

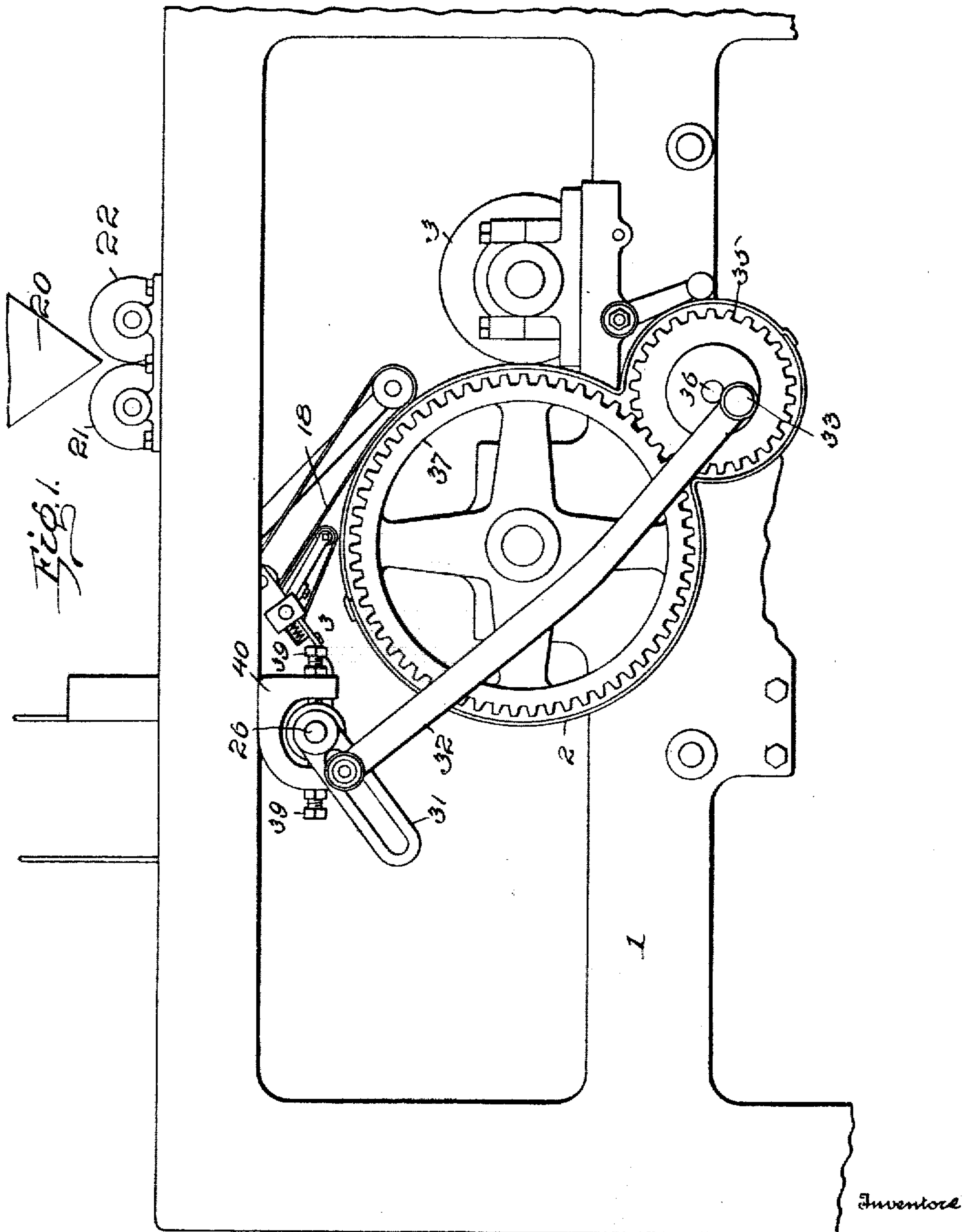
No. 815,262.

