

No. 698,918.

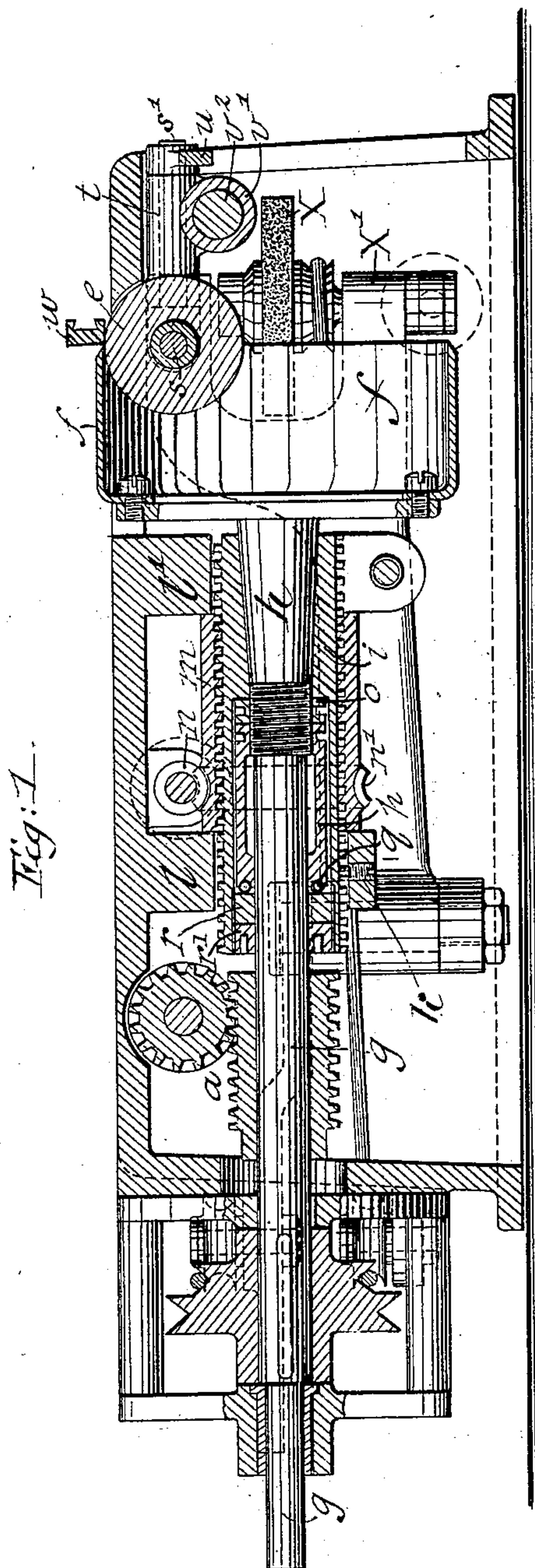
Patented Apr. 29, 1902.

B. FISCHER.  
MACHINE FOR SKIVING LEATHER.

(Application filed Sept. 24, 1901.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

