

W. L. & R. L. RUSSELL.

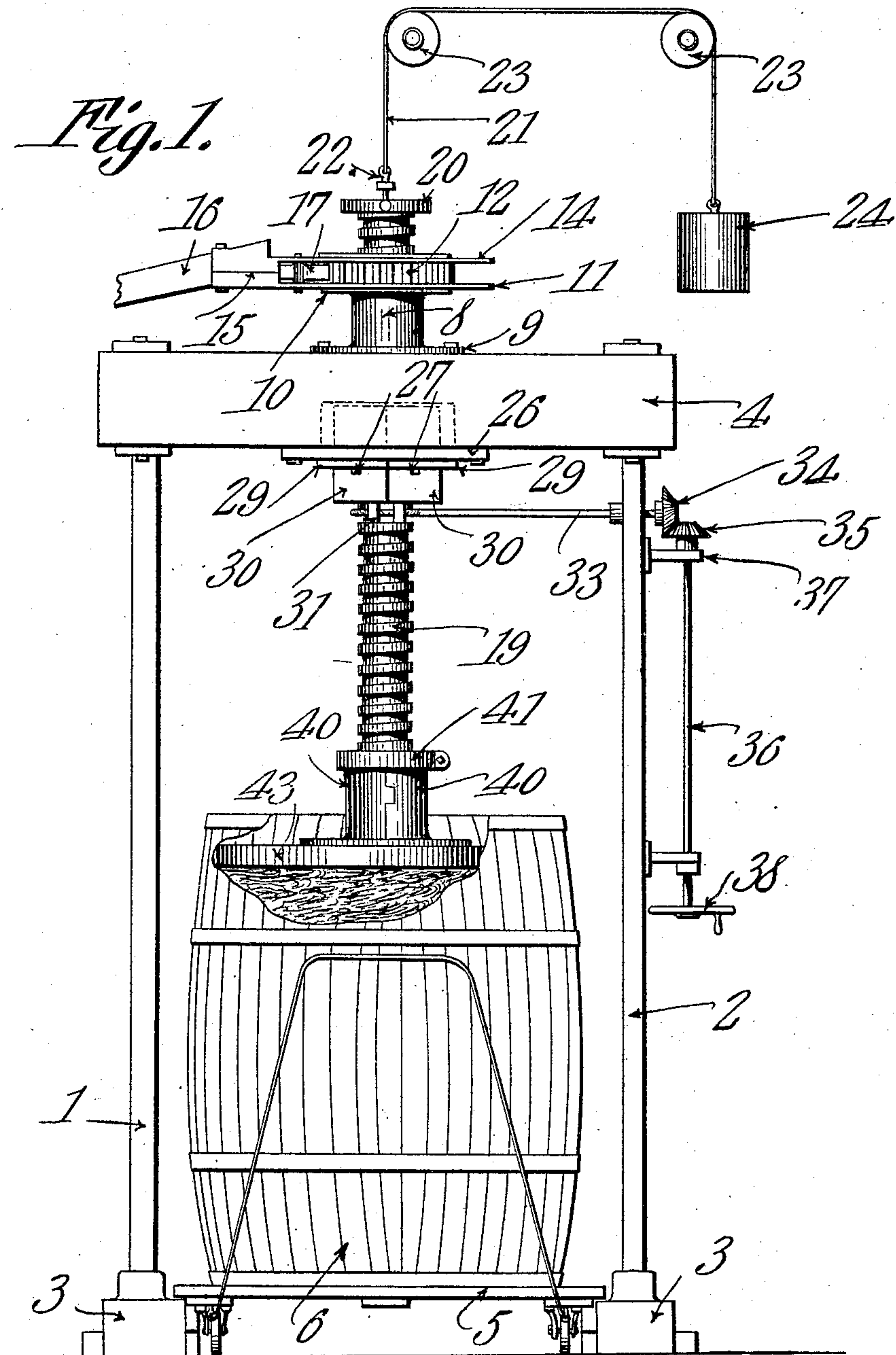
TOBACCO PRESS.