PATENTED MAR. 13, 1906.

W. S. BROWN & H. W. ENDERIS.  
FEEDING ATTACHMENT FOR PRINTING PRESSES.

APPLICATION FILED JAN. 17, 1905.

4 SHEETS—SHEET 1



Witnesses  
*J. M. Fowler Jr.*  
*A. M. Purcell*

*Walter S Brown*  
*Henry W Enderis*  
By *W. J. Fitzgerald* Attorneys.

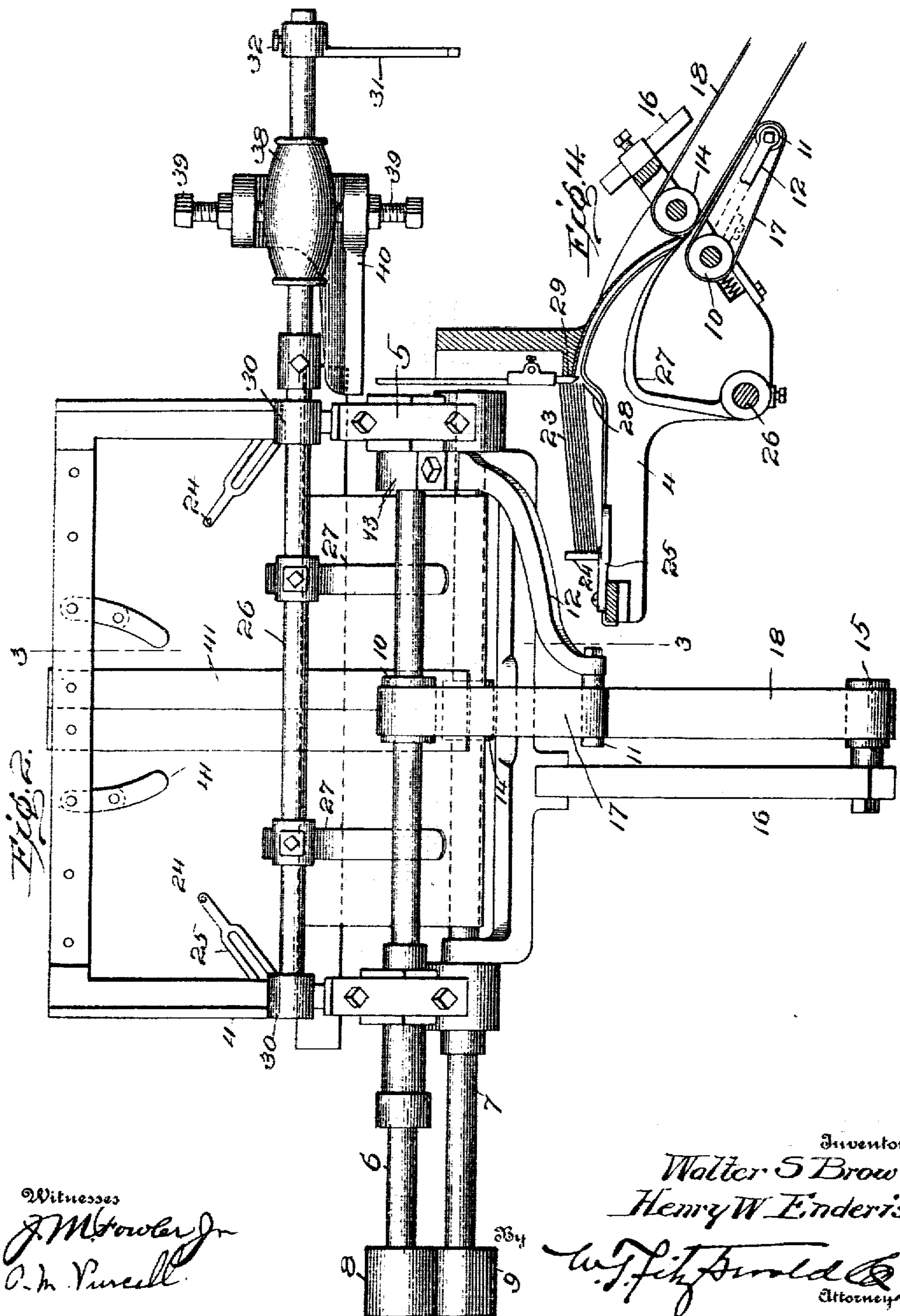
No. 815,262.