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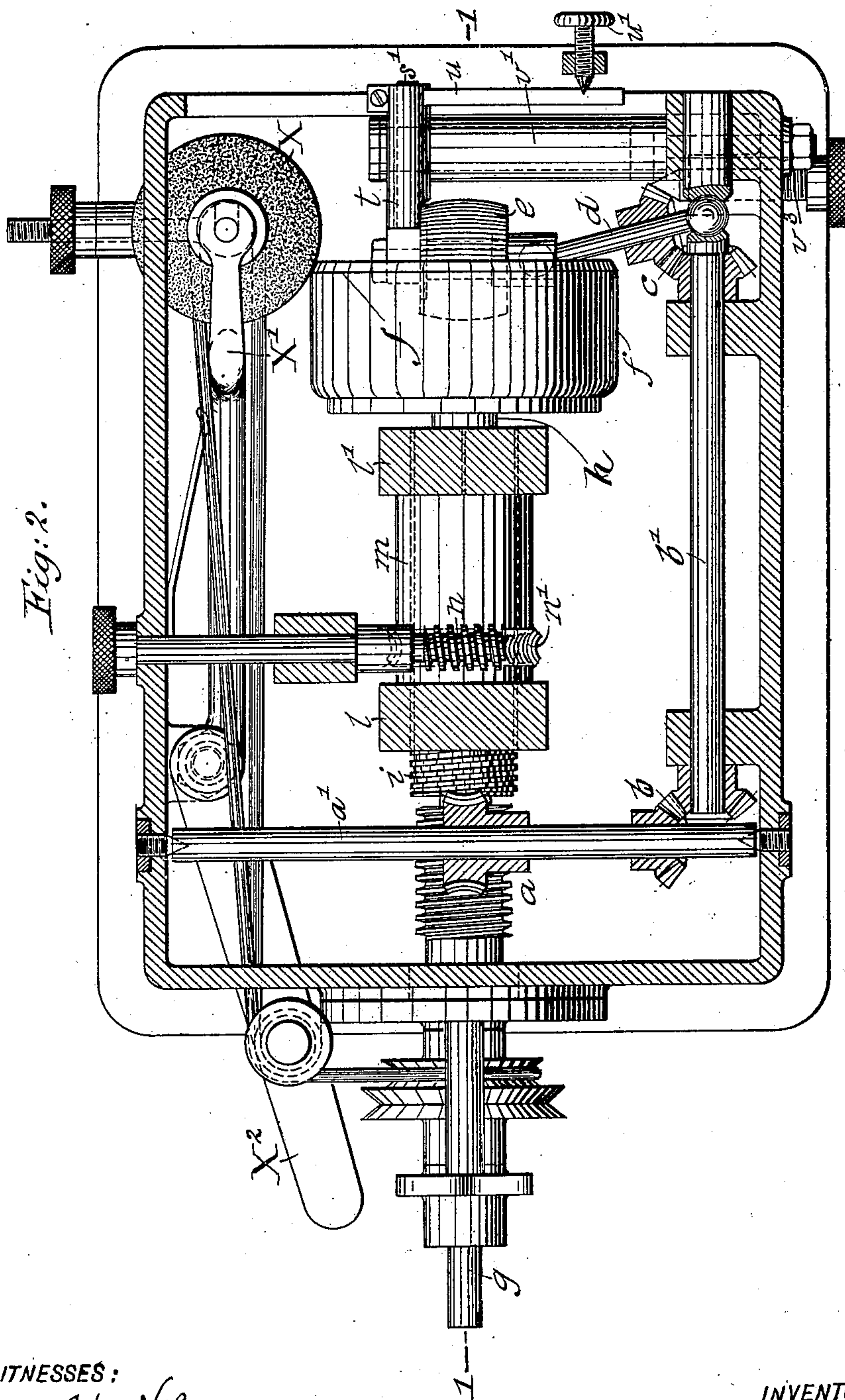
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3 Sheets—Sheet 2.



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Fig. 3.

