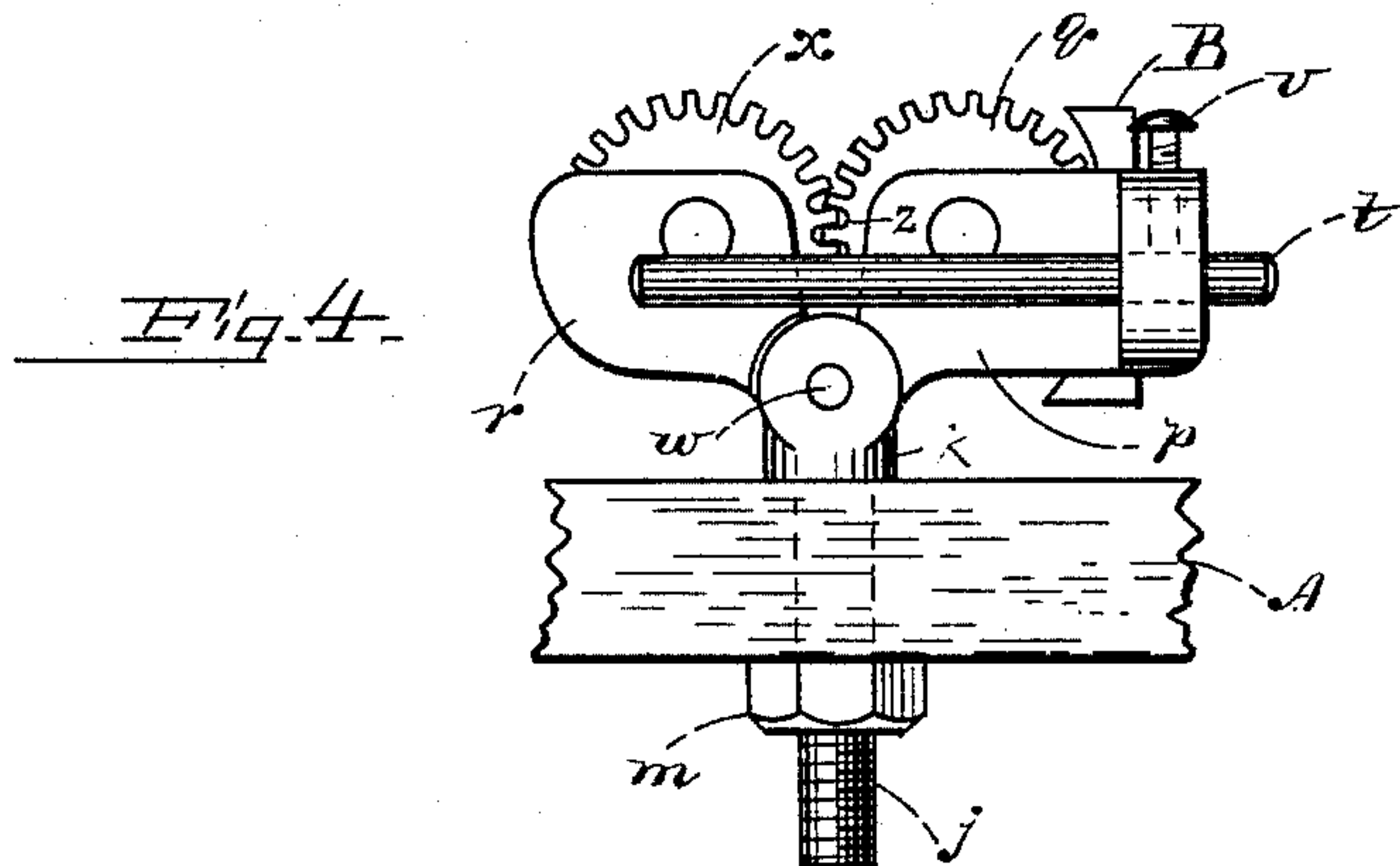