PATENTED MAR. 13, 1906.

W. S. BROWN & H. W. ENDERIS.  
FEEDING ATTACHMENT FOR PRINTING PRESSES.

APPLICATION FILED JAN. 17, 1905.

4 SHEETS—SHEET 2.



No. 815,262.

PATENTED MAR. 13, 1906.

W. S. BROWN & H. W. ENDERIS.  
FEEDING ATTACHMENT FOR PRINTING PRESSES.

APPLICATION FILED JAN. 17, 1905.

4 SHEETS—SHEET 3

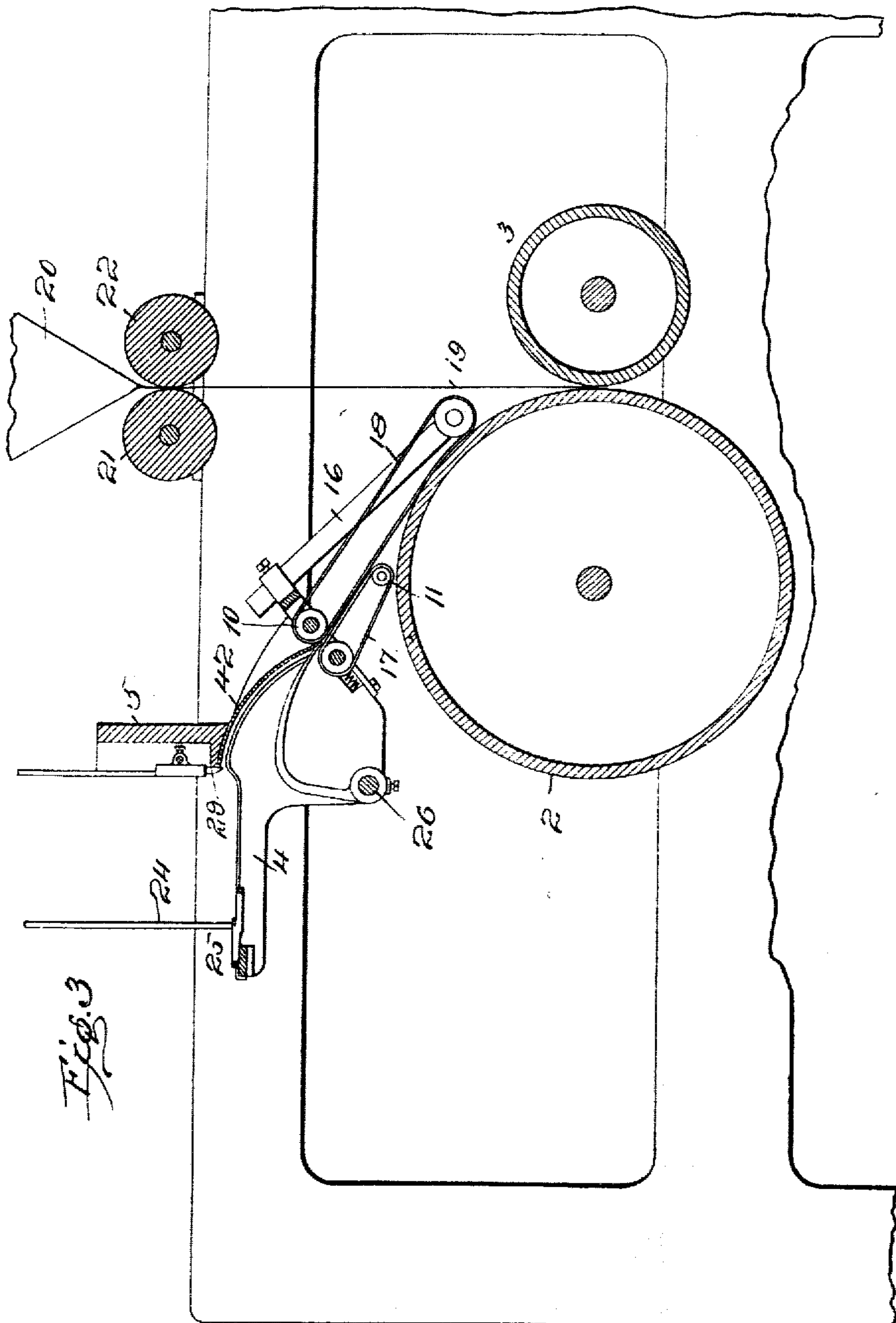


Fig. 3

Inventors

Witnesses  
J. M. Fowler  
A. M. Purcell

Walter S Brown  
Henry W Enderis  
By W. J. Fitzgerald & Co.,  
Attorneys.



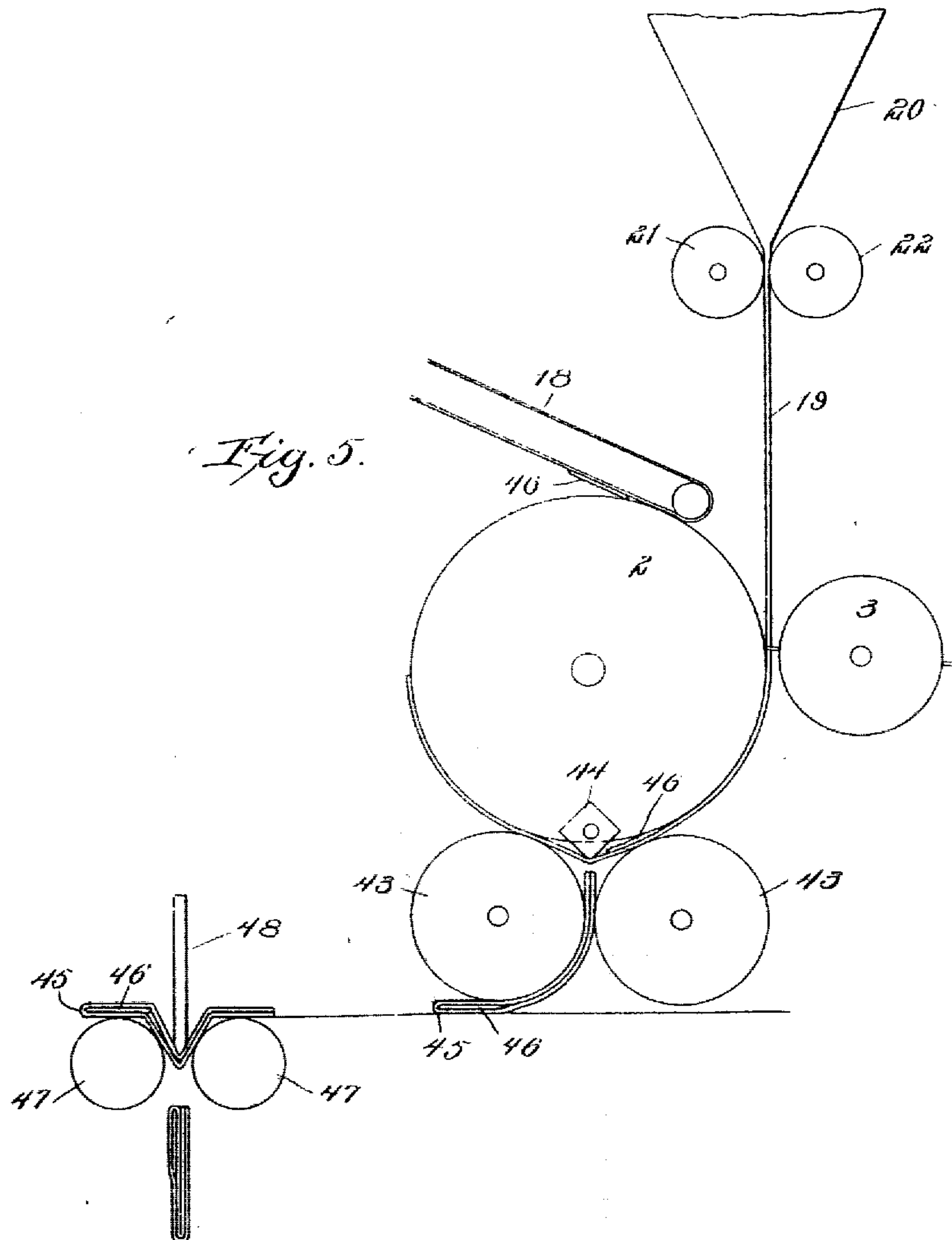
No. 815,262.

