

No. 639,763.

Patented Dec. 26, 1899.

C. E. PATTBERG.

APPARATUS FOR HANDLING OFFSET WEBS.

(Application filed Apr. 6, 1894. Renewed May 27, 1899.)

(No Model.)

4 Sheets—Sheet 1.

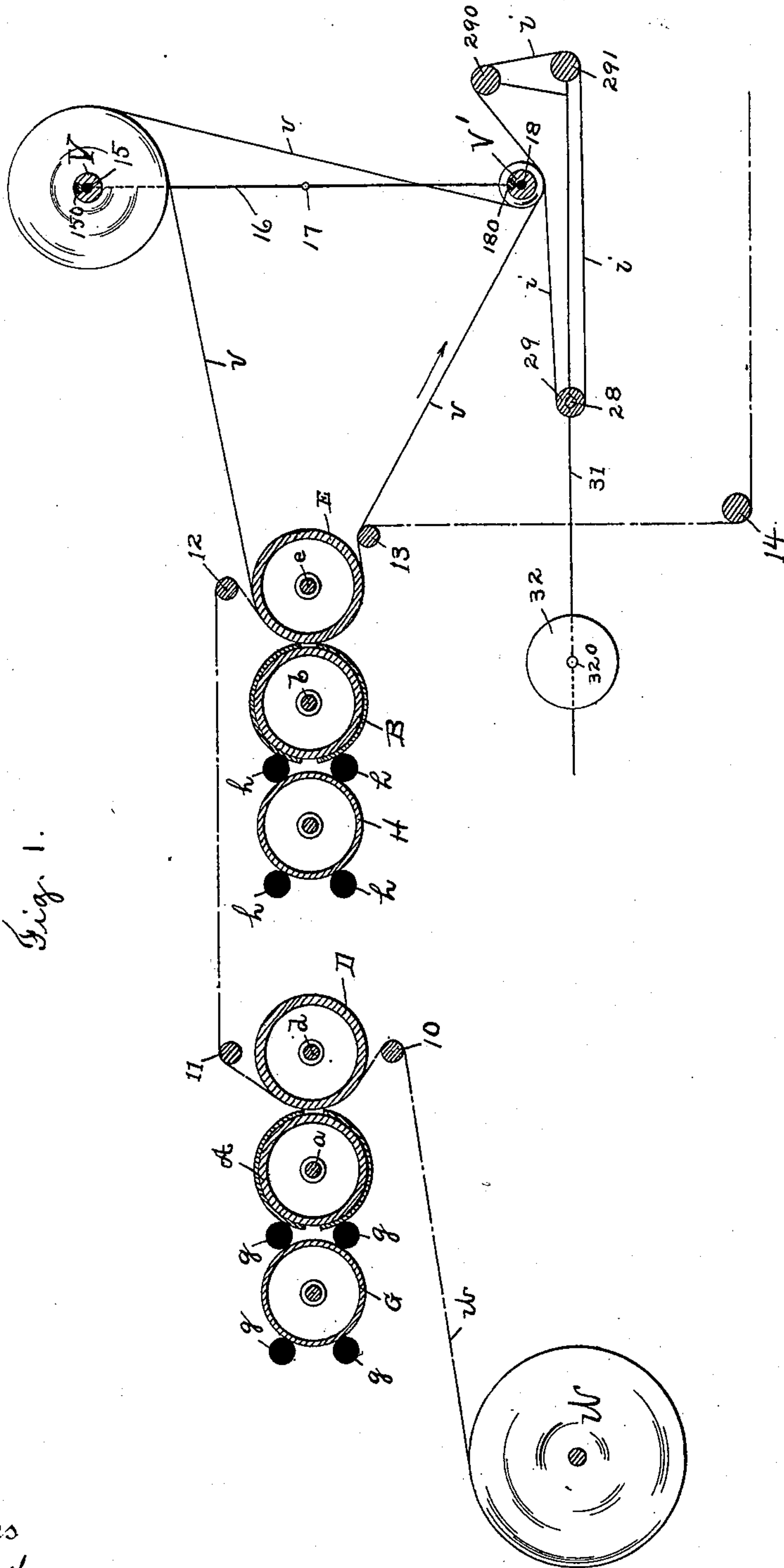


Fig. 1.

Witnesses
Chas. F. Johnson
E. M. Healy.

Inventor

Charles E. Pattberg,
By Attorneys
Southgate & Southgate

No. 639,763.

Patented Dec. 26, 1899.

