

No. 840,885.

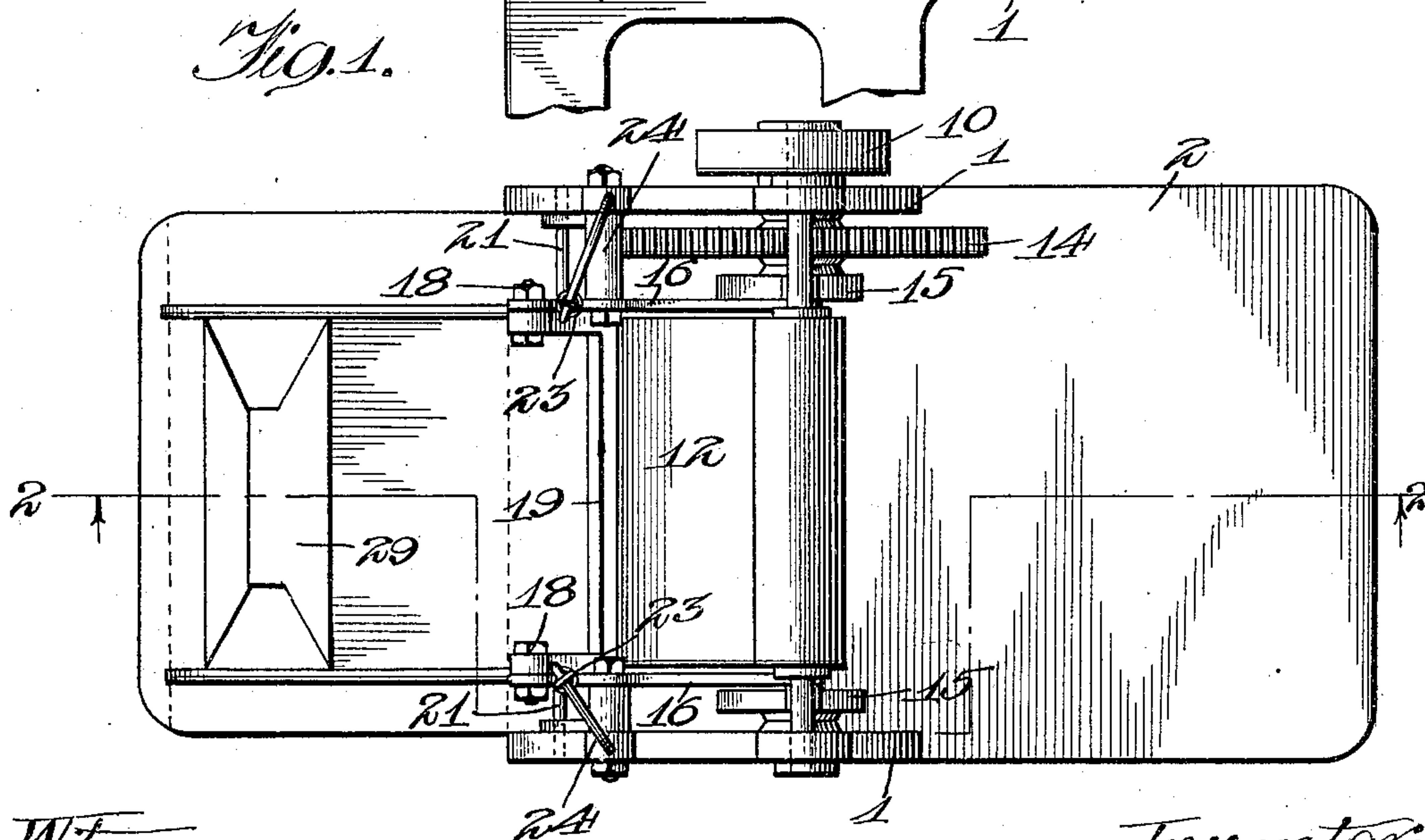