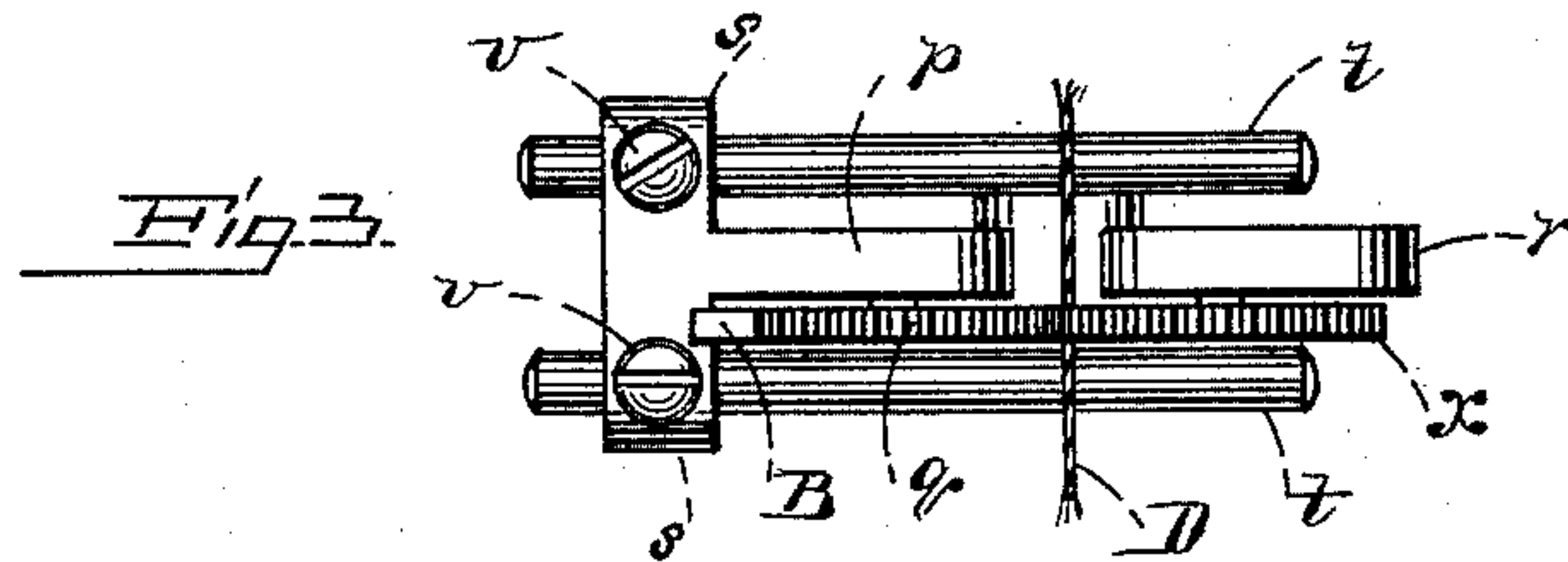
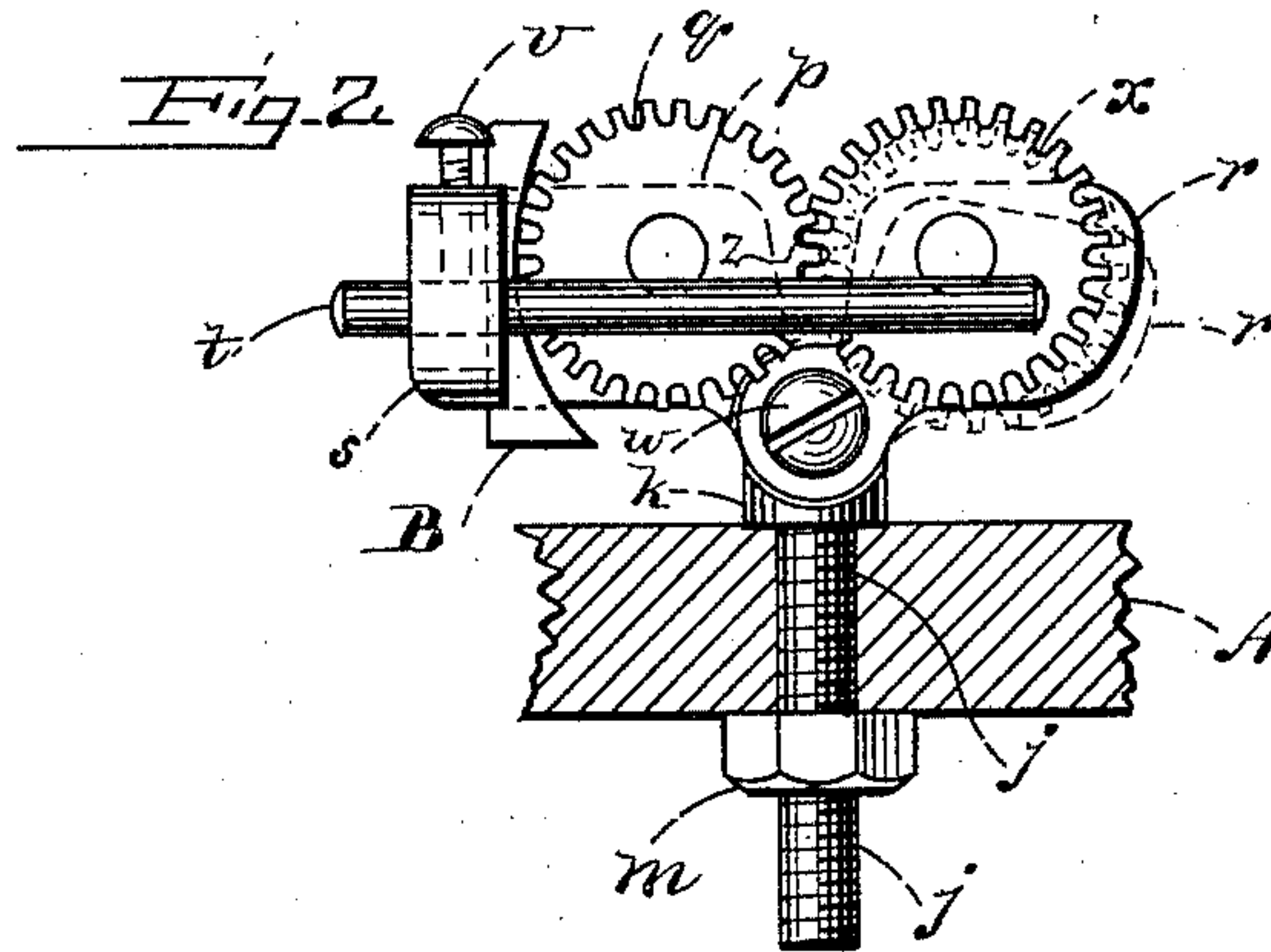