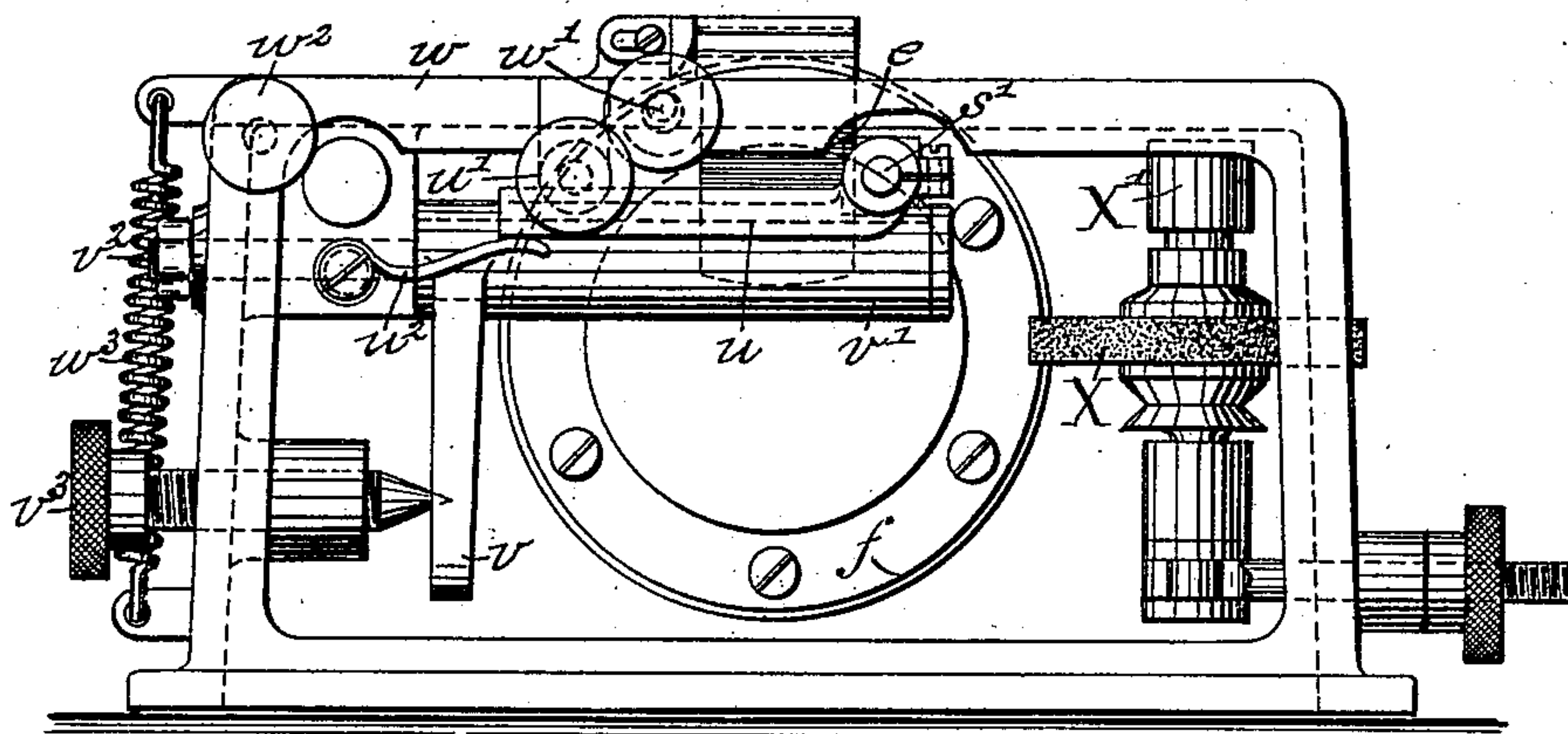


Fig. 4.

