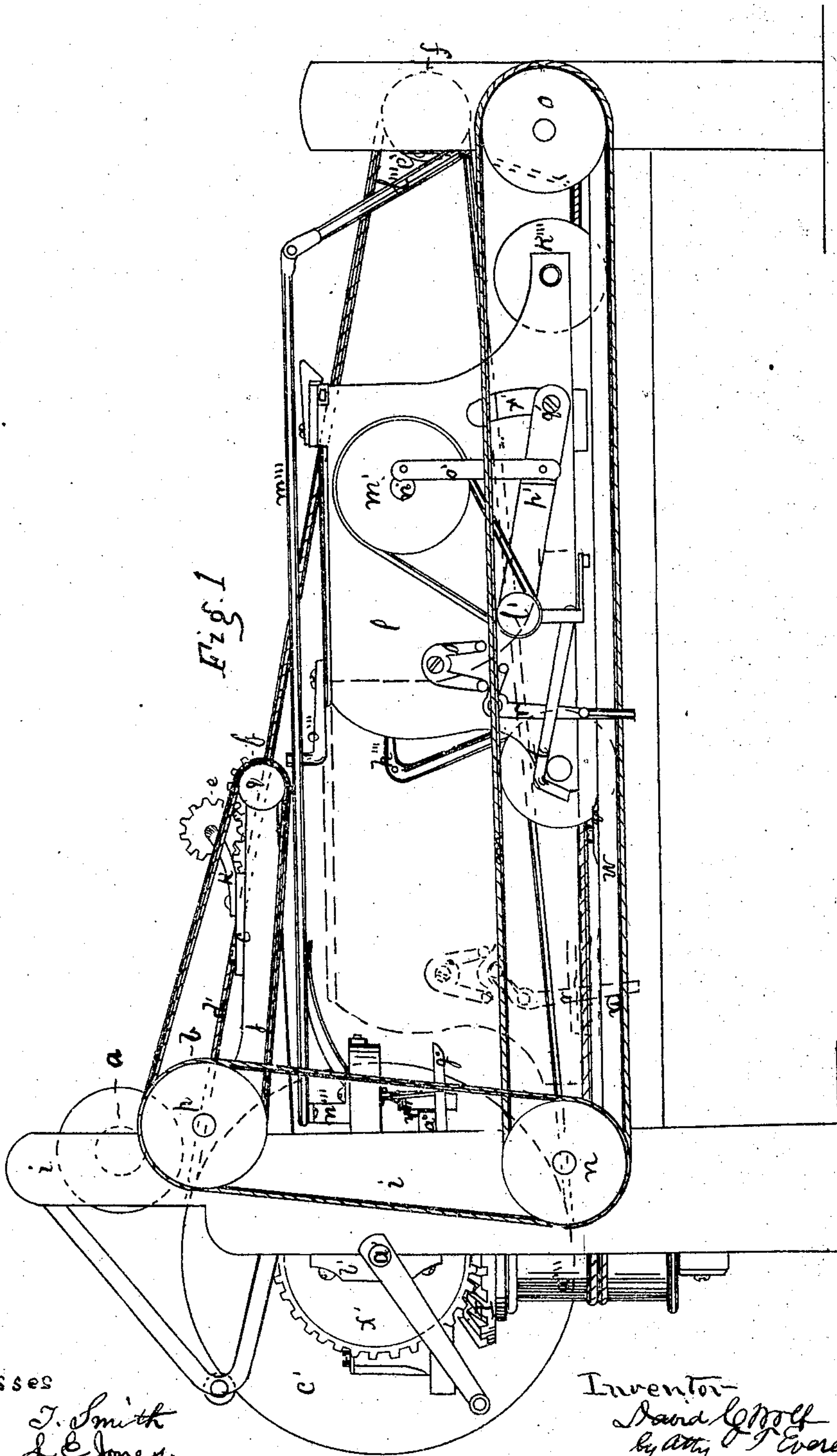


D. C. Wolf

Spinning Machine

No. 75232

Patented March 3. 1868



Witnesses

J. Smith
L E Jones.

Inventor—

David Lyndell
by atty J Everett

D. C. Wolf
Spinning Machine

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Fig. 4.