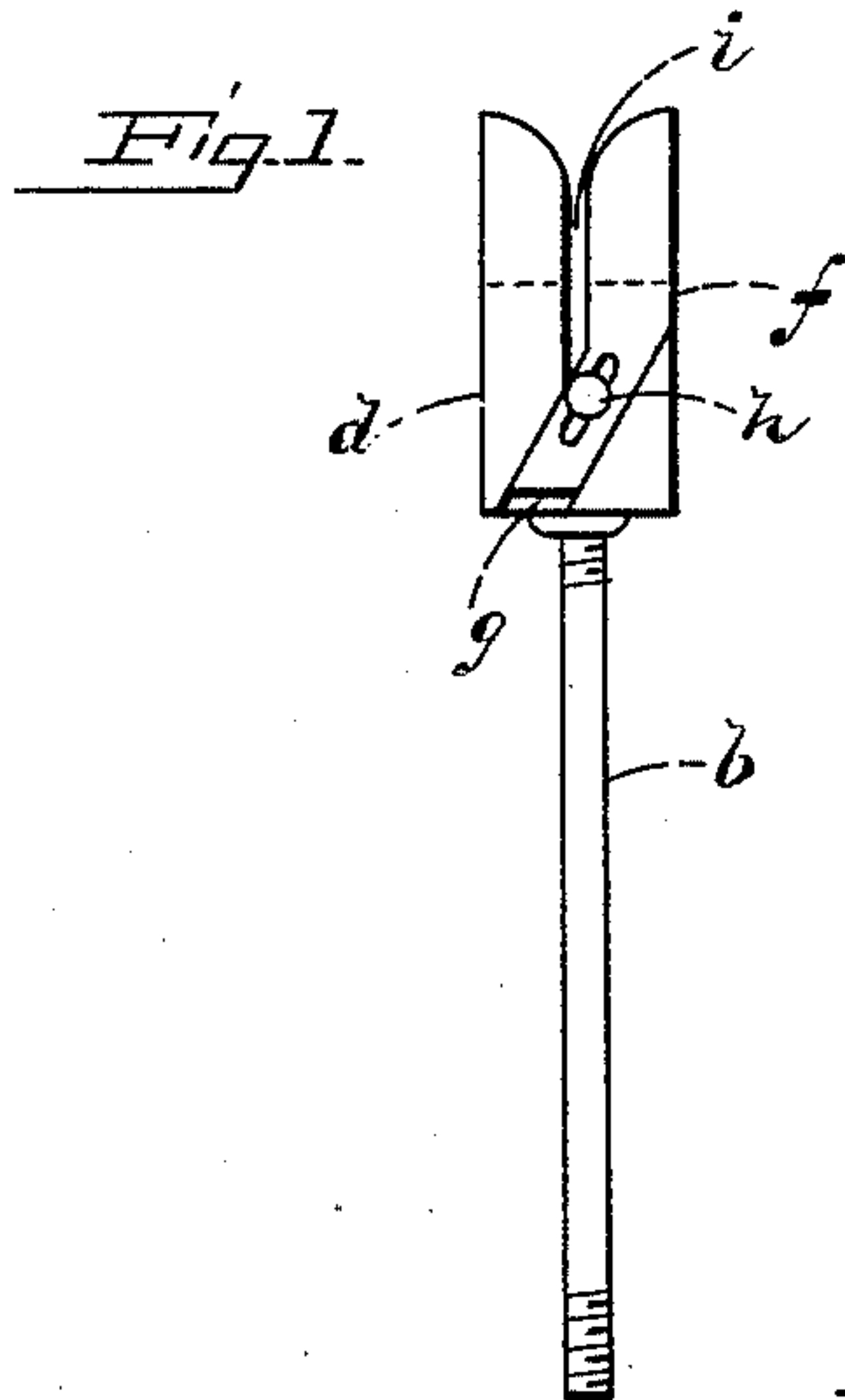