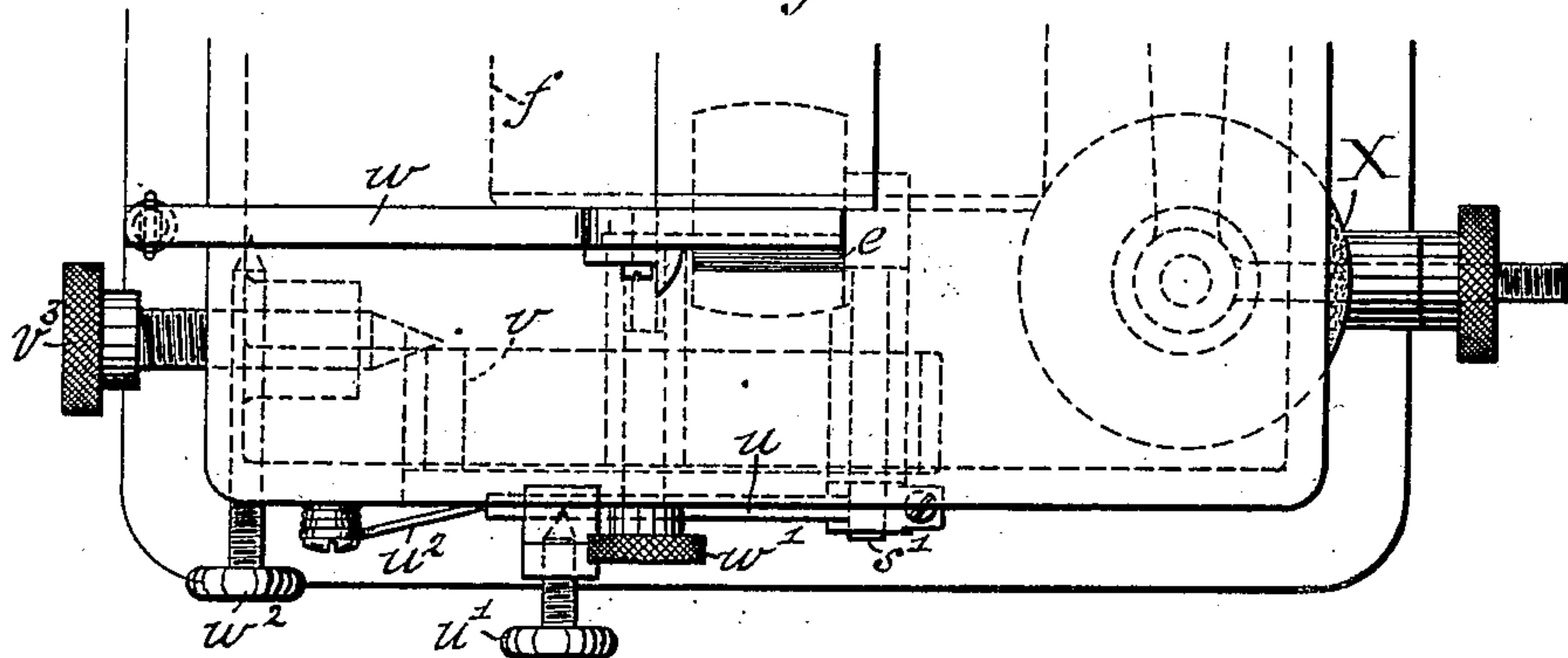


Fig. 5.