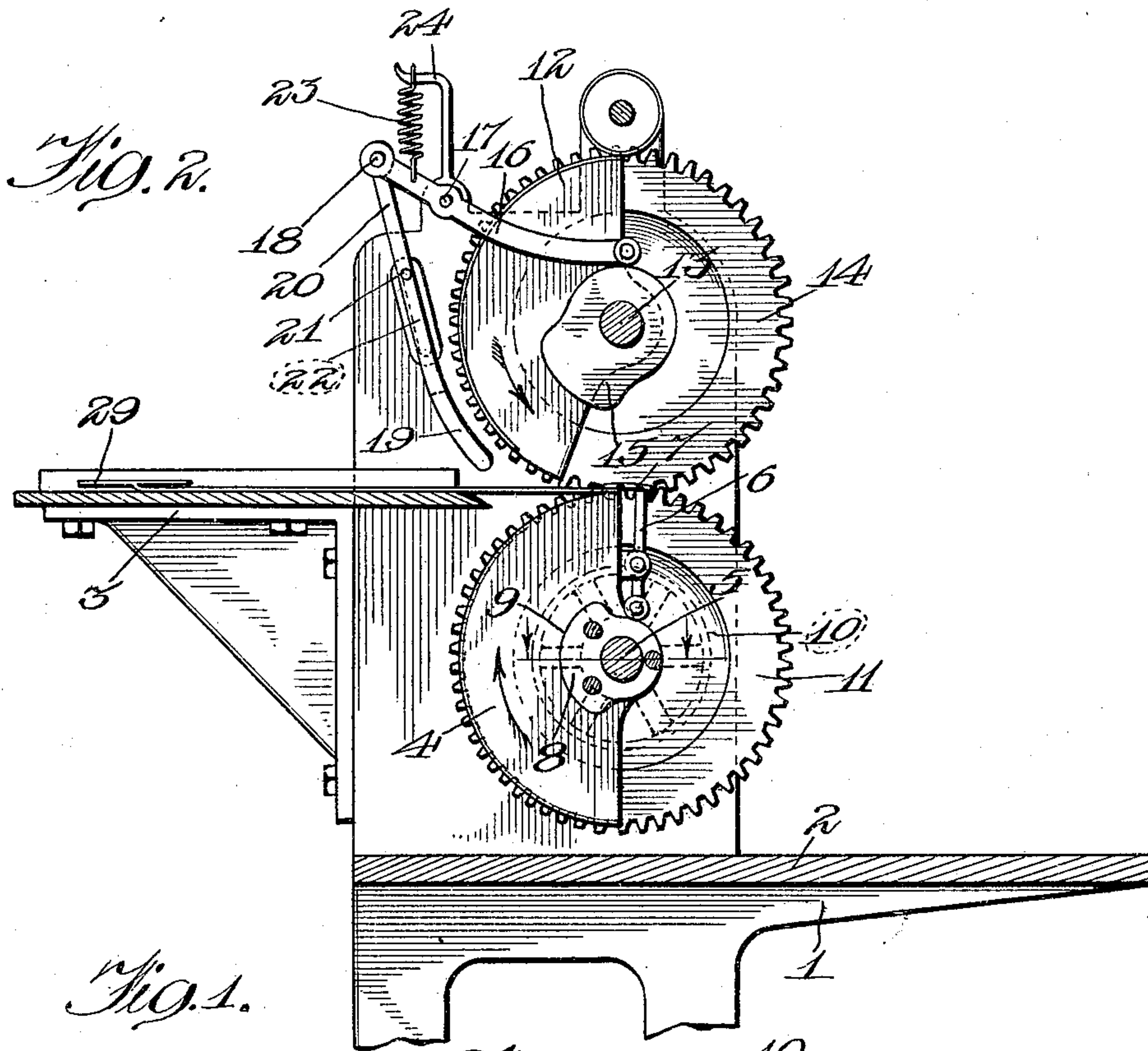
PATENTED JAN. 8, 1907.