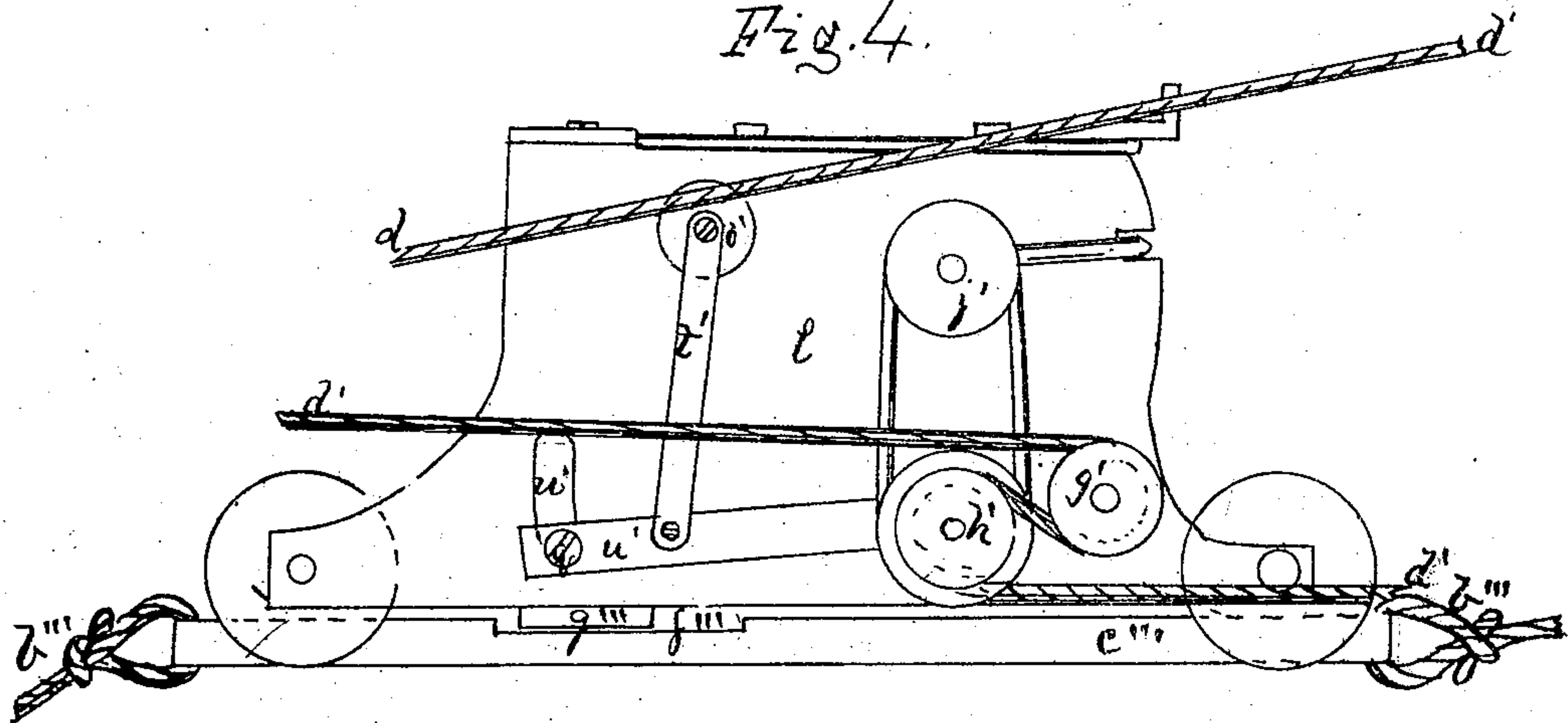