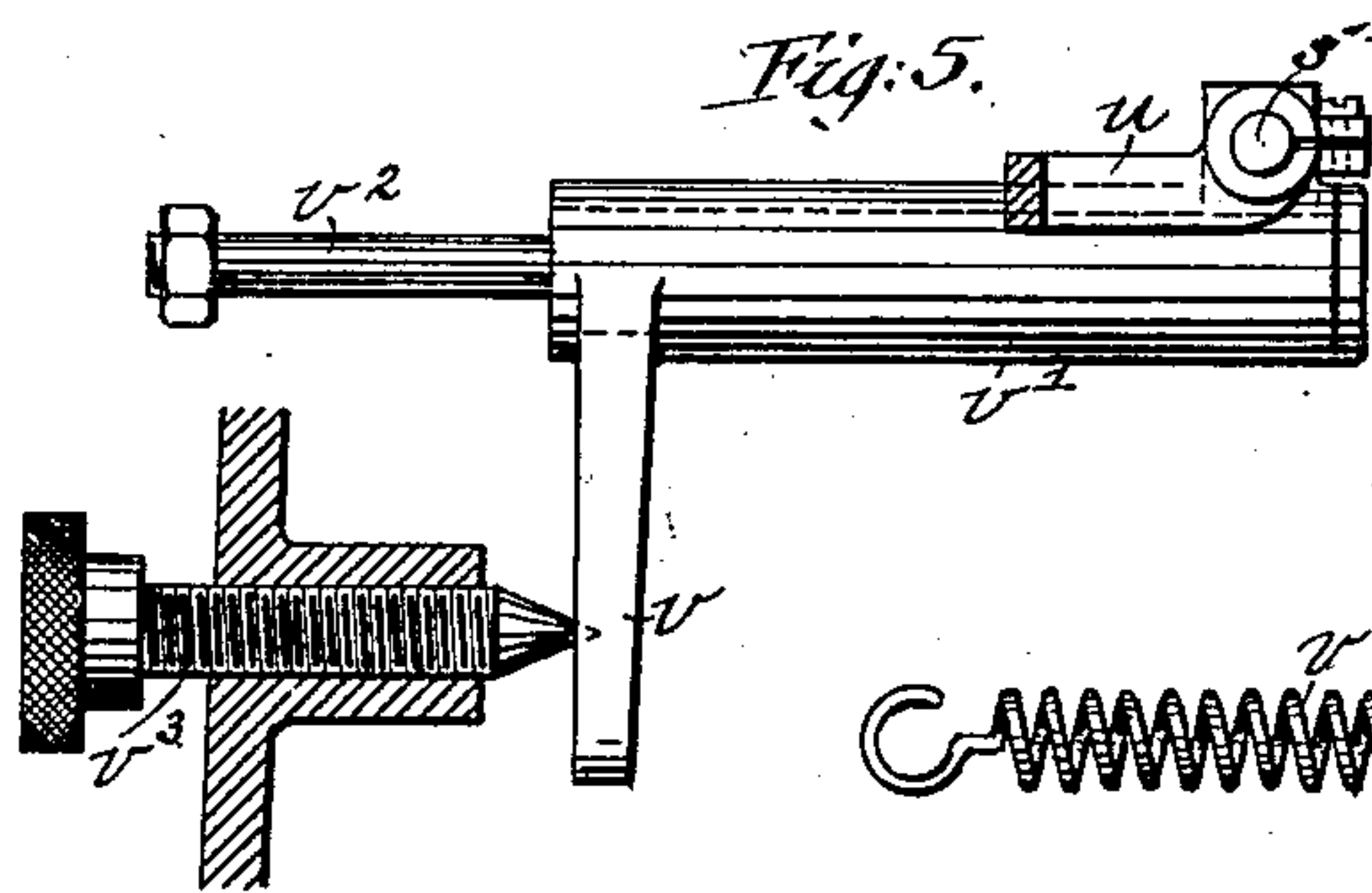


Fig. 6.