APPLICATION FILED DEC. 6, 1909.

966,126.

Patented Aug. 2, 1910.

2 SHEETS—SHEET 1.



Witnesses

Herbert Lawson

Inventors
Walter L. Russell
Robert L. Russell
By *CA Snow & Co.*
Attorneys

W. L. & R. L. RUSSELL.

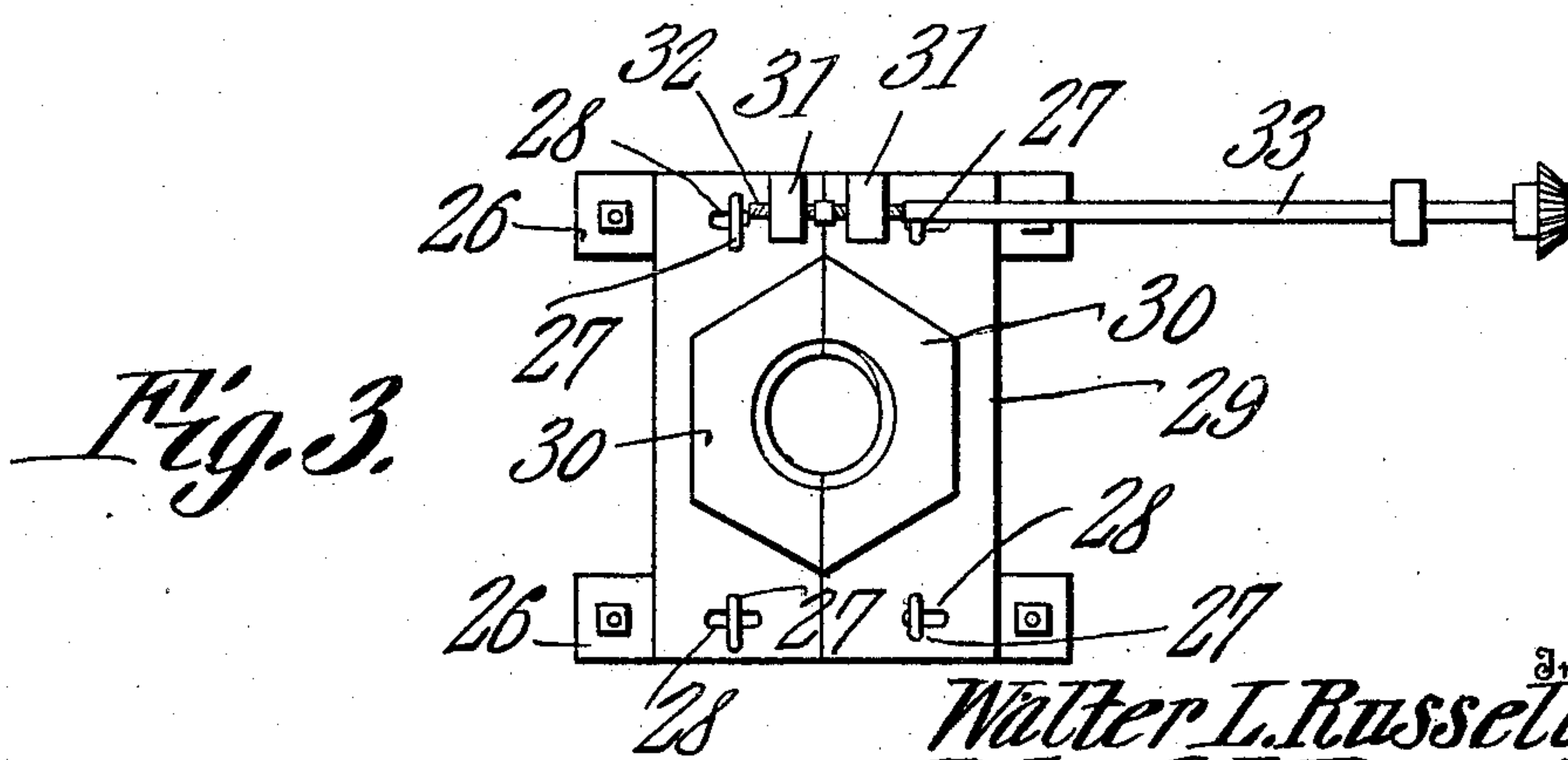
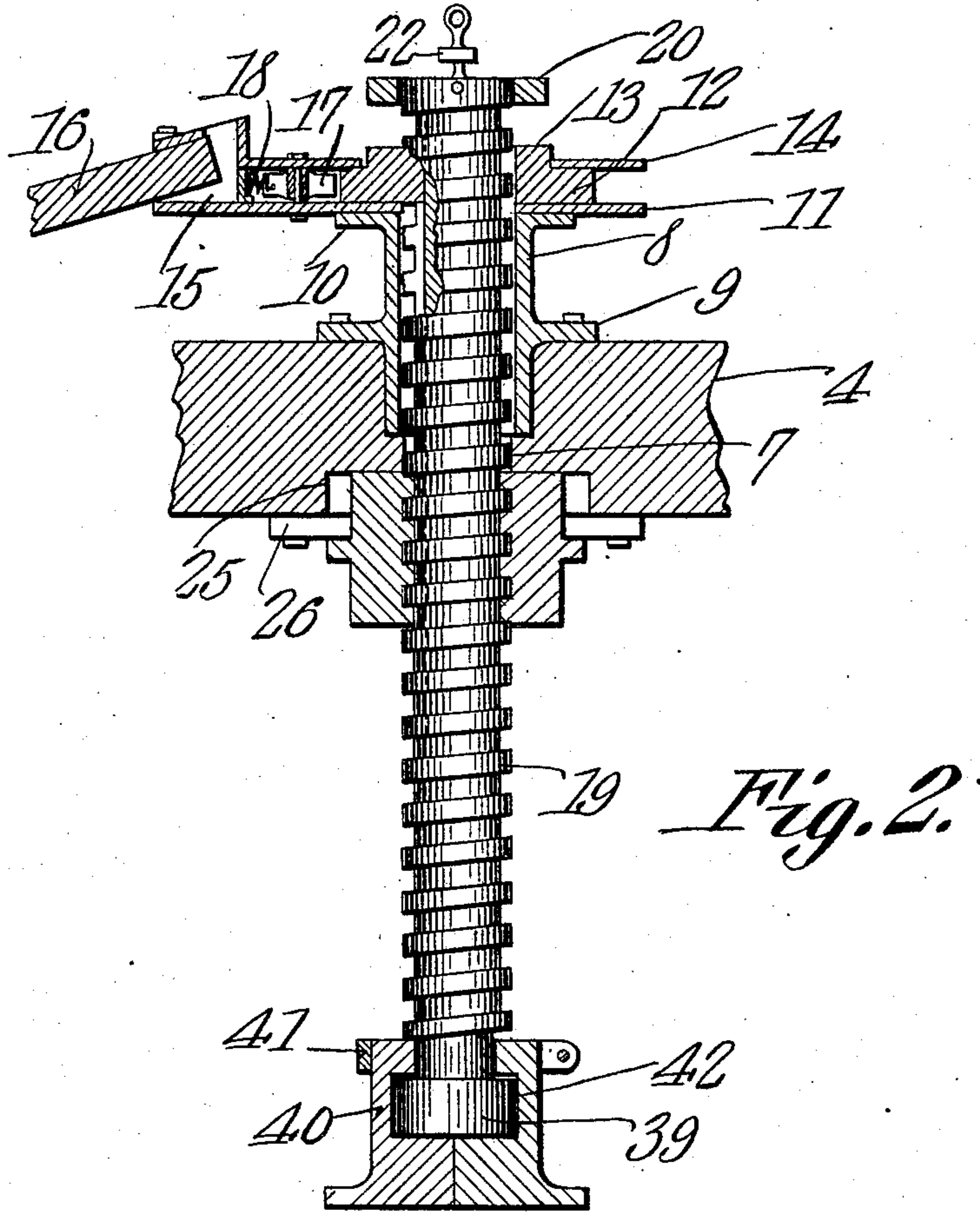
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Attorneys

UNITED STATES PATENT OFFICE.