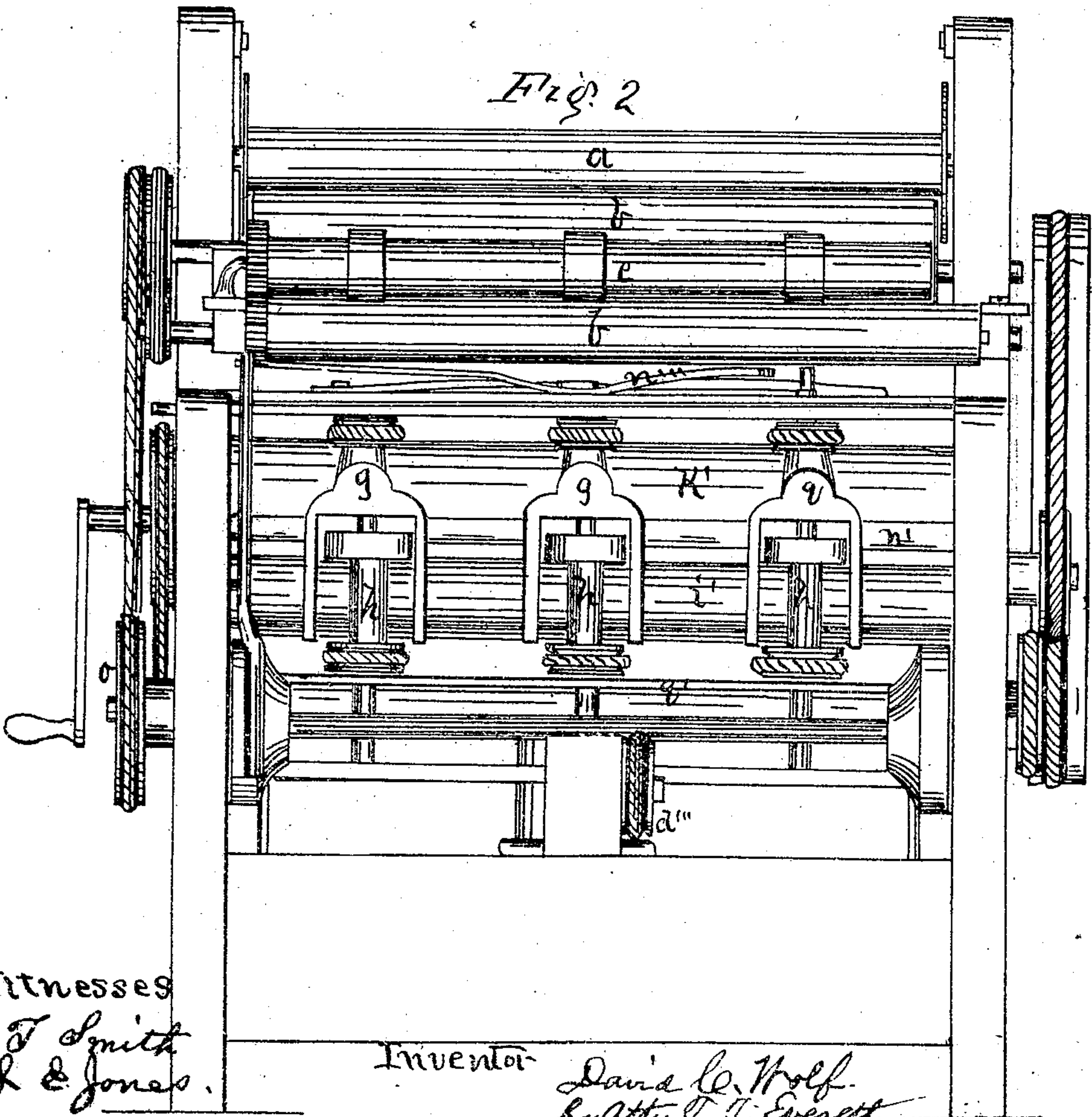


