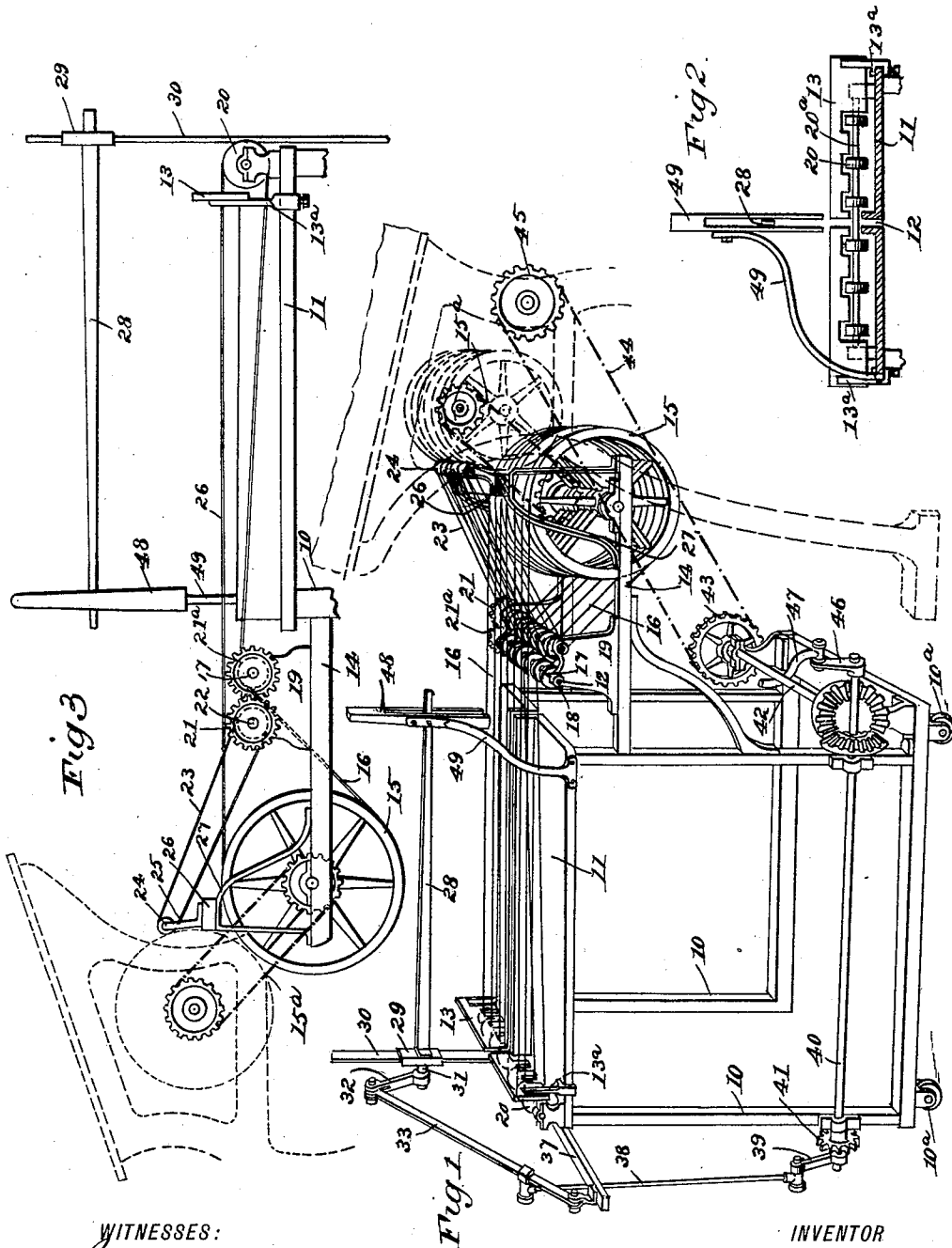


(No Model.)

C. N. WALLS.
FEEDING ATTACHMENT FOR PAPER FOLDERS.

No. 475,644.

Patented May 24, 1892.



WITNESSES:
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FEEDING ATTACHMENT FOR PAPER-FOLDERS.

SPECIFICATION forming part of Letters Patent No. 475,644, dated May 24, 1892.

Application filed August 26, 1891. Serial No. 403,764. (No model.)

To all whom it may concern:

Be it known that I, CYRUS N. WALLS, of Taylorville, in the county of Christian and State of Illinois, have invented a new and Improved Feeding Attachment for Paper-Folders, of which the following is a full, clear, and exact description.

My invention relates to improvements in a feeding attachment adapted to deliver newspapers to a folding-machine as they come from the press; and the object of my invention is to produce an extremely simple and cheap feeder which may be adapted to any kind of a folder and which will carry the papers sidewise as they come from the press—that is, so that the paper will be carried straight upon the folder without changing its direction—and place them in position to be operated on by the folder without the aid of any gripping mechanism or of any hand-operated machinery.