WALTER L. RUSSELL AND ROBERT L. RUSSELL, OF RIPLEY, OHIO.

TOBACCO-PRESS.

966,126.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed December 6, 1909. Serial No. 531,606.

To all whom it may concern:

Be it known that we, WALTER L. RUSSELL and ROBERT L. RUSSELL, citizens of the United States, residing at Ripley, in the county of Brown and State of Ohio, have invented a new and useful Tobacco-Press, of which the following is a specification.

This invention relates to screw presses of that type particularly designed for use in "prizing" tobacco, and for other like purposes, and is more especially an improvement upon the structure disclosed in Patent No. 694,861 issued to L. M. Hosea on March 4, 1902.

The principal object of the invention is to provide novel means for feeding the screw during the pressing operation, said feeding means being shiftable so as to permit the screw to be pushed upwardly subsequent to such operation, thus obviating the necessity of turning the ratchet mechanism back to its initial position relative to the screw before the press can again be used.

A further object is to provide ratchet mechanism which is held against vertical movement relative to the supporting frame, means being provided whereby the screw of the press can be shifted longitudinally through said ratchet mechanism whenever desired for the purpose of effecting a quick adjustment.

Another object is to provide improved means for actuating the screw feeding element.

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings, Figure 1 is a front elevation of a press constructed in accordance with the present invention, the tobacco receptacle being shown partly broken away. Fig. 2 is an enlarged longitudinal section through the screw feeding mechanism, the swiveled base or platen being also shown in section and a portion of the screw broken away. Fig. 3 is a bottom plan view of the feed nut and the actuating shaft connected thereto.

Referring to the figures by characters of reference 1 and 2 designate standards mounted on parallel sills 3, said standards supporting a head block 4. A truck 5 is

designed to be brought into position between the sills, this truck being of any suitable construction and supporting a receptacle such as indicated at 6 and in which the tobacco or the like is to be compressed. An opening 7 extends vertically through the center portion of the head block 4 and fitted within and extending above the upper portion of this opening is a guide sleeve 8 having an annular flange 9 which bears upon and is bolted or otherwise secured to the head block. Another annular flange 10 is formed about the upper end of the sleeve 8 and constitutes the bearing for the base plate 11 of the ratchet mechanism, this plate supporting a ratchet wheel 12 which is provided with a boss 13 upon its upper face. Said boss projects into a circular opening formed within the top plate 14 of the ratchet mechanism, the said top plate being connected to the bottom plate 11 and cooperating therewith to form a socket 15 into which projects one end of a pivoted actuating lever or sweep 16. A pawl 17 is pivotally mounted between the plates 11 and 14 and is held normally in engagement with the ratchet wheel 12 by means of a suitable spring 18. The ratchet wheel 12 is feathered upon a screw 19 which is slidably mounted within the sleeve 8 and projects above the ratchet mechanism, there being a collar 20 upon the upper end portion of the screw for limiting the downward movement of said screw within the ratchet mechanism and the sleeve. A rope or cable 21 is connected to the upper end of the screw by means of swiveled members 22, this rope or cable being supported by sheaves 23 and being connected to a counter-balance 24 whereby the screw and the parts connected thereto can be readily shifted vertically.

The opening 7 communicates, at its lower end, with a recess 25 formed in the bottom portion of the head block 4. Wear strips 26 are secured to the head block along opposite sides of this recess 25 and have guide bolts 27 extending downwardly therefrom and through slots 28 formed in the ends of flanges 29. These flanges extend from the sections 30 of a split nut, the threads within said sections being designed to engage the threads upon the screws when the sections 30 are in contact as shown in Fig. 3. The said sections project into the recess 25 and are limited in their movements away from the screw by the end walls of the re-

cess. Ears 31 extend downwardly from the flanges 29 of the two nut sections each of these ears being interiorly screw threaded for engagement with the threaded portion 5 32 of a shaft 33. This shaft is provided with right hand and left hand threads for engaging the respective ears so that when the shaft is turned in one direction the nut sections will be simultaneously moved apart, 10 and, when the shaft is rotated in the other direction, the said nut sections will be drawn together and into engagement with the threads upon the screw.