H. E. WESTERVELT.

PRINTING PRESS.

APPLICATION FILED OCT. 30, 1905.

3 SHEETS—SHEET 1.



Witnesses:  
Chas. Downard,  
J. C. Lee

Inventor:  
Herbert E. Westervelt  
by C. Miller Bevil  
Attys.

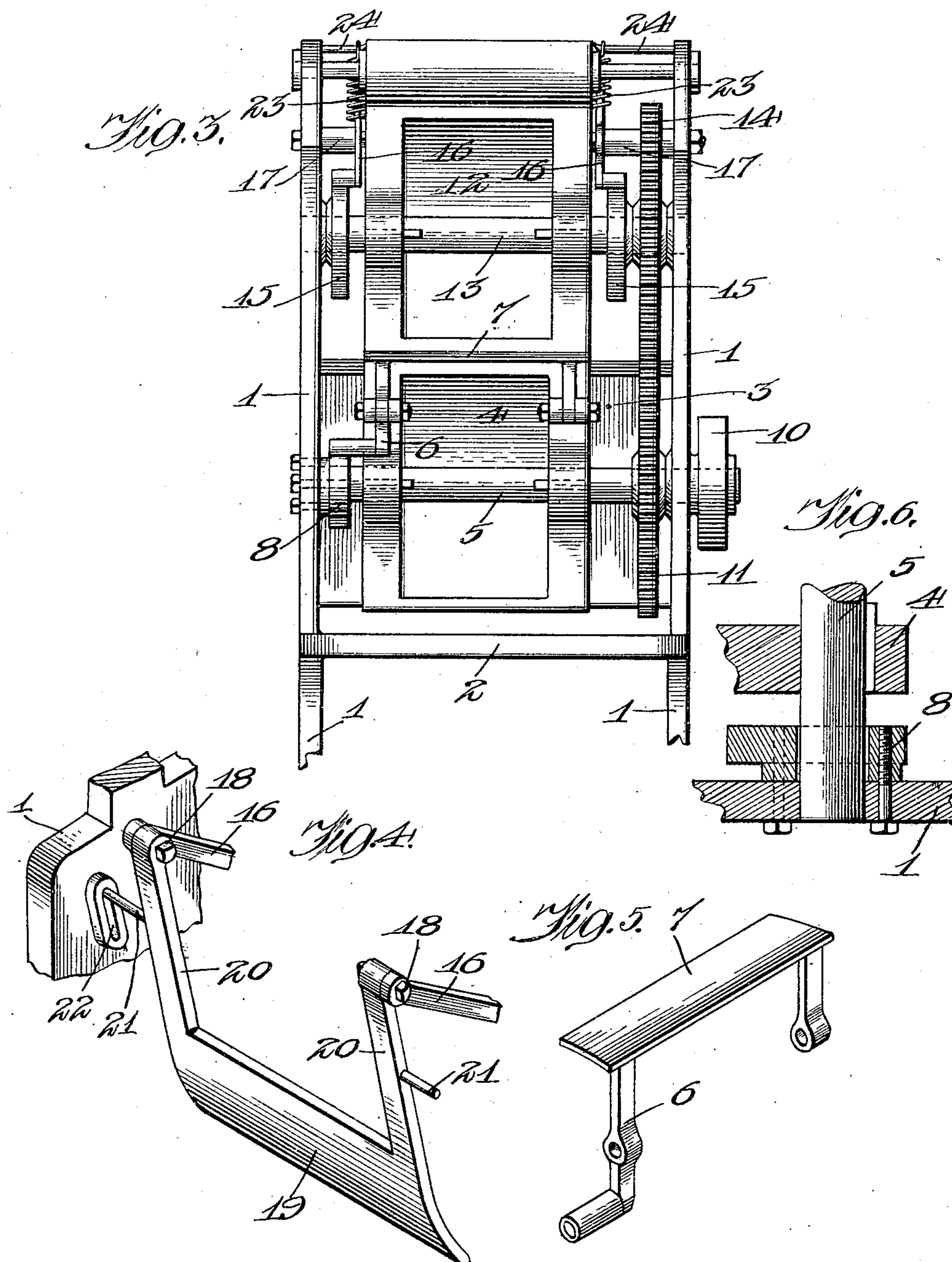
No. 840,885.