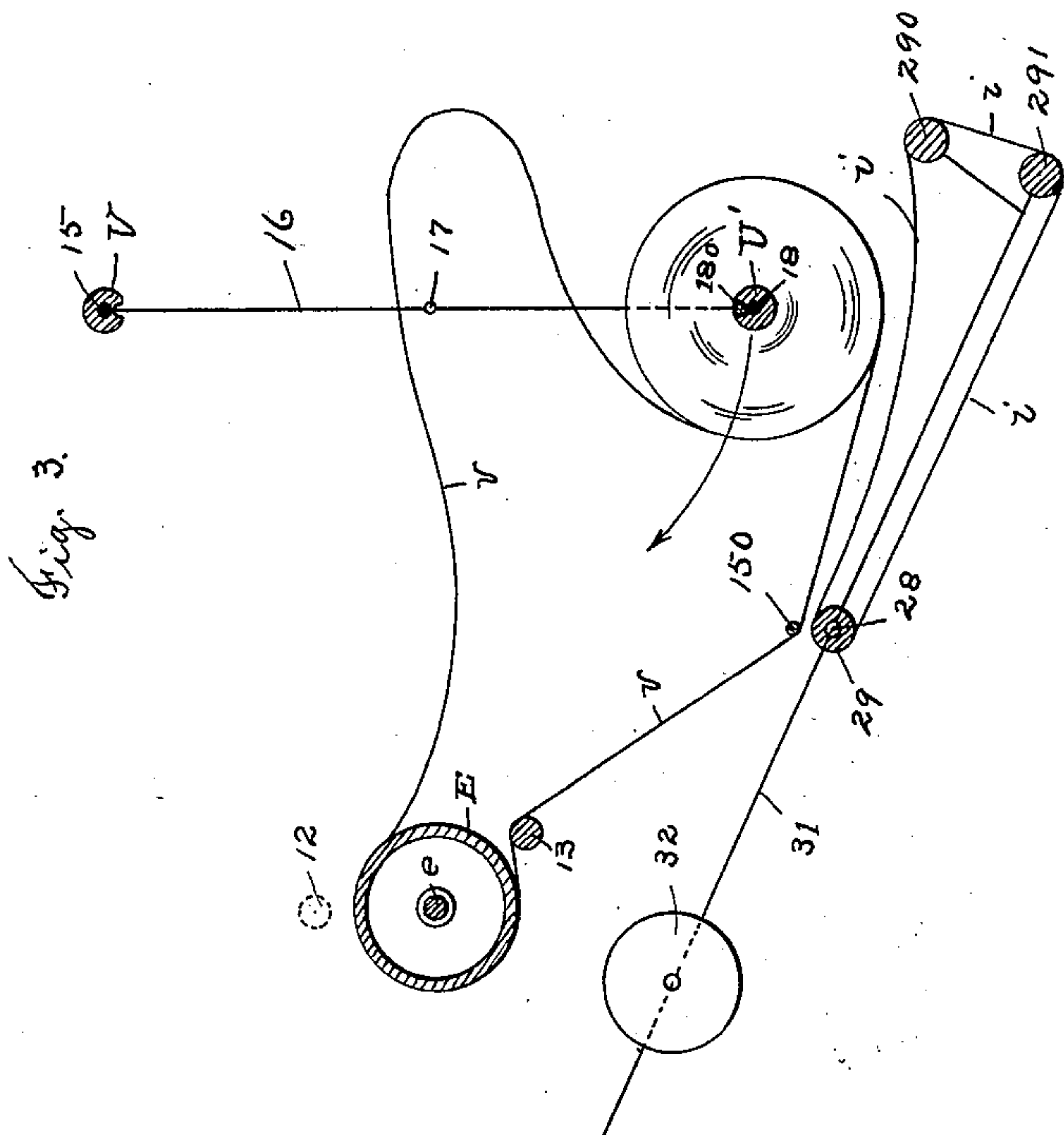
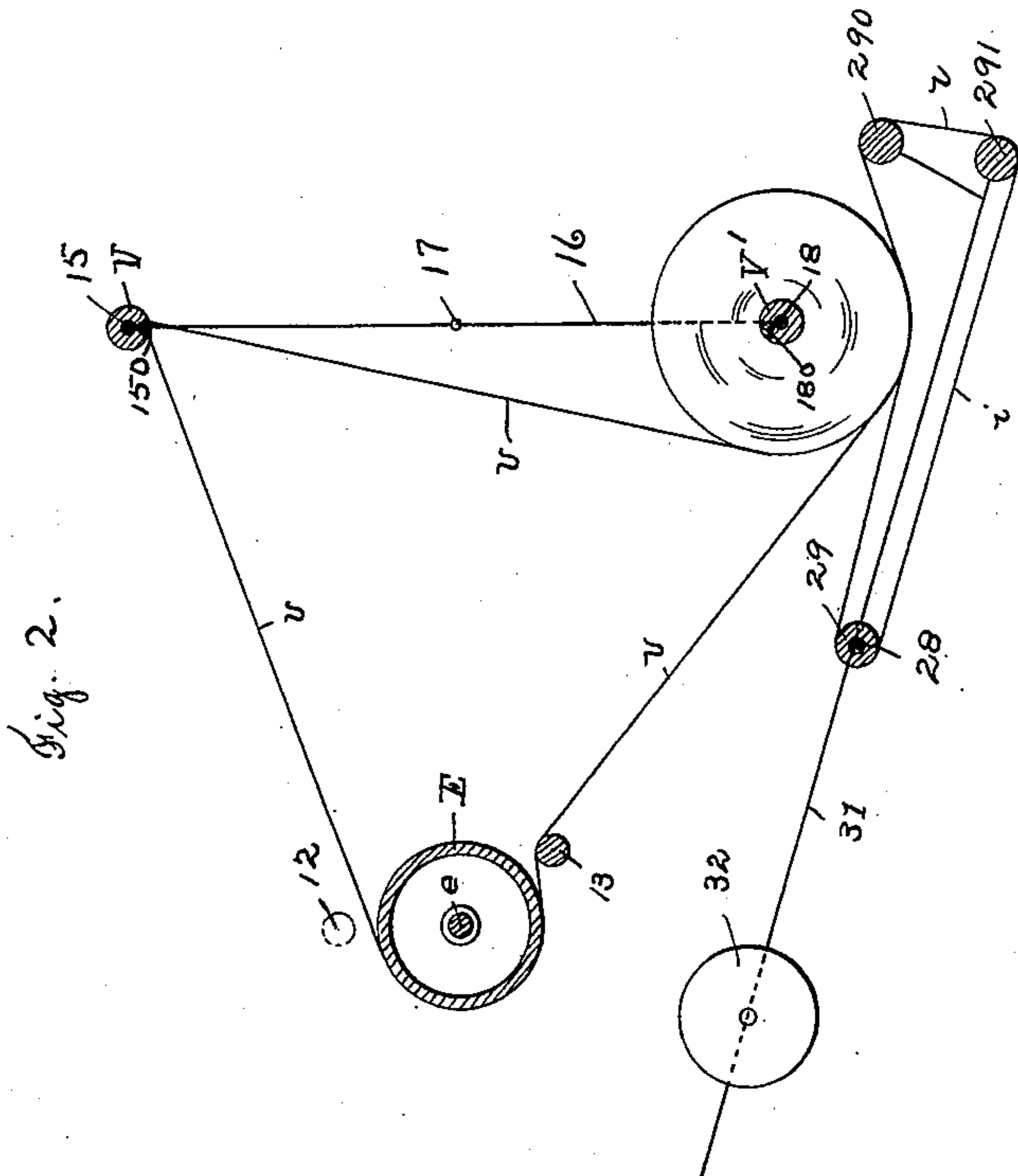
C. E. PATTBERG.