PATENTED MAR. 13, 1906.

W. S. BROWN & H. W. ENDERIS.  
FEEDING ATTACHMENT FOR PRINTING PRESSES.

APPLICATION FILED JAN. 17, 1905.

4 SHEETS—SHEET 4



Witnesses

*Louis R. Heinichs*  
*Hubert D. Lawson*

Inventors  
*Walter S. Brown*  
*Henry W. Enderis*

By *W. J. Fitzgerald* Attorney  
T 6



# UNITED STATES PATENT OFFICE

WALTER S. BROWN AND HENRY W. ENDERIS, OF LINCOLN, NEBRASKA.

## FEEDING ATTACHMENT FOR PRINTING-PRESSES.

No. 815,262.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed January 17, 1905. Serial No. 241,482.

*To all whom it may concern:*

Be it known that we, WALTER S. BROWN and HENRY W. ENDERIS, citizens of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Feeding Attachments for Printing-Presses; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention, as hereinafter set forth, comprehends certain new and useful improvements in feeding attachments for printing-presses; and the object of our invention is to provide a mechanism for delivering or feeding separate articles, as envelopes, cards, folders, &c., and we will hereinafter set forth in detail the preferred form of construction of our feeding attachment, it being understood that we desire to comprehend in this application all substantial equivalents and substitutes as may be regarded as falling fairly within the purview of our invention.

Other objects and advantages will be hereinafter disclosed, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 shows a side elevation of our invention as applied to use in connection with the folding-cylinder of a printing-press. Fig. 2 is a bottom plan view of our feeding attachment as separated from the folding mechanism. Fig. 3 is a sectional view of Fig. 2 as taken on line 3-3 thereof, illustrating our envelop attachment disposed relatively to the folding-cylinder and immediately cooperating parts. Fig. 4 is a view similar to that presented in Fig. 3, except that our attachment only is illustrated. Fig. 5 is a diagrammatical view showing the course taken by the paper during the folding operation within the press and the position assumed by the envelop incorporated within the folds.

In order to conveniently refer to the various parts of our invention and cooperating accessories, numerals will be employed, the same numeral applying to a similar part throughout the several views.

Referring to the numerals on the drawings, 1 indicates part of the framework of the folding attachment of a printing-press, while 2 designates the folding-cylinder of the usual or any preferred construction, and 3 the aux-

iliary cylinder cooperating with the folding-cylinder and adapted to cut the paper at predetermined points.