PATENTED JAN. 8, 1907.

H. E. WESTERVELT.  
PRINTING PRESS.

APPLICATION FILED OCT. 30, 1905.

3 SHEETS—SHEET 2.



Witnesses:  
G. V. Donarum.  
J. P. Lee

Inventor:  
Herbert E. Westervelt  
by: C. Miller Ruffeld  
Atty:



No. 840,885.

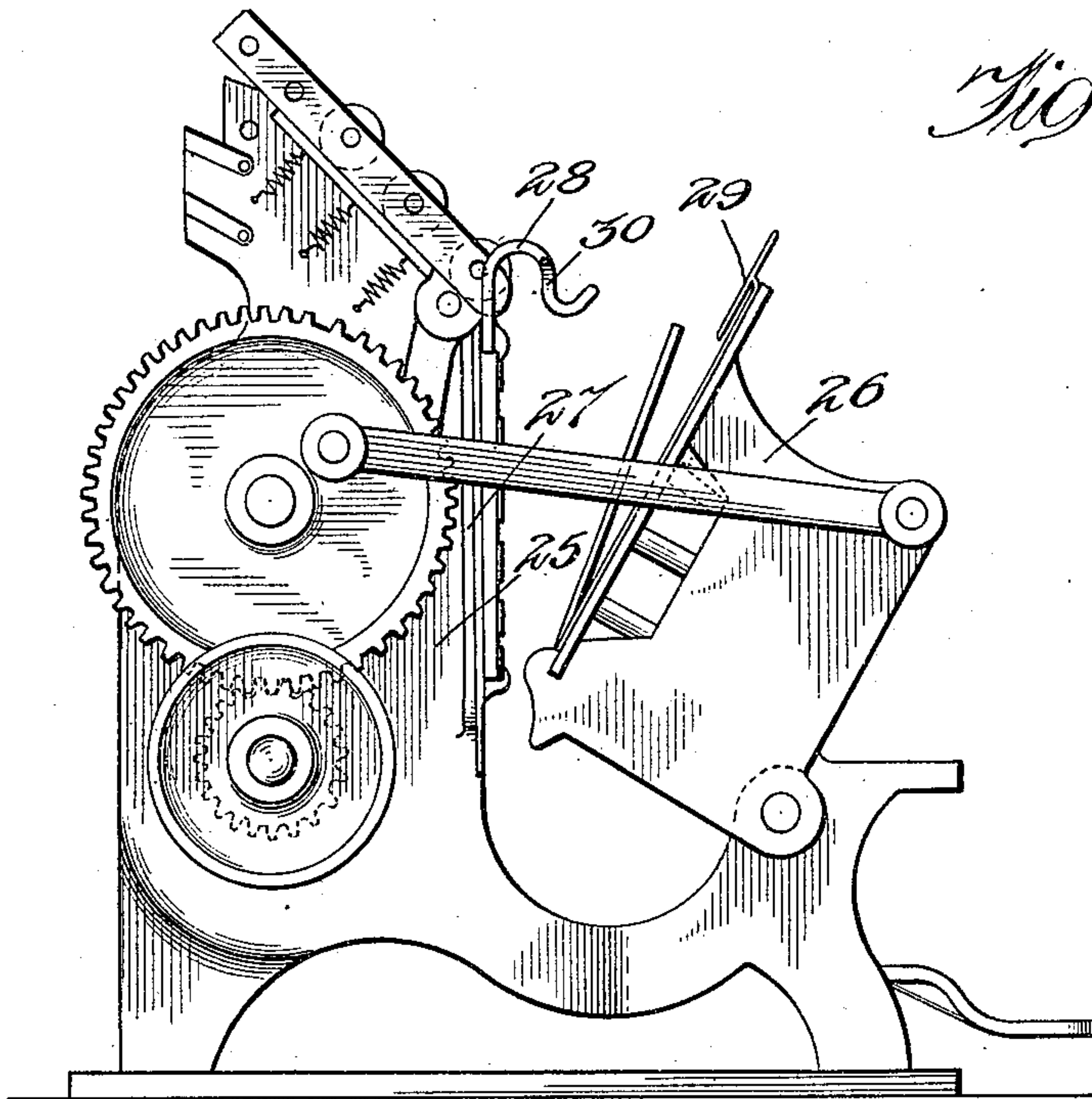
PATENTED JAN. 8, 1907.