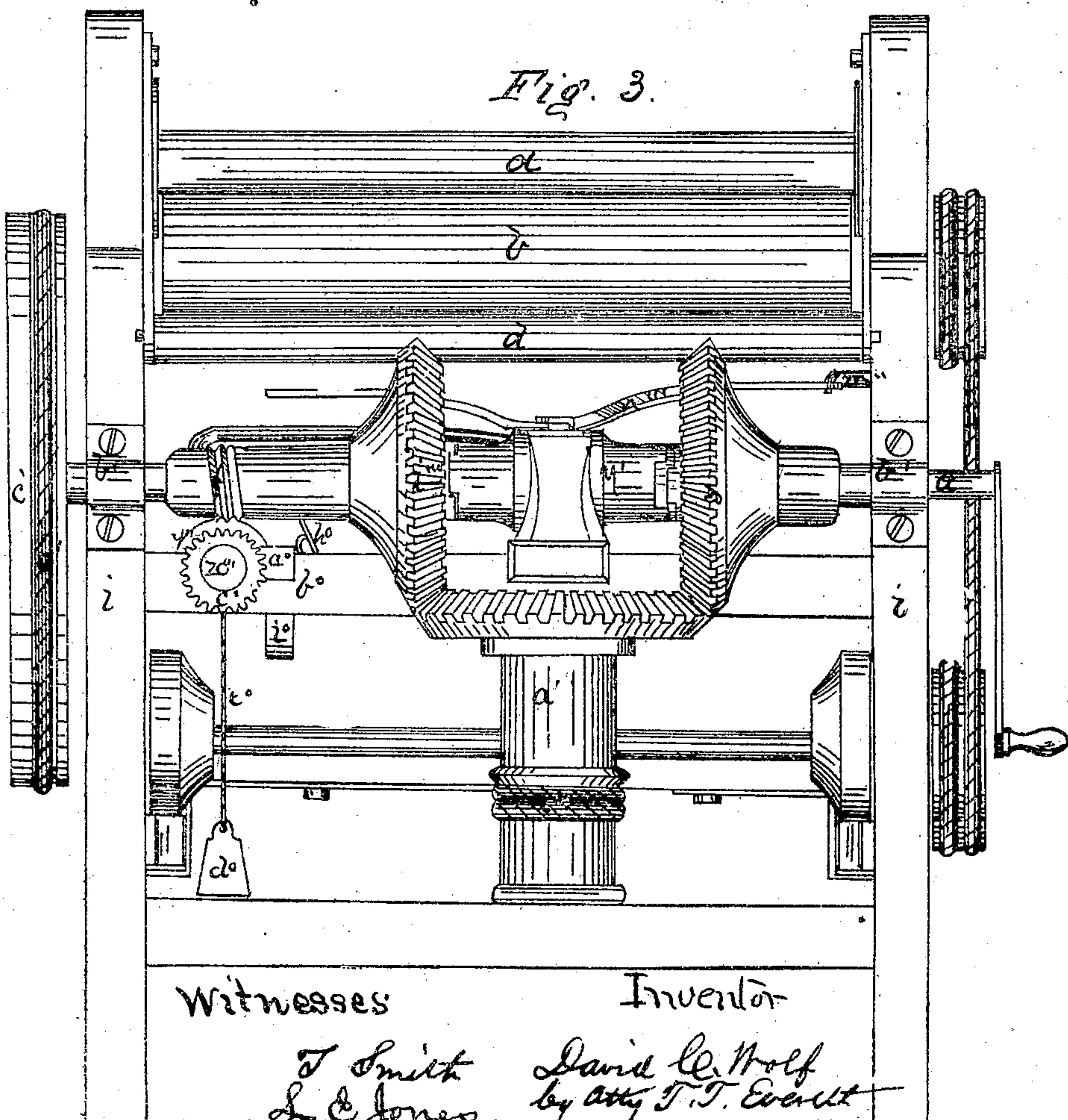
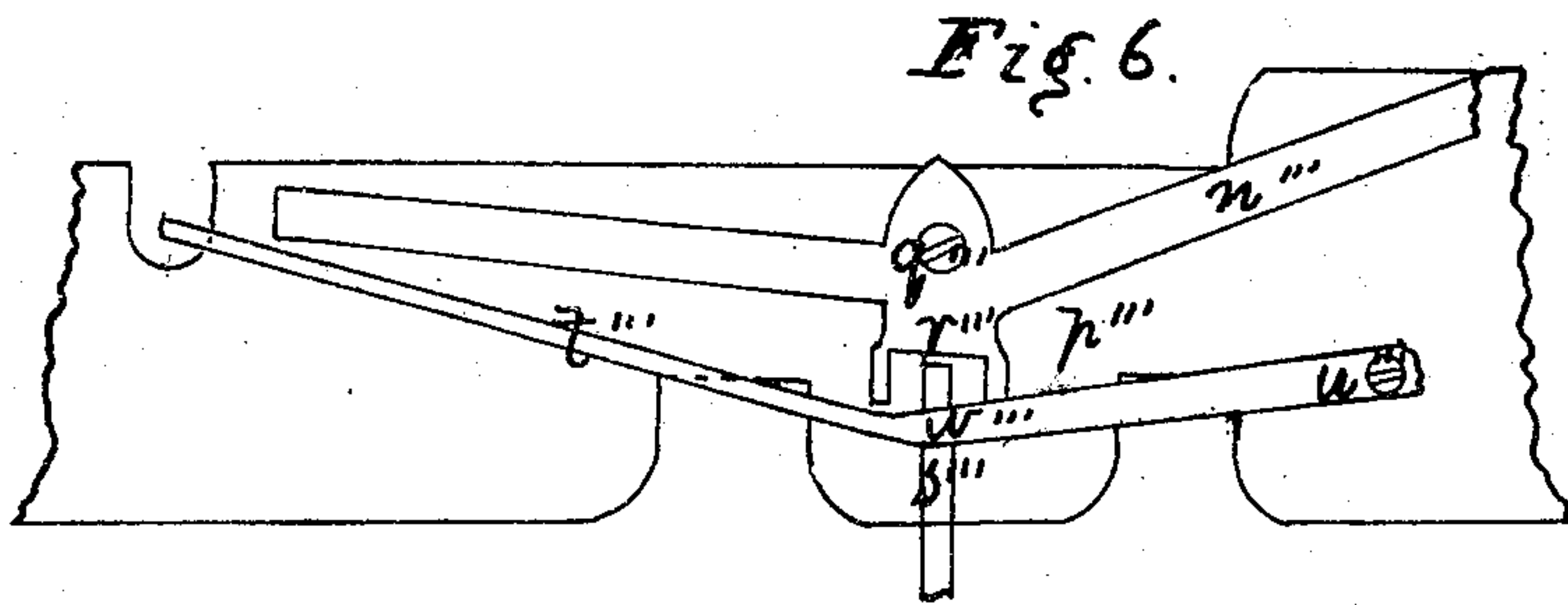