To this end my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the machine embodying my invention, showing it attached to the frame of a folding-machine and connected with a press, the end of the press-frame being indicated by dotted lines.

Fig. 2 is a broken vertical cross-section through the top of the folding frame or table, and Fig. 3 is a broken detail side elevation showing the arrangement of the carrying and guard tapes.

The frame 10 is a common frame of the well-known Bascom folder and is mounted on casters 10^a, so that the machine may be easily moved. This frame carries the ordinary folding mechanism, which is not shown in the drawings, as it forms no part of this invention; but the mechanism for operating the first folding-arm is shown, as this invention consists in part in providing a support for said arm, which will permit the papers to be fed sidewise upon the machine-top.

The frame 10 is provided with a table-top 11, having a central vertical slot extending

through it, which slot is adapted to permit the passage of the first folding-arm, as hereinafter described. On the rear end of the table-top is a vertical stop 13, which is held in brackets 13^a, clamped upon the side edges of the table, and the stop 13 may thus be placed so as to feed papers of different sizes. The stop is intended to engage papers and limit their motion.

On the front end of the frame 10 is a bracket-like extension 14, in the outer portion of which is mounted a series of wheels 15, carrying tapes 16, which tapes have their lower portions made to extend over guide-pulleys 17 on the shaft 18, the shaft being mounted in brackets 19, so as to bring it at a height about even with the table-top, and the rear ends of the tapes pass over pulleys 20, which are mounted on a shaft 20^a in the rear of the stop 13, and the stop is recessed, so that the tapes may pass through it. The tapes will thus extend over the table-top, and as they are arranged in a level and parallel position they will serve as an efficient means of carrying the papers upon the table.

The wheels 15 serve as driving-wheels, and the shaft which carries them is provided with a sprocket-wheel, which connects by a chain 15^a with a sprocket-wheel carried by the press, and the driving mechanism is timed so that the tapes 16 will move with the same speed as the paper which is carried through the press.

The driving-wheels 15 are adapted to be arranged beneath the delivery of the press, as shown in the drawings, and in order that the papers may not fall in front of the wheels, but may be sure to pass upon the tapes and from thence to the table-top, the following mechanism is employed: A shaft 22 is mounted in the brackets 19 parallel with the shaft 17, the two shafts being geared together by means of the gear-wheels 21 and 21^a, and on the shaft 22 is a series of pulleys carrying tapes 23, which extend forward above the driving-wheels 15, and the upper ends of which are mounted on rolls 24, which are carried by a shaft supported in brackets 25, the brackets being secured to a bed-plate 26 and the latter being mounted on brackets 27 on the front end of the bracket-like extension 14 of the frame 10. These guide-tapes 23 will

thus move constantly and will serve to guide the papers upon the tapes 16.

The folding-arm 28, which makes the first fold in the paper, is held horizontally above the slot 12 in the table-top and is adapted to move downward through the slot in the usual way, one end of the arm being secured to a slide-block 29, which moves on an upright 30, secured to one end of the table-top, and this slide-block is provided with a crank 31, which is operated by the toggle-levers 32 and 33. The toggle-lever 33 is pivoted at its lower end to a support 37 on the frame 10 and is connected by a shaft 38 with a crank 39 on the shaft 40, which shaft is mounted on one side of the frame 10 near the bottom and is provided near one end with a sprocket-wheel 41, adapted to drive the folding mechanism, which is not shown in the drawings. The shaft 40 is geared to a shaft 42, which extends across the front end of the machine, and this latter shaft carries a sprocket-wheel 43, which connects by means of a chain 44 with a sprocket-wheel 45 on the press. The front end of the shaft 40 is also provided with a crank 46, which is pivoted to a crooked arm 47, adapted to operate the second folding-arm of the folding-machine.

The front end of the arm 28 is held to move in a split guide-post 48, which is held above the slot 12 in the table-top, and in order that the post may not interfere with the feeding

of the papers it is held in place by a curved brace 49, which is secured at its upper end to the post and at its lower end to one side of the table-top.

The operation of the machine is as follows: The papers as they come from the press are carried by the guide-tapes 23 upon the tapes 16 and are delivered sidewise upon the table-top 11, the movement of each paper being limited by the stop 13, and the mechanism is timed so that when a paper strikes the stop 13 the folding-arm 28 descends, makes the first fold in the paper, and carries it through the slot 12, so as to deliver it to the folding mechanism below.

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

In a paper-folding machine, the combination, with the slotted folding-table, of a series of movable carrying-tapes extending over pulleys at one end of the table and over large wheels at the opposite end thereof and a series of guide-tapes having their lower ends carried by rollers arranged within the loops of the carrying-tapes, the said guide-tapes extending diagonally upward from between the carrying-tapes, substantially as described.

CYRUS N. WALLS.

Witnesses:

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JOHN S. PLUNKETT.