H. E. WESTERVELT.

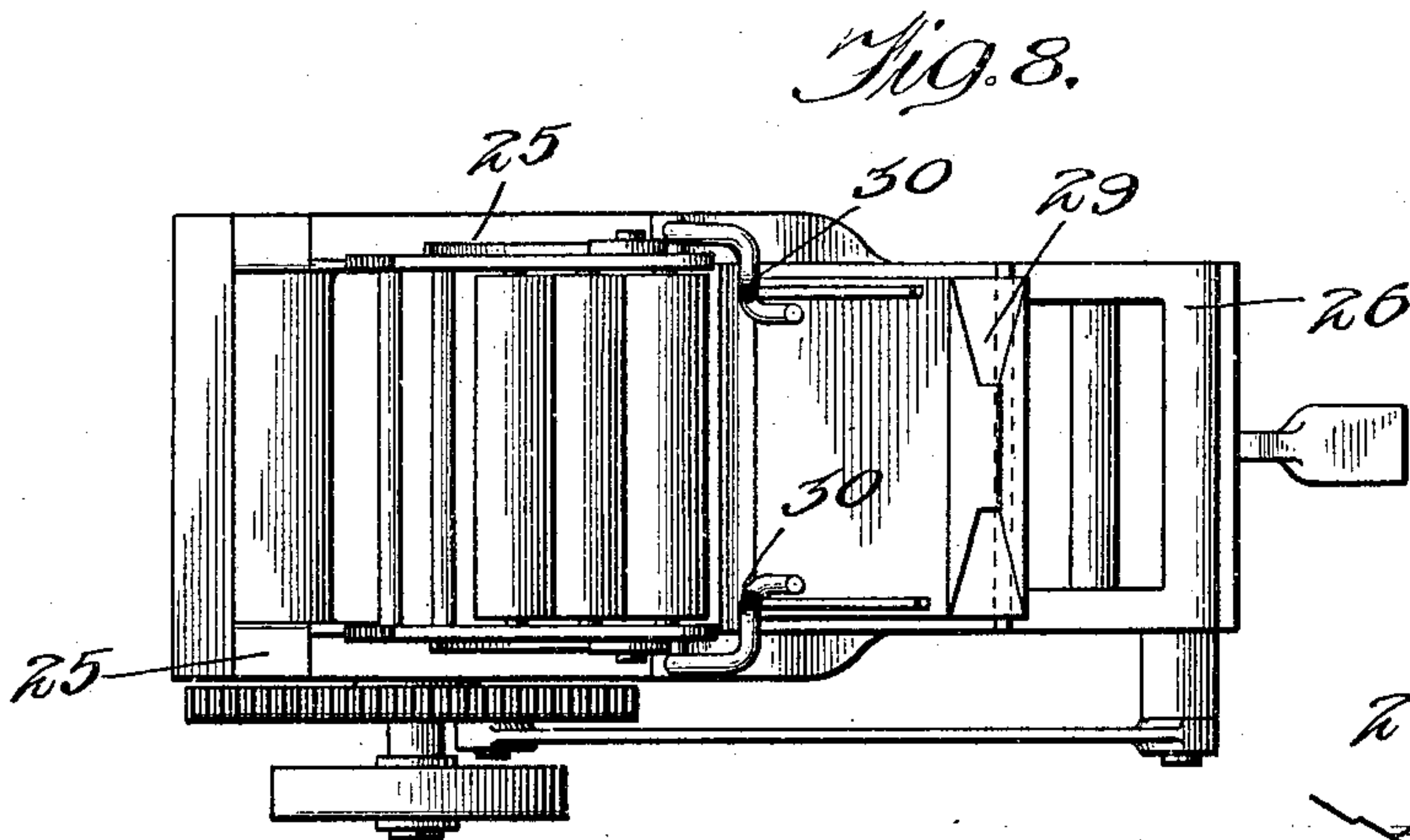
PRINTING PRESS.