APPARATUS FOR HANDLING OFFSET WEBS.

(Application filed Apr. 6, 1894. Renewed May 27, 1899.)

(No Model.)

4 Sheets—Sheet 2.



Witnesses
Chas. F. Schuchert
C. M. Healy.

Inventor

Charles E. Pattberg,
By Attorneys
Southgate & Southgate

No. 639,763.

Patented Dec. 26, 1899.

C. E. PATTBERG.

APPARATUS FOR HANDLING OFFSET WEBS.

(Application filed Apr. 6, 1894. Renewed May 27, 1899.)

(No Model.)

4 Sheets—Sheet 3.

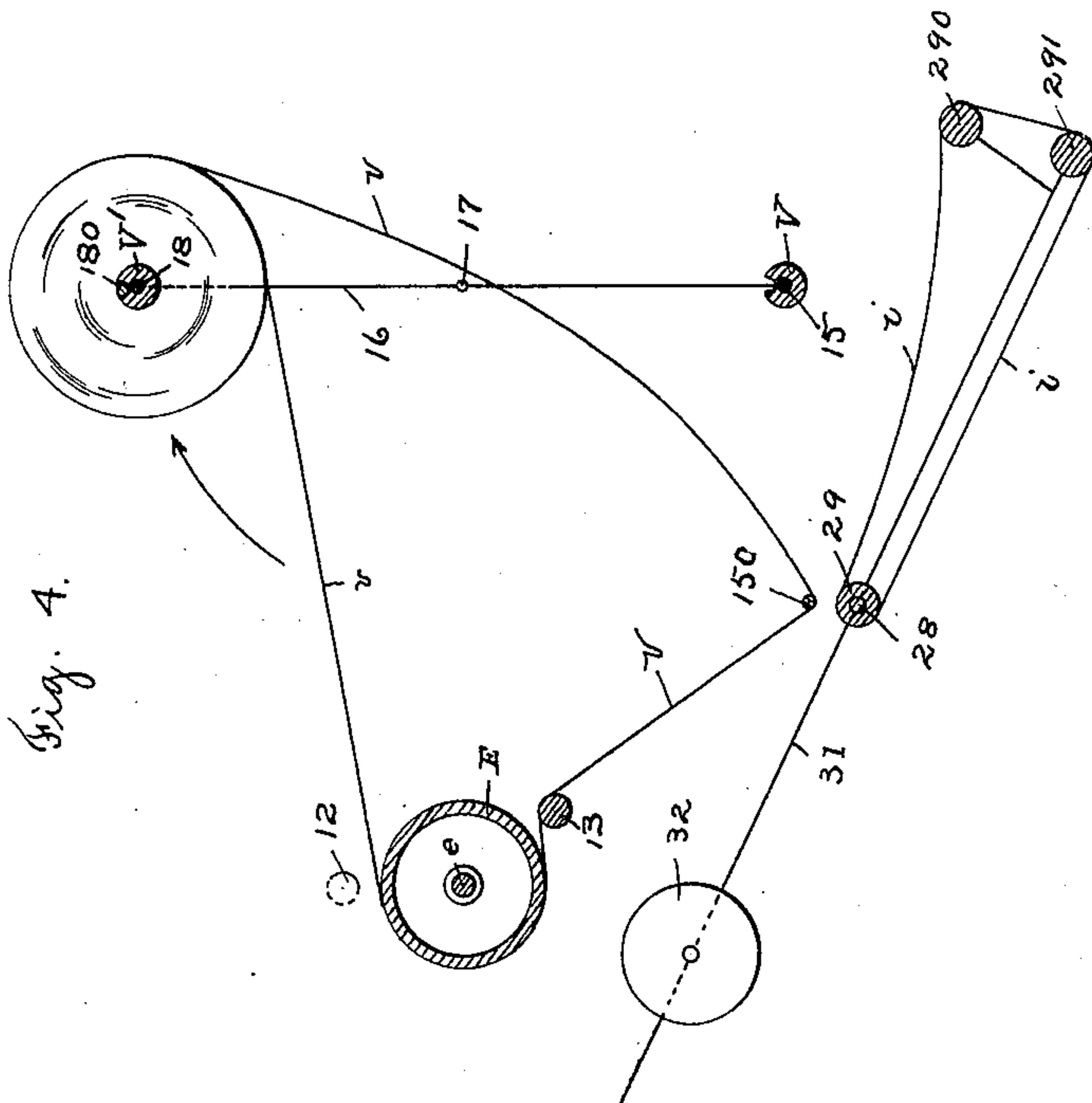


Fig. 4.

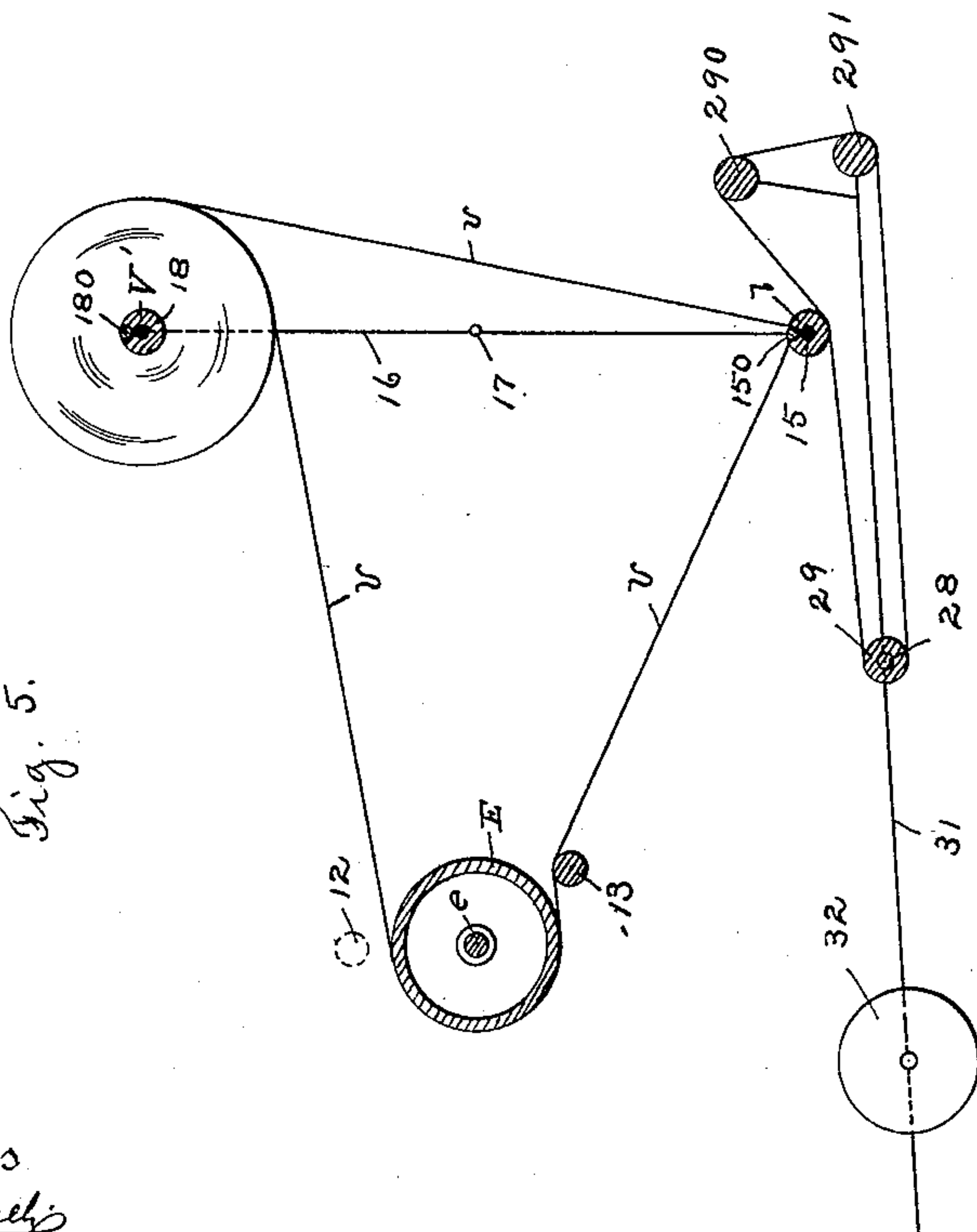


Fig. 5.