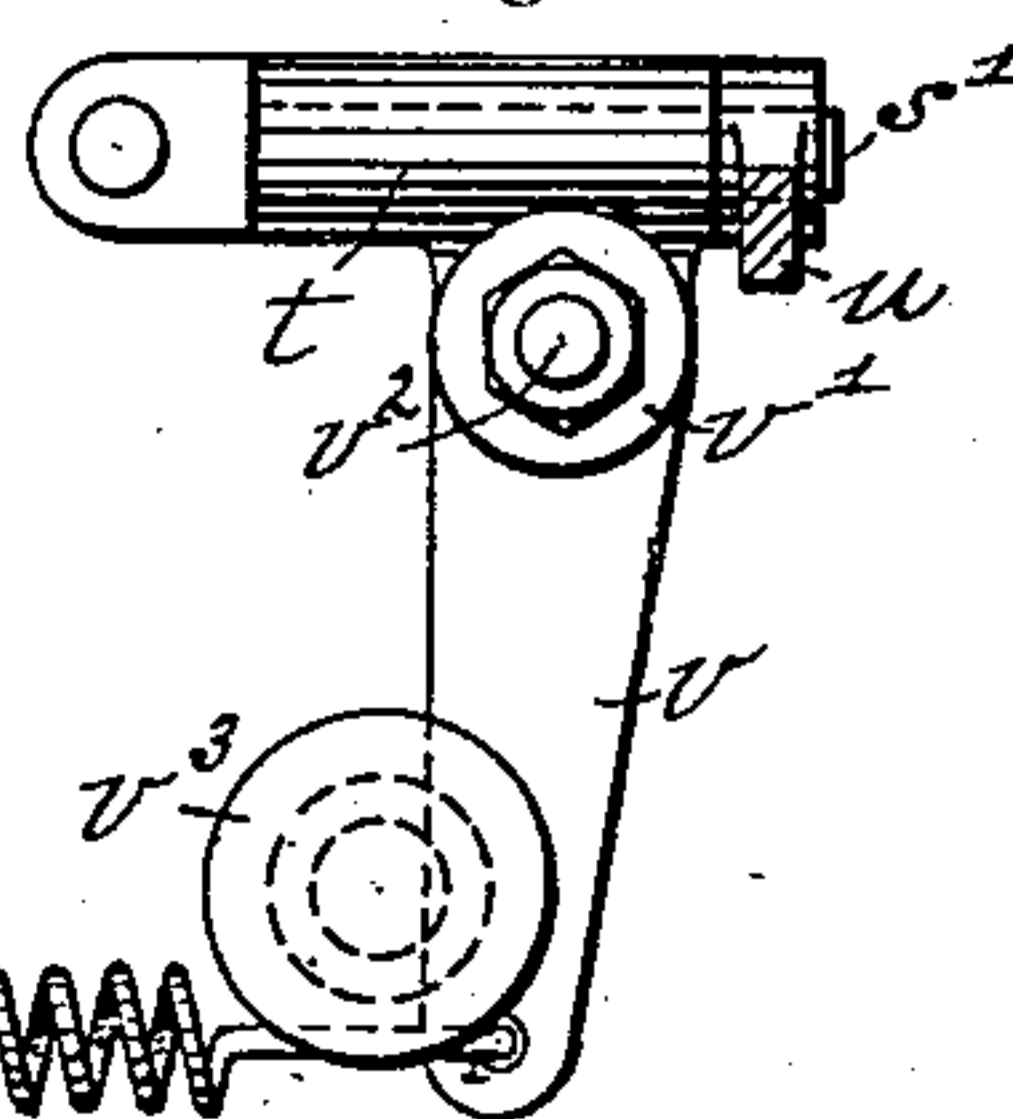


Fig. 7.

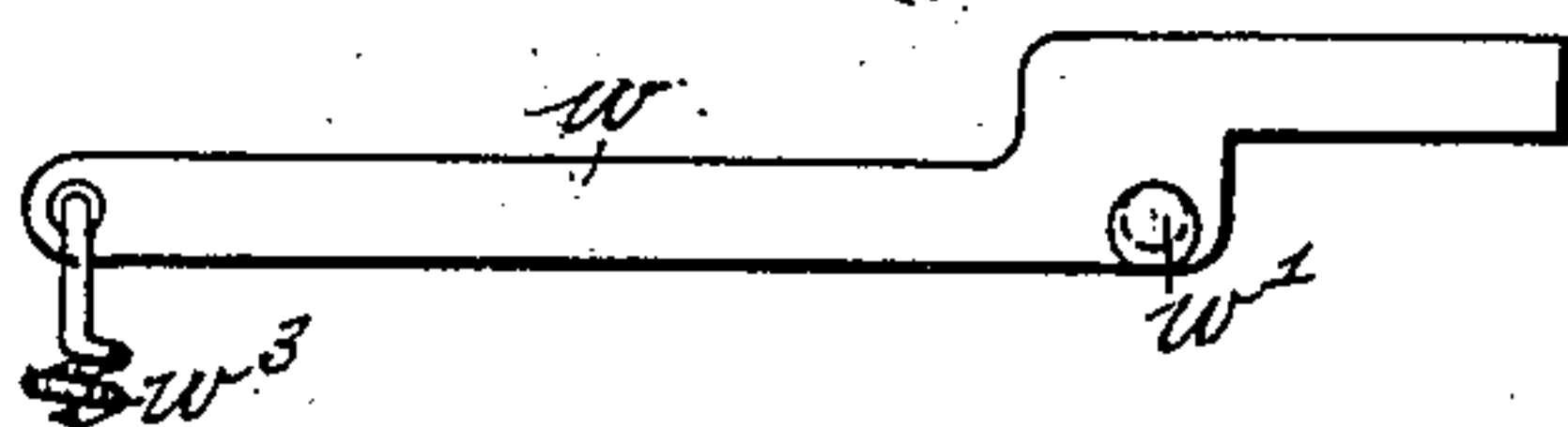
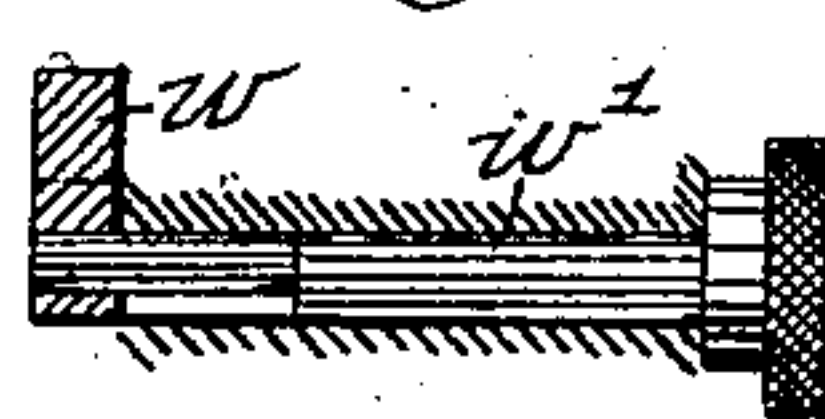


Fig. 7^a.