Briefly stated, our invention consists of suitable means for successively introducing into a folded part of each paper an envelop, printed card, folder, or the like, whereby each paper will be provided within its folds with one of said articles, so that the article will be held within the folds against casual displacement, thus insuring that each paper will be delivered with its respective envelop or other object deposited therein, and with the foregoing purpose in view we have provided mechanism of comparatively simple character which will be found reliably efficient in the performance of its office.

It being necessary to mount our feeding attachment in close cooperation with the folding-cylinder 2, we provide a suitable framework 4, having conveniently-arranged standards or arms 5, adapted to be bolted to a contiguous part of the framework in which the folder-cylinder is mounted, and we dispose in suitable bearings in said framework thus or otherwise constructed a pair of parallel shafts 6 and 7, having, respectively, upon their outer ends the pulleys or band-wheels 8 and 9, it being understood that the equivalent of said wheels may be used as gears or sprocket-wheels, each being properly connected with the source of power, as with driving wheels or shafts contiguous thereto and forming part of the mechanism of the printing-press, and as this connection with the source of power is a matter of expediency we deem it unnecessary to illustrate the same. We also secure upon the shaft 6 the band-wheel 10, and cooperating with said wheel is the auxiliary band-wheel 11, mounted upon the free end of the arm or bracket 12, bolted to a contiguous part of the framework, as designated by the numeral 13. In like manner we secure to the shaft 7 the band-wheel 14, placed in cooperation with the auxiliary band-wheel 15, mounted upon the end of the arm or bracket 16, the wheels 10 and 11 being placed in cooperative relationship by means of the belting 17, or the equivalent thereof, while the wheels 14 and 15 are similarly connected by suitable belting 18 or equivalent means.

Obviously the arms 12 and 16 may, if desired, be rendered adjustable, whereby the belting may be easily made taut or given the requisite degree of tension. Furthermore, it



will be obvious that the parts 17 and 18, designated as "belting," are mere tapes, and their office is to cooperatively carry and deliver the articles, such as envelopes, as before explained, first onto the periphery of the rotating folding-cylinder 2 and thence into the space immediately between said cylinder and the vertical section 19 of the paper which has been folded longitudinally upon itself through the mediation of the tapered nose 20 and the cooperating rollers 21 and 22 common to some forms of printing-presses. The longitudinally-folded paper web then passes between the cylinder 2 and the cutting-cylinder 3 and is then fed between the cylinder 2 and two rolls 43, and simultaneously with the cutting of the web by the cylinder 3 the tumbler 44, assumes a position above the pass between rolls 43. When the paper web travels around the cylinder 2, the envelop which has been fed between said cylinder and the web is carried therewith, so that when tumbler 44 arrives in the position indicated in Fig. 5 the web will be folded upon itself, as shown at 45, and will be fed between rolls 43, thereby carrying the envelop between the folds, as shown at 46. Said folded web and the envelop therein are then carried into position above rolls 47, where the web is again folded by means of a plunger 48, and the envelop is thus securely incorporated within the folds of the web and cannot be easily removed therefrom except by unfolding the paper. This apparatus for folding the web does not constitute any portion of our invention, but is merely one of a number of means utilized for folding paper webs.

In Fig. 4 we have shown a bundle or stack of envelopes, which we have designated by the numeral 23, said envelopes being held intact, one upon another with flaps downward, by any suitable means, as the vertically-disposed rods or wires 24, secured in sockets provided in the adjustable members 25, and in order to successively feed the envelopes into cooperation with the tapes or belting 17 and 18 we provide upon the rock-shaft 26 a pair of fingers 27, which are suitably curved, so that their free ends may be moved upwardly and outwardly until the ends thereof are brought into engagement with the depending flap 28 upon the lowest envelop, and it therefore follows that when the said fingers 27 are again moved inward they will engage said flap and draw the bottom envelop inward and downward and deliver it into a place between the rollers 10 and 14, and as said wheels and tapes or belting carried thereon are properly rotated the envelop will be delivered to the tapes and carried downward thereby onto the periphery of the cylinder and by the cooperation of the tape or belting 18 it finally will be delivered between the printed paper and the cylinder, as before explained. In order that only the bottom en-

velop be drawn inward by the action of the fingers 27 we have provided the flexible stop 29, which is preferably made of rubber and slightly beveled, as clearly shown in Fig. 4. This stop is positioned so as to allow but one envelop to pass under it, and it yields to any pressure placed thereon incident to the inward movement of the lowest envelop, but immediately assumes its normally vertical position when such force is removed.