Witnesses
Chas. F. Schuch
& M. Healy

Inventor

Charles E. Pakberg,
By Attorneys
Southgate & Southgate

No. 639,763.

Patented Dec. 26, 1899.

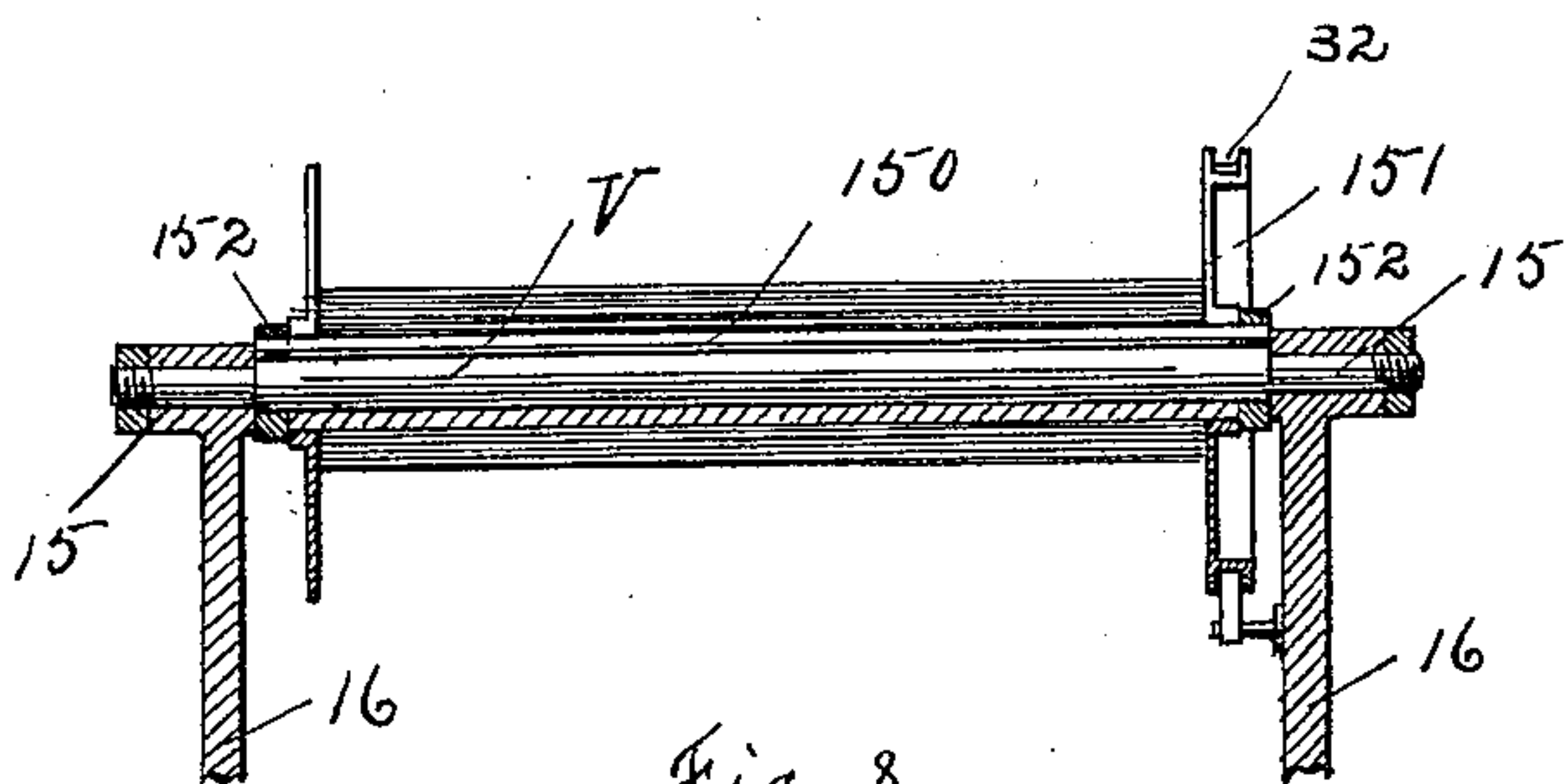
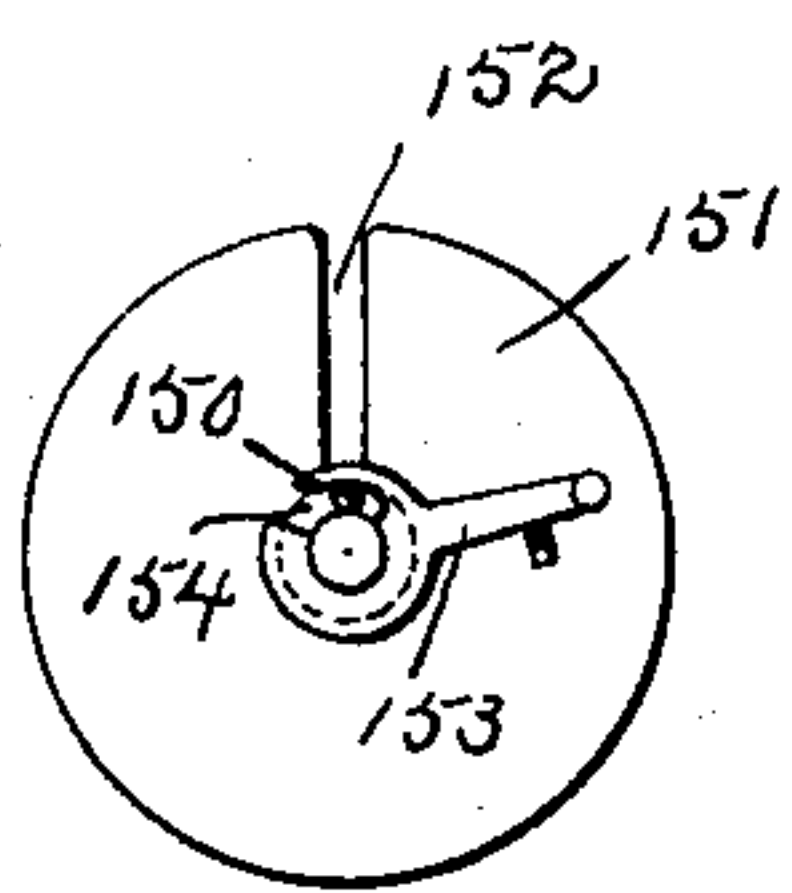
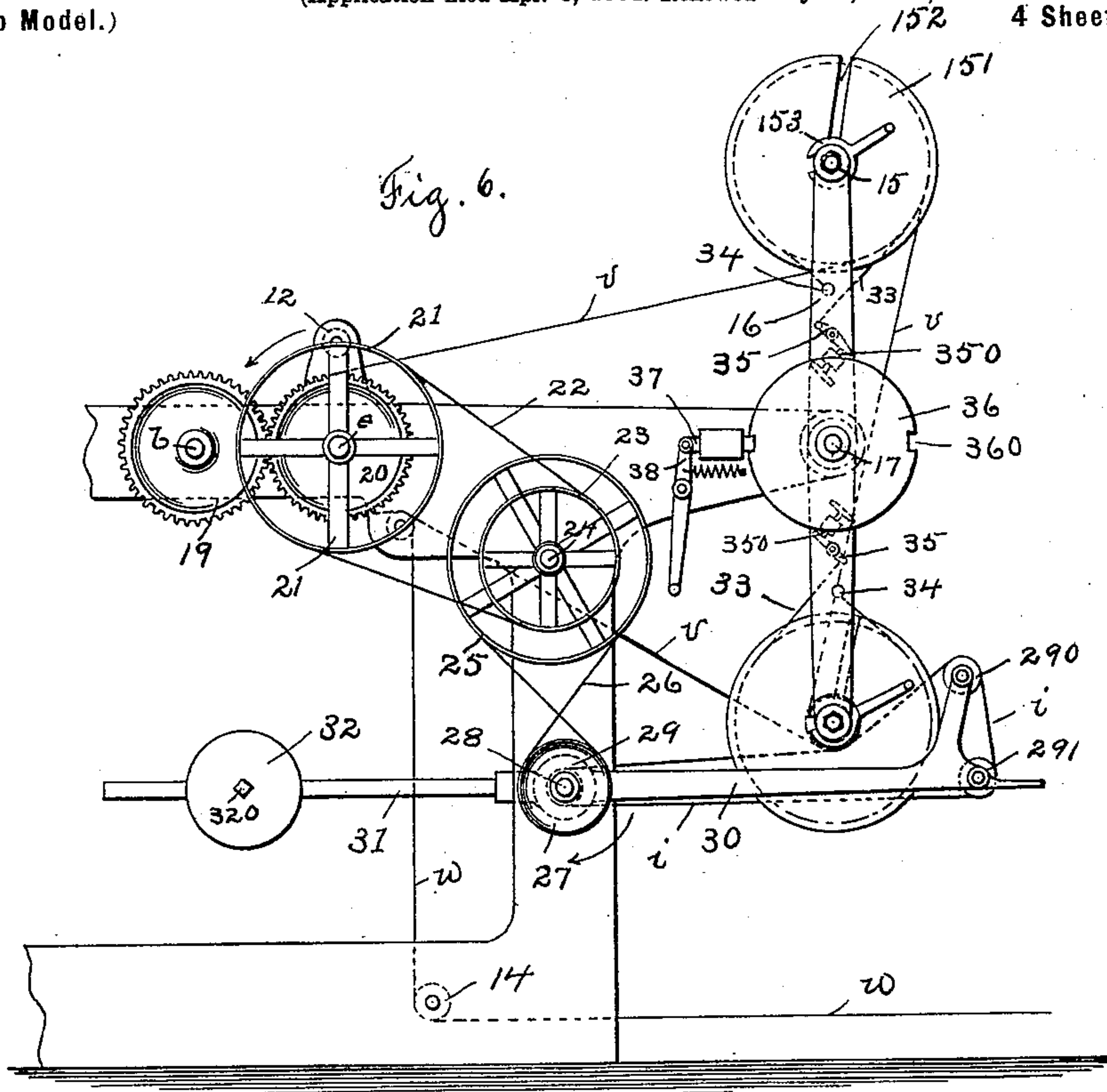
C. E. PATTBURG.