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# UNITED STATES PATENT OFFICE.

BENNO FISCHER, OF CANNSTADT, GERMANY.

## MACHINE FOR SKIVING LEATHER.

SPECIFICATION forming part of Letters Patent No. 698,918, dated April 29, 1902.

Application filed September 24, 1901. Serial No. 76,334. (No model.)

*To all whom it may concern:*

Be it known that I, BENNO FISCHER, a citizen of the Empire of Germany, residing in Cannstadt, in the Kingdom of Württemberg and Empire of Germany, have invented certain new and useful Improvements in Machines for Skiving Leather, of which the following is a specification.

This invention relates to certain improvements in the machine for skiving leather for which Letters Patent of the United States were granted to me on May 28, 1901, No. 675,206; and it consists of certain novel details of construction and combinations of parts whereby the feed-roller is positively actuated from the main shaft of the machine and the skiving-knife adjusted thereon relatively to the said feed-roller, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section through my improved machine for skiving leather on line 1 1, Fig. 2. Fig. 2 is a horizontal section of the machine immediately below the table. Fig. 3 is an end elevation of the machine, showing an edge view of the ring-shaped skiving-knife. Fig. 4 is a plan view of Fig. 3. Figs. 5 and 6 illustrate in side and end view details of the adjusting mechanism for the feed-roller. Figs. 7 and 7<sup>a</sup> are side and end details, respectively, of an adjustable guide mechanism.

Similar letters of reference indicate corresponding parts.

In skiving-machines of this class heretofore constructed the feed-roller, located at the interior of the knife, was rotated by means of a pulley-and-cord transmission. This means, while it answered the purpose, was, however, not sufficiently reliable, inasmuch as it permitted interruptions in the motion of the feed-roller, due to gliding of the cord, &c. My improvement consists in substituting for the pulley-and-cord transmission a means for positively and reliably actuating the feed-roller, so that the leather is always reliably fed forward to the knife.

In the drawings, *a* indicates a worm-gear transmission, the worm of which is located on the shaft *g*.

*a'* is the gear-shaft, *b* gears connecting the

same with an intermediate shaft *b'*, and *c* a movable gear transmission to the shaft *d*, which is connected by a universal ball-and-socket joint with the shaft of the feed-roller *e*. The ring-shaped knife *f* and its shaft *g* are shiftable toward the feed-roller *e*. This is accomplished as follows: The shaft *g* turns in a sleeve *i*, which is provided with a groove and prevented against turning on its axis by a set-screw *k*, which is located in the journal-bearing *l*. The sleeve *i* is provided with an exterior screw-thread, on which turns a screw-nut *m*. This nut is located between the journal-bearings *l* and is thereby prevented from longitudinal shifting motion in the direction of the axis of the shaft *g*. When the screw-nut *m* is, however, turned by means of a worm-gear *n n'*, the sleeve *i*, together with the shaft *g* and the ring-shaped knife *f*, is shifted on the axis of the shaft *g*. The ring-shaped knife *f* can therefore be moved toward the feed-roller *e* or moved away from the same. The shifting of the shaft *g* on its sleeve *i* is accomplished by making the end of the sleeve *i* of a conical shape at its interior, into which the correspondingly-turned-off end of the shaft is fitted and on which the sleeve *i* is retained firmly by a screw-nut *o*, as shown in Fig. 1. In order to prevent the shaft from becoming wedged in the conical recess of the sleeve *i*, an adjusting device is provided at the opposite end of said sleeve, which consists of a sleeve *p*, seated in the sleeve *i* and abutting against the screw-nut *o* at one end. At the opposite end is provided the screw-nut *r*, which has inserted between it and the sleeve *p* the antifriction-balls *q*. The screw-nut *r* engages the internal-screw-threaded surface of the sleeve *i* and is secured by the jam-nut *r'*.