APPLICATION FILED OCT. 30, 1905.

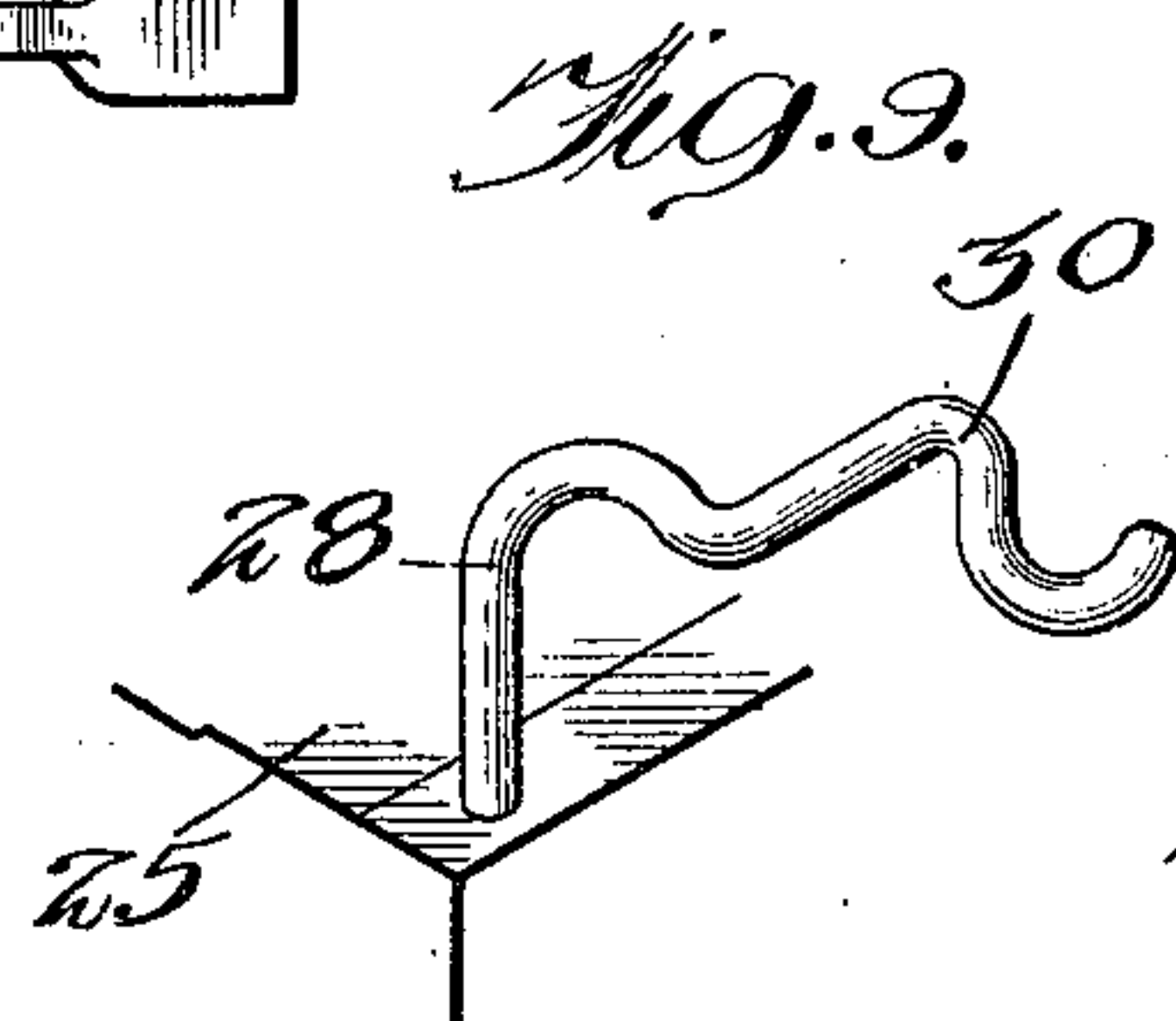
3 SHEETS—SHEET 3.