By reference to Fig. 2 it will be observed that the rock-shaft 26 is mounted in suitable bearings 30, carried by the framework, and is actuated by means of the slotted arm 31, rigidly secured to the outer end thereof, as by the set-screw 32 or equivalent means. The slotted arm 31 is connected with the source of power by means of the link member or bar 32, extending downward into engagement with the wrist-pin 33 upon the disk-like member 34, attached to the gear 35 upon the shaft 36, it being understood that said gear is placed in mesh with the gear 37 on the end of the folding-cylinder 2, said gears being of proper size to secure the requisite movement of the shaft 26, whereby the movement of the fingers 27 will be properly timed for the performance of their office in successively delivering the envelopes into engagement with the tapes, as before mentioned.

As an auxiliary means for mounting our attachment 4 in proper position we loosely mount upon the shaft 26 a bearing 38, which is adjustably secured by means of screws 39 within a bracket 40. This bracket is fastened to the frame of the press and serves to give the shaft 26 a very firm support.

In addition to the support for the envelopes afforded by the standards 24 we have also provided the plates 41, which are curved at their inner ends to correspond to the guiding-plate 42, said parts cooperating with each other to provide a guideway for the envelopes, &c., to be delivered into each paper.

It will therefore be observed that our feeding mechanism is entirely automatic in its operation, all that is required from the attendant being to provide a supply of envelopes or other articles which it is desired shall be delivered into the folds of the paper at the instant the latter is received by the folding mechanism.

Inasmuch as various modifications and changes may be made in the construction and combination of elements deemed necessary in materializing our invention, we do not wish to be confined strictly to the exact showing herein made.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination with the folding-cylinder of a printing-press, of an envelop-carrying belting or tape; an auxiliary belting cooperating therewith and with the periph-



ery of said cylinder and devices for successively delivering an envelop, folder or the like between said cooperating tapes, substantially as specified and for the purpose set forth.

2. The combination with the folding-cylinder of a printing-press, of a suitable framework attached to the framework in which said cylinder is mounted; a pair of shafts each having a band-wheel; a pair of arms or brackets each having an idler or tape wheel to cooperate with its respective wheel upon said shafts; suitable means for actuating both of said shafts whereby the belting on each pair of wheels will be moved in sympathy with each other to act upon an interposed envelop or the like and deliver said envelop upon the periphery of the folding-cylinder and thence into the folds of each paper as it is delivered to the folding mechanism within the cylinder and means to deliver the envelops to said tapes as and for the purpose set forth.

3. The combination with mechanism of a press adapted to receive and fold a paper web; of stack-holding devices, a rocking shaft, fingers upon the shaft adapted to en-

gage and remove a portion of the stack only when said fingers are moved in one direction, a carrier for receiving said portions from the fingers and delivering them to the folding mechanism and upon the paper web, and means in the path of the stack portions for preventing the removal of more than one portion from the stack at a time.

4. The combination with stack-holding devices; of rocking fingers thereunder adapted to engage and remove portions of the stack, a carrier for receiving said portions from the fingers, a folding and a cut-off cylinder adapted to receive the paper web therebetween, and folding mechanism adapted to subsequently receive the web, said carrier adapted to deliver stack portions between the folding-cylinder and the web.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WALTER S. BROWN.  
HENRY W. ENDERIS.

Witnesses:

J. W. STOUT,  
M. W. MARKS.