APPARATUS FOR HANDLING OFFSET WEBS.

(Application filed Apr. 6, 1894. Renewed May 27, 1899.)

(No Model.)

4 Sheets—Sheet 4.



Witnesses
Wm F. Schuch
E. M. Healy

Inventor

Charles E. Pattberg
By Attorneys
Southgate & Southgate

UNITED STATES PATENT OFFICE.

CHARLES E. PATTBURG, OF NEW YORK, N. Y., ASSIGNOR TO THE CAMPBELL PRINTING PRESS AND MANUFACTURING COMPANY, OF SAME PLACE.

APPARATUS FOR HANDLING OFFSET-WEBS.

SPECIFICATION forming part of Letters Patent No. 639,763, dated December 26, 1899.

Application filed April 6, 1894. Renewed May 27, 1899. Serial No. 718,561. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. PATTBURG, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Improvement in Apparatus for Handling Offset-Webs, of which the following is a specification.

The object of my invention is to provide a simple, convenient, and efficient device for feeding an offset-web through printing-machines; and to these ends my invention consists of the parts and the combinations of parts, as hereinafter described, and more particularly pointed out in claims at the end of this specification.

In the accompanying four sheets of drawings, Figure 1 is a diagrammatic view showing my offset-web device applied to a rotary web-perfecting printing-press. Fig. 2 is a diagrammatic view showing the position of the parts when the web has been coiled upon the lower roller or reeling device. Figs. 3, 4, and 5 are diagrammatic views showing the relative position which the parts assume when the device is manipulated so that the offset-web may be recoiled upon one of the rollers. Fig. 6 is a side elevation of a portion of a printing-press with my offset-web device applied thereto, and Figs. 7 and 8 are detail views to be hereinafter referred to.

By my invention the web that is to be used as the offset-web is wound in two plies into a web-roll, the first point secured to the reel or shaft being a crease in the web between the two plies. One ply of the web is then led around the impression-cylinder which it is desired to protect and then glued or secured to the other ply, so that an endless offset-web is made, which is thus led around the impression-cylinder which it is desired to protect. A point or crease in the endless offset-web is then secured to the shaft or reel of the rewinding device. By this arrangement one ply of the double web wound on the supply-reel will pass around the impression-cylinder to the rewinding device and the other ply directly to the rewinding device. With the parts thus arranged the offset-web is run so that the web will pass from the supply-reel

to the rewinding-reel, and the rewinding-reel will rewind the double ply of web to form a double-ply web-roll substantially the same as that first made. The rewound roll is then used as a supply-roll, and a crease or fold in the endless web is started as the supply-point to the reel that is used as the rewinding-reel. By this arrangement the entire endless offset-web can be run through the press any number of times, and no rethreading of the offset-web is necessary after the device is once started, because the web as then used is an endless web, which is led around the impression-cylinder which it is desired to protect.

I will now describe one way in which my invention may be carried out in connection with an ordinary rotary web-press.

Referring to the drawings and in detail, A designates the first printing-cylinder, mounted upon the usual shaft *a* and with which coacts the usual first impression-cylinder D, mounted upon the shaft *d*. The printing-cylinder A is provided with any suitable inking device, as form-rollers *g g* and ink-drum G. A second printing-cylinder B, mounted upon a shaft *b*, is also journaled in the framework, and coacting with the same is the second impression-cylinder E, which is mounted upon a shaft *e*, and the printing-cylinder B is provided with any of the usual inking devices, as the form-rollers *h h* and the ink-drum H. The second impression-cylinder E is the one which it is desired to protect from offset from the web in presses of this character.

The web *w* to be printed is led through the machine from the web-roll W around a guide-roller 10, between the printing-cylinder A and the impression-cylinder D, around the guide-rollers 11 and 12, and then between the printing-cylinder B and the impression-cylinder E. The web *w* is then led around the guide-rollers 13 and 14 out of the press to any suitable delivery device. To protect the second impression-cylinder E from the first-printed side of the web, an offset-web *v* is led around the impression-cylinder E. This offset-web is wound in two plies into a roll V, as before described, one ply thereof being led around said impression-cylinder E and se-

cured to the other ply thereof. A crease or fold in the web is then secured to the rewinding reel or shaft V'. The reels V and V', with the web which is wound thereon during the various operations, are journaled or mounted upon shafts 15 and 18, respectively, which are carried by a suitable frame or yoke 16, journaled upon central trunnions 17, carried by the framework of the press.

In order to secure the offset-web detachably to the reels V and V', the same are provided with rods 150 and 180, respectively, which fit into grooves in the reels and which may be detachably secured in place when the web is to be rewound upon one of these reels. The means which I preferably employ for detachably fastening the securing-rods in place is most clearly illustrated in Fig. 7. As shown in this figure, the securing-rods are inserted through radial slots 152, which are formed in the disks 151 of the reels V and V' and are clamped and secured in position by means of the clamps 153, which are provided with slots 154 for engaging and fastening the securing-rods in place, these clamps being arranged on the axles of the reels, as shown, and provided with any suitable means, as spring-clips, for keeping them in the position where they hold the rods in place.