The motion-transmitting mechanism adjacent the feed-roller *e* is so constructed as to permit a radial adjustment of the feed-roller while the same is either in horizontal or inclined position, so that the feed-roller can be adjusted in relation to the knife *f* to permit the skiving-machine to be used for splitting the leather as well as for skiving.

The feed-roller *e* is supported on a shaft *s*, which is applied to an arm *s'*, located at right angles thereto and which turns in a sleeve *t*. To the opposite end of the arm *s'* is applied a lever *u*, upon the upper side of which bears



the conical end of a set-screw  $u'$ , against which the lever  $u$  is pressed by a spring  $u^2$  at its under side. By this construction and the movable construction of driving mechanism for the feed-roller already described it is possible to move the feed-roller  $e$  at one side farther from the edge of the knife than from the other, so that the size of the wedge-shaped shaving can be changed in accordance with the changing thickness of the leather.

For using the machine for splitting leather the feed-roller must be capable of adjustment radially of the knife within the same, so as to be set at the proper distance from the cutting edge. This is accomplished by a lever  $v$ , which is secured at right angles to a sleeve  $v'$ , which is located on an arm  $v^2$ ; said sleeve  $v'$  supporting the sleeve  $t$  of the arm  $s'$ , which is located at right angles to the same. The shaft  $s$  of the feed-roller  $e$  is therefore parallel to the sleeve  $v'$ . The feed-roller  $e$  is adjusted radially to or from the knife  $f$  by the turning of the sleeve  $v'$ . The turning of the lever  $v$  is accomplished by a screw  $v^3$ , the conical end of which bears against one side of the same, a spring  $v^4$ , as shown in Fig. 6, retaining the lever in contact with said screw.

For accurately guiding the leather that is to be worked toward the cutting edge of the knife the guide-piece  $w$  is provided, which is pivotally mounted on the shifting pin  $w'$  at a suitable relation to the knife. This horizontal guide piece or arm  $w$  is capable of vertical or inclined adjustment by being supported, adjacent one end, on the conical end of the adjusting-screw  $w^2$  in addition to its being mounted on the eccentric of the shifting pin  $w'$ . For the vertical adjustment of the guide-piece the adjusting-screw  $w^2$  and the shifting pin  $w'$  are turned successively; but for the inclined adjustment of the guide-piece  $w$  it is simply necessary to operate the adjusting-screw  $w^2$  so as to raise the outer end thereof, which rests on the conical point of said screw. The guide-piece  $w$  is controlled by the spring

$w^3$ , tending to retain the same in normally-horizontal position.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a machine for skiving leather, the combination, with a ring-shaped knife, of a feed-roller, a shaft supporting the same, a second shaft connected at an angle with the first, a sleeve connected at an angle with the bearing of said second shaft, adjusting means connected with said second shaft, and adjusting means connected with said sleeve, substantially as set forth.

2. In a machine for skiving leather, the combination, with a ring-shaped knife and a feed-roller, of a guide-piece, and means for adjusting said guide-piece horizontally or obliquely to said feed-roller, substantially as set forth.

3. In a machine for skiving leather, the combination, with an annular skiving-knife and means for rotating the same, of a feed-roller provided on an adjustable shaft, a horizontally-arranged guide-piece, means for adjusting said guide-piece in inclined position to said skiving-knife, and means for adjusting said feed-roller in parallel position with said guide-piece, substantially as set forth.

4. In a machine for skiving leather, the combination, with an annular skiving-knife provided with a conical spindle, of a driving-shaft having a conical socket for said spindle, a threaded sleeve fixed on said driving-shaft, a screw-nut for engaging said threaded sleeve, and a worm-gear for rotating said screw-nut to impart longitudinal motion to said shaft and skiving-knife, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

BENNO FISCHER.

Witnesses:

JULIUS HOGGER,  
JULIUS HEIM.