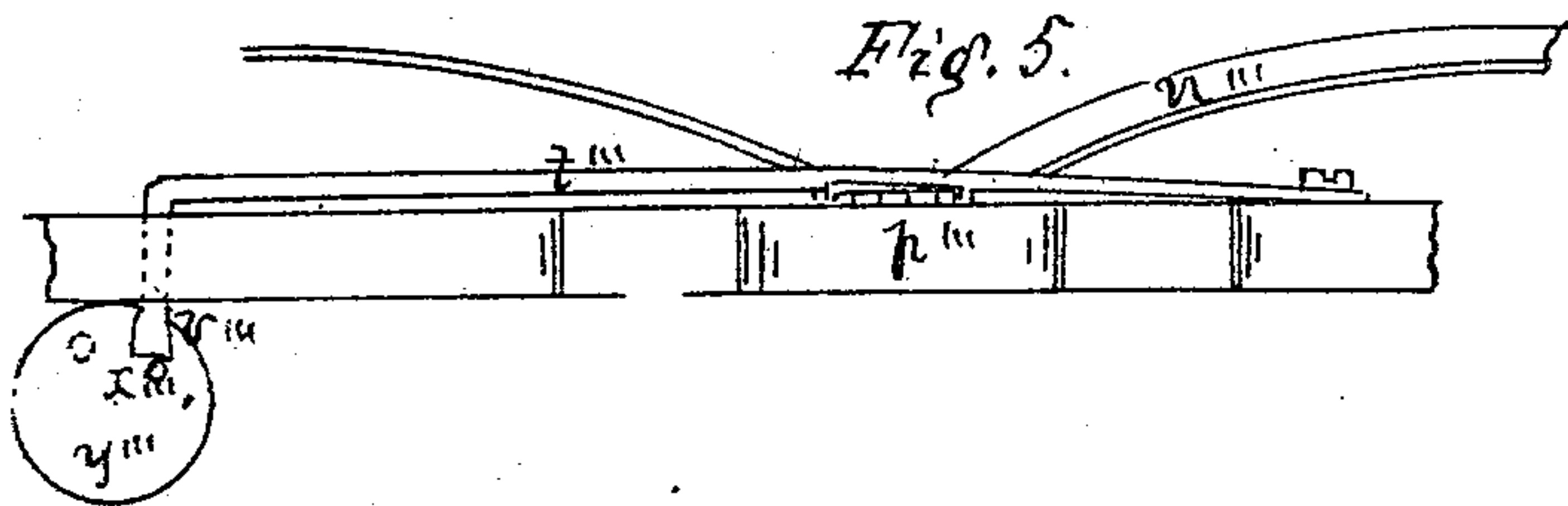
Fig. 2