The means which I employ for rewinding the offset-web is shown in Fig. 6, and by referring to this figure it will be seen that the shaft *b* of the printing-cylinder B is provided with the ordinary gear 19, which meshes with and drives a gear 20, carried by the shaft *e* of the impression-cylinder B. Upon the shaft *e*, I secure a band-wheel 21, which drives a pulley 23 by means of belt 22. Fastened on the shaft 24 of the pulley 23 I secure a band wheel or pulley 25, which by means of a cross-belt 26 actuates or drives a pulley 27, secured on a shaft 28, upon which shaft 28 a roll 29 is mounted. A framework or yoke 30 is journaled upon the shaft 28 and is provided at its outer end with idler-rolls 290 and 291. An endless band or series of tapes *i* is carried around the rollers 29, 290, and 291. This frame 30 is counterbalanced or weighted by means of a weight 32, which is mounted on a rod 31, extending from the center of the framework. This weight 32 can be adjusted to various positions on the rod 31 by means of the bolt 320, the weight 32 being used to hold the endless band in contact with the web-roll into which the offset-web is rewound. It will also be noted that the frame 30 may be depressed as the web rewinds into this lower roll. By means of this construction it will be seen that a constant peripheral speed will be imparted to the web-roll into which the offset-web is rewound, the parts being preferably so proportioned that the drawing device will put a slight tension on the web as the same issues from between the web to be printed and the second impression-cylinder.

For the purpose of securing a proper tension of the web as the same is drawn from the

supply-roll the disks 151 of the reels V and V' are provided with grooves 32, as shown most clearly in Fig. 8, and fitting into these grooved disks are suitable bands or straps 32, which have one of their ends secured, as at 34, to the frame 16 and have their other ends secured to levers 35, which levers can be adjusted by means of handles 350. By this means the web-roll from which the supply of offset-web is drawn can be put under tension, so that the offset-web will have to be drawn under tension into the press.

The yoke or frame 16 may be locked or secured in various positions by means of a concentric disk 36, which is secured to turn therewith and which is provided with slots 360, adapted to be engaged by a spring-pressed bolt 37, which may be actuated by means of a handle or lever 38.

With a device as thus organized the way my invention is practiced is as follows: The offset-web is led around the impression-cylinder and started into the roll which forms the rewinding-roll, as before described. In Fig. 1 the greater part or bulk of the offset-web is shown as wound or coiled upon the reel V, which in this particular position will act as a supply-roll. The winding mechanism is shown in this figure as operating to withdraw the web from the reel V and to wind it up upon the reel V'. When the web has been entirely drawn from the reel V and has been wound up upon the reel V', the parts will assume substantially the position indicated in Fig. 2. The securing-rod 150 is then detached from the reel V and the parts allowed to assume the position indicated in Fig. 3. The pivoted yoke or frame 16 is then unlocked and rotated about its axis 17 in the direction of the arrow until the parts assume substantially the position illustrated in Fig. 4. The web *v* is then connected to the reel V by means of the securing-rod. It will thus be seen from an inspection of Fig. 5 that the reeling device has been arranged or adjusted so that the web will now be drawn from the web wound upon the reel V' and rewound upon the reel V. By this way of handling an offset-web it will be seen that a continuous offset-web wound originally in two-ply may be wound back and forth between the reeling devices without changing the direction of the travel of the web through the printing mechanism and so that the entire web may be used, and may be used a number of times, if desired, and that these operations may take place without changing the web through the press.

There are many other apparatuses which may be devised for carrying out my invention and many changes may be made in the device which I have shown and described by those who are skilled in the art.

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

1. In an anti-offset device, the combination of reeling devices, means for winding a pli-

cated or double web back and forth between the reeling devices, one ply of the web being led around the impression-surface which it is desired to protect, and means for reversing the winding of said web without rethreading the same through the machine, and without changing the direction of its travel around the impression-surface, substantially as described.

10 2. In an anti-offset device, the combination of a plurality of reeling devices, an endless web led around the impression-cylinder which it is desired to protect, and means for detaching and securing the endless web to the reeling devices, substantially as described.

15 3. In an anti-offset device, the combination of a plurality of reeling devices, an endless web led around the impression-cylinder, which it is desired to protect, means for detaching and securing the web to the reeling devices, and means for changing the relative position of the reeling devices, substantially as described.

20 4. In an anti-offset device, the combination of a plurality of reeling devices, an endless web led around the impression-cylinder which it is desired to protect, means for detaching and for securing the web to the reeling de-

vices, and a mechanism for winding the web back and forth between the reeling devices, substantially as described. 30

5. In an anti-offset device, the combination of a plurality of reeling devices, an endless web, means for detaching and for securing the web to the reeling devices, means for changing the relative position of the reeling devices, and a mechanism for winding the web back and forth between the reeling devices consisting of an endless belt engaging the web upon one of the reeling devices, substantially as described. 35 40

6. In an anti-offset device, the combination of an endless web led around the impression-cylinder which it is desired to protect, a plurality of reeling devices provided with means whereby a double ply of the web may be secured thereto, consisting of bars fitting into the reeling devices, and means for clamping the bars in position, substantially as described. 45

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses. 50

CHAS. E. PATTERBERG.

Witnesses:

H. A. WROE WOOD,
JAMES H. CRAFT.