*Fig. 7.*



*Fig. 8.*



*Fig. 9.*

Witnesses:  
*G. V. Donnan*  
*J. C. Lee*

Inventor:  
*Herbert E. Westervelt.*  
by *C. Miller Appell*  
Attys.



# UNITED STATES PATENT OFFICE.

HERBERT E. WESTERVELT, OF SOUTH BEND, INDIANA.

## PRINTING-PRESS.

No. 840,885.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed October 30, 1905. Serial No. 284,964.

*To all whom it may concern:*

Be it known that I, HERBERT E. WESTERVELT, a citizen of the United States, residing at South Bend, in the State of Indiana, have  
5 invented a certain new and useful Improvement in Printing-Presses, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this  
10 specification.

My invention relates to printing-press devices, and especially to a form of printing-press particularly adapted to print on paper bags.

15 The principal object of the invention is to provide a simple, practical, and effective mechanism by which an inscription can be printed upon the side of a paper bag upon which the bottom of the bag is folded.

20 In the accompanying drawings I have shown two different forms of mechanism for accomplishing this purpose. One is a rotary printing-press and the other a reciprocating press.

25 In the drawings, Figure 1 is a plan of a rotary-printing-press arrangement adapted for printing paper bags in accordance with my present invention. Fig. 2 is a section taken on line 2 2 in Fig. 1. Fig. 3 is an end elevation of the machine. Figs. 4, 5, and 6 are  
30 details of construction. Fig. 7 is a side elevation of a reciprocating press having mechanism for printing on folded bags embodying my present invention. Fig. 8 is a plan view  
35 of the same, and Fig. 9 is a detail of construction.

Referring to the device shown in Figs. 1 to 6, inclusive, I show a frame 1, provided with a platform 2 and also with a bracket 3, which  
40 supports a table for the paper bags as they are being fed to the printing mechanism. A rotary bag-roll 4 is mounted upon a rotary shaft 5, which is supported by the frame 1. This roll is one-half cut away, leaving a solid  
45 portion which forms a bed for the paper bag while the same is being printed on. A gripping device consisting of a gripping-finger 6, having a gripping-jaw 7, is mounted upon the roll 4 and adapted to grip the top of a paper  
50 bag as the latter is advanced along the guideway 3. A cam 8 is secured to the frame 1 and constructed with an elevated portion 9, adapted to actuate the gripping-finger 6. By this cam the gripping device is automatically opened and closed. The shaft 5 is also  
55 provided with a pulley 10 and with a gear-