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Inventor *Daniel C. Wolf.*
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D. C. Wolf
Spinning Machine
No. 75232. Patented March 3. 1868



United States Patent Office.

DAVID C. WOLF, OF SOUTH ENGLISH, IOWA.

Letters Patent No. 75,232, dated March 3, 1868.

IMPROVEMENT IN SPINNING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, DAVID C. WOLF, of South English, in the county of Keokuk, and State of Iowa, have invented a certain new and useful Improvement in Spinning-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters and marks thereon, which said drawings form part of this specification, and represent a spinning-machine with my improvement as a part thereof—

Figure 1 being a side view of the machine,

Figure 2 a back end view of the same,

Figure 3 a front end view, and

Figures 4, 5, and 6, views of the machine which will hereafter be explained.

In each of these figures like parts are indicated by like marks and letters.

The rolls from which the yarn is to be spun are fed to the machine between the rollers *a* and *b*, over the table *c*, to and between the rollers *d e f*, and thence forward to the spindles *g* and spools *h*. These rollers have suitable bearings in the standard *i*, bar *j*, and by arms *k* in the table *c*. Motion is given to these feed-rollers during a certain portion of the forward movements of the carriage *l*, by a cord or band, *m*, passing around the pulleys *n* and *o*, a like cord passing from around pulley *p* to the pulley *q*. The pulley *q* is on the end of the shaft of roller *f*. Rollers *d* and *e* have pinions, that of *e* gearing into that of *d*, while that of *e* also gears into the pinion of the roller *f*. The feed of these rollers occurs only while the cord *m* is clamped by the lever *r* and the fork *s*, as is indicated by the red lines of fig. 1. The clamping and liberating of the cord *m* is brought about by the lever *r*, and fork *s*, lever *t*, pin *u*, and plate *v*. Thus, when the carriage is travelling towards the front part of the machine, the lower end of the lever *r* comes against the pin *u*, which forces the upper end of the lever against the cord, and carries the cord up into the fork. Lever *t* is a spring-lever, acting upon lever *r*, and binding that lever against the cord. As the carriage is travelling from the front to the rear of the machine, the end of the lever *t* comes against the outer edge of the plate *v*, which edge is elliptical, and by this plate the lever *t* is forced outward, and the lever *r*, by this movement being released, drops and ceases its binding on the cord *m*. The plate *v* is attached to the bar *w* by a screw, and may readily be fixed at any point on the bar, so that the clamping of the cord *m* may be for a longer or shorter period, and thus the feed-rollers be in motion for a greater or lesser length of time, and the spinning be made coarser or finer, as may be desired. The lever *t* is shown in black lines in fig. 1 somewhat more elevated than it will be at any time, and it is thus shown raised only to make it more distinct.

The crank-shaft *a'* has its bearings *b'* on the standards *i*. A pulley or wheel, *c'*, is affixed to the outer end of the crank-shaft. A band or cord, *d'*, passes around this pulley, and around the pulley *e'* on the standard *j'*, thence around the pulley *g'* on the carriage *l*, (see fig. 4,) thence around the pulley *h'* of the roller *i'* to the pulley *c'*. From the pulley *h'* a cord passes to and around the pulley *j'* of the roller *k'*. Through this set of pulleys the spindles and spools are rotated; the first by cords from the roller *k'*, and the second by cords from the roller *i'*. A pulley, *l'*, (see fig. 1,) on the other end of the roller *i'*, has a cord passing around it, and around the pulley *m'* of the rod or shaft *n'*, by which this shaft is rotated. An arm, *o'* passes from the pulley *m'* to a vibrating-lever, *p'*, which lever is attached to the spool-bar *q'*. The ends of the spool-bar pass through slots *r'* and *w'* in the sides of the carriage. On the opposite end of the rod or shaft *n'* is a disk, *s'*, with arm *t'*, and which is connected with the vibrating-lever *u'*, attached to the spool-bar *q'* at that end, through a like slot, *w'*, in the side of the carriage. The arms *o'* and *t'* act as crank-arms, and through the means here recited the spool-bar and spools are raised and let down.