A bevel gear 34 is secured to one end of 15 the shaft 33 and adjacent the standard 2, said gear meshing with another gear 35 which is secured to the upper end of a shaft 36. This last mentioned shaft is journaled in brackets 37 extending laterally from the 20 standard 2, there being a hand wheel 38 connected to the lower end of shaft 36 and whereby the same can be readily rotated. The lower end of the screw 19 is provided with a cylindrical head 39 interposed be- 25 tween the sections 40 of a presser foot or platen, said sections being detachably connected together by means of a split band 41 the ends of which are attached to each other in any preferred manner. The head 39 is 30 designed to rotate within recesses 42 formed within the sections of the platen so that the said platen can be held against rotation while the screw 19 is being revolved. The 35 platen may be secured to a head 43 designed to contact with the tobacco or other materials in the mass to be compressed.

In using the device herein described the nut sections 30 are spread apart by means of the threaded portions of the shaft 33, said 40 shaft being actuated by gears 34 and 35, and shaft 36. The nut sections are thus disengaged from the screw 19 and by pushing upwardly on the screw the same can be caused to slide within the sleeve 8 and 45 within the ratchet mechanism, this sliding motion being facilitated by the counter-balance 24. After the mass of material to be compressed, has been placed beneath the screw, the said screw can be lowered until 50 the head 43 has been forced thereby into contact with the mass. The nut sections 30 can then be adjusted toward each other and into engagement with the screw. By then shifting the ratchet mechanism by means of 55 the sweep 16 the screw 19 can be fed downwardly so as to compress the mass to a desired extent.

Upon the completion of the pressing operation the nut sections 30 can be sepa- 60 rated in the manner herein before described and the screw 19 and the parts connected thereto, shifted upwardly. It will thus be

seen that the parts can be very quickly set and a great saving of time thus effected.

The entire device is very simple, durable 65 and efficient in construction and can be easily operated.

Various changes can of course be made in the construction and arrangement of the parts without departing from the spirit or 70 sacrificing any of the advantages of the invention.

What is claimed is:—

1. A press including a supporting structure, a guide sleeve secured thereto and up- 75 standing therefrom, a screw slidably and revolubly mounted in the sleeve, ratchet mechanism supported upon the guide sleeve and including a wheel feathered upon the screw, a feed nut normally surrounding the 80 screw and made up of slidable sections, and means for simultaneously shifting the sections either into or out of engagement with the screw.

2. A press including a slidable screw, a 85 sectional feed device normally engaging the screw to hold the same against sliding movement, interiorly screw-threaded projections upon the sections of the feed device, a shaft having threaded portions mounted for rota- 90 tion within said projections, said portions being oppositely threaded, and means for rotating the shaft to simultaneously shift the sections in opposite directions to disengage the shaft. 95

3. A press including a slidable screw, a sectional feed device, guides therefor, interiorly screw threaded projections upon the sections of the feed device, a shaft mounted for rotation and having oppositely pitched 100 threads for engaging the respective projections, and means for actuating the shaft to simultaneously shift the sections of the feed device in opposite directions to release or to engage the screw. 105

4. A press including a supporting structure, a guide sleeve upstanding therefrom and secured thereto, a screw slidably and revolubly mounted within the sleeve, a 110 platen swiveled upon the screw, and ratchet mechanism supported upon the guide sleeve and above the supporting structure, said mechanism including a wheel feathered upon the screw and an operating sweep 115 movable in a circle about the screw.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

WALTER L. RUSSELL.
ROBERT L. RUSSELL.

Witnesses:

F. E. ROSS,
E. C. KIRKPATRICK.