wheel 11. A printing-roller 12 is mounted above the bed-roller 4 and supported by a shaft 13, supported by the frame 1. The printing-roller 12 is provided with printing  
60 devices, such as type, which are to print desired inscriptions upon the paper bags. The roller 12 is also cut away, so that it is actually only a semicylinder; in fact, less than that, because more than one-half is cut away,  
65 as is well shown in Fig. 2. This additional cut-away portion is to permit the gripping device 6 to operate. The shaft 13 is also provided with a gear-wheel 14, which meshes with a gear-wheel 11, and is also provided  
70 with a cam 15. A lever 16 is pivotally mounted upon the frame at 17 and connected at 18 with a blade 19, having supporting-arms 20, provided with pins 21 21. The pins 21 21 are arranged to work in slots 22 22,  
75 formed in the sides of the machine-frame. A spring 23 is connected at one end to a standard 24 on the frame and at the other end with the lever 16. Thus as the rotary shaft 13 rotates the cam 15 is caused to swing the lever  
80 16 about its point of pivotal support, and thereby cause the blade 19 to swing downwardly and backwardly. As the bags advance they are printed upon by the type-wheel 12. When a bag has advanced suffi-  
85 ciently to bring the forward end of the bag-bottom nearly to the type, the blade 19 descends and strikes the bottom behind the primary cross-fold line, thereby tilting up the forward end of the bottom and exposing the  
90 side of the bag under the same, which is thereupon printed upon. The bag shown has a diamond-folded bottom, an end portion 29 of which projects beyond the end of the body portion of the bag. The invention is  
95 applicable, however, to any form of bag having a similar construction. The edges of the cut-away portions of the gear 11 and roller 12 are arranged to come together at the primary cross-fold line of the bag after the bag-bottom is tilted up, and thus the bag is printed  
100 and the bottom passed between the rollers without being creased or crushed, and the bag drops from the press in its original folded condition.

105 Referring to the machine shown in Figs. 7 to 9, inclusive, I have shown a reciprocating printing-press having a bed 25, carrying the type, and a swinging platen 26 for the bags. The press is provided with fingers 28 28, secured to the bed 25 and projecting forwardly and inwardly toward the middle of the bed.  
110



The elbows 30 30 of the fingers 28 28 are so located that as the platen 26 advances the elbows 30 30 will be struck by the upper part of the bag-bottom—that is, that portion of the bag-bottom which projects beyond the body part thereof. This will swing the lower part of the bottom up, and thereby expose the portion of the bag-body underneath the same, so that it can be printed upon.

It will be understood that changes and modifications can be made without departing from the spirit of my invention.

What I claim is—

1. The combination with printing mechanism, of means for tilting the bag-bottom to an upright position across the end of the bag-body, and means for feeding the bag to the printing mechanism so that the latter will print upon the bag-body when the bottom is in its upright tilted position.

2. The combination with the printing and bed rolls, both of which are cut away to permit the bag-bottom to remain in a tilted upright position during the printing operation, of means for gripping the bag to the bed-roll, and means for tilting the bag-bottom into an upright tilted position to permit printing upon that portion of the bag-body adjacent to the bag-bottom.

3. The combination with printing and bed or platen rolls, of means for gripping the bags to one of said rolls, a swinging blade for lifting the forward end of the bag-bottom, and means for actuating said swinging blade.

4. The combination with printing and platen rolls, of a gripping device carried by the platen-roll, a cam for actuating said gripping device, a pivotal lever associated with the printing-roll, a cam rotating with the printing-roll for actuating said lever, a swinging blade having supporting-arms pivotally connected with said lever, said arms being provided with pins, and guideways for receiving and guiding said pins.

5. The combination with means for printing on the side of the bag on which the bottom is folded, of means for striking the bottom beyond the primary cross-fold line and thereby tilting the bottom away from the body to expose the latter.

In witness whereof I hereunto subscribe my name this 11th day of October, A. D. 1905.

HERBERT E. WESTERVELT.

Witnesses:

A. MILLER BELFIELD,  
I. C. LEE.