The carriage *l* is moved forward when the bevelled wheel *x'* is in gear with the clutch *y'*, bevelled wheel *x'* then rotating the horizontal bevelled wheel *z'* on the vertical drum *a'''*. A cord, *b'''*, is attached to the front end of the bar *c'''*, and passes around the drum *a'''*, thence around the vertical pulley *d'''* to the back end of the bar *c'''*. This bar is notched or recessed at *f'''*, and is held against the bottom bars *g'''* or frame of the carriage by suitable means. This notch *f'''* allows some play of the bar at the commencement of the action for the movement of the carriage, by which the tooth of the bar *h'''*, the lower end of which is inserted in a hole or slot in the bar *c'''*, and its fulcrum being between this point and the tooth, is moved out from the recess

of the roller k' during the forward movement of the carriage, and into the recess of that roller during the backward movement of the carriage, so that the roller k' which operates the spindles is not in motion when the carriage is on its return.

The carriage is moved backwards when the bevelled wheel i''' is in gear with the clutch y' , the changing of the clutch from the one bevelled wheel to the other being produced at the end of the forward movement of the carriage by the wheel k''' of the carriage-frame coming against and operating the lever l''' , which, by the rod m''' , moves the forked bar n''' in one direction, and at the end of the backward movement of the carriage by the projecting bar o''' on the top of the carriage acting against the other arm of the forked bar, and moving it in the other direction. The forked bar n''' is pivoted to the table p''' at q''' , (see fig. 6.) The extension-piece r''' is notched, and embraces the end of the lever s''' , which moves the clutch y' . A spring-bar, t''' , secured at the one end, u''' , passes across the lever s''' , its end v''' turning down, as indicated at fig. 5. This spring-bar t''' is recessed at w''' , so that the movement of the lever s''' is restricted at the return movement of the carriage until this lever is liberated from the recess w''' by the elevating of the spring-bar t''' , which liberation is produced by the pin x''' elevating the end v''' . This elevation will occur sooner or later, due to the position of the pin in the wheel y''' , which position may be changed either by putting the pin in a different part of wheel, or by changing the relative position of the wheel to the end of the spring-bar. The wheel y''' is on the inner end of a shaft, z''' , which has its bearings in an oscillating or rocking-box, a° , the box being connected to the bar b° . On the outer end of the shaft z''' is a toothed wheel, c° , to which is attached a weight, d° , by a cord, e° , the wheel c° when in gear being moved or rotated by the screw-threads f° of a barrel or collar, secured to the shaft a' . A pin, g° , projects inwards from the inner end of the box a° . In the rotation of the shaft a' , while the carriage is travelling forwards and backwards, the screw-threads f° fit in the teeth of the wheel c° , a spring, h° , forcing the inner end of the box a° downwards, and its outer end upwards, thus keeping the screw-threads and wheel in gear, and in this rotation the weight is wound up and the pin x''' carried around and under the end v''' of the spring-bar t''' . The shaft a' continuing to rotate, the twisting of the thread will continue. The pin x''' elevates the end of the spring-bar, and liberates the lever s''' , and allows the forked bar n''' free operation, so that the clutch is transferred from the wheel i''' to the wheel x' for the advancing movement of the carriage, just previous to which the wheel i° passes under the projecting pin g° , tilting the box a° , and ungearing the wheel c° and screw-threads f° . The twisting of the thread will therefore be more or less due to the period of time that the shaft is rotating and the carriage at rest, which condition will be regulated by the earlier or later action of the pin x''' on the end v''' of the spring-bar t''' .

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the fork s , levers t and r , plate v , and pin u , for clamping and liberating the cord, substantially as and for the purpose herein recited.

2. I claim the bar h''' , operated by the bar c''' , for holding the roller k' , as and for the purpose herein described.

3. I claim the wheel y''' , having the pin x''' , and the other means and devices connected therewith, substantially as described for the purpose herein recited.

This specification signed this 4th day of April, 1867.

DAVID C. WOLF.

Witnesses:

LEANDER S. BLAIR,
JAMES H. WOLF.