(No Model.)

J. M. WEAVER.
YARN CLEARER.

No. 477,031.

Patented June 14, 1892.



WITNESSES=
Ernest C. Kimball
H. Surfer

INVENTOR=
Julius Myron Weaver
PER *C. A. Shaw* ATT'Y-S.

UNITED STATES PATENT OFFICE.

JULIUS MYRON WEAVER, OF ASHLAND, MASSACHUSETTS.

YARN-CLEARER.

SPECIFICATION forming part of Letters Patent No. 477,031, dated June 14, 1892.

Application filed January 25, 1892. Serial No. 419,139. (No model.)

To all whom it may concern:

Be it known that I, JULIUS MYRON WEAVER, of Ashland, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Yarn-Clearers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation showing a form of yarn-clearer in ordinary use; Fig. 2, a side elevation of my improved yarn-clearer; Fig. 3, a top plan view of the same represented as in use, and Fig. 4 an elevation showing the side opposite that shown in Fig. 2.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates especially to a device for removing the nubs or knots from yarn before use in weaving or spinning; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

Yarn-clearers as ordinarily constructed consist of two knife-edged blades mounted in the same plane, leaving a space or slot between them through which the yarn is drawn to remove the imperfections or projections thereon. The form shown in Fig. 1 consists of a standard *b*, on which a blade *d* is mounted, a companion blade *f* being adjustable vertically in a groove *g* in said blade *d* by means of a set-screw *h*, the space *i* between said plates being utilized to draw the yarn through. The work performed by this device is very imperfect, the yarn frequently slipping out from the top of the slot and necessitating the expenditure of much time and trouble in replacing it. My improvement overcomes this and other objections.

The body of my improved device consists of a threaded bolt or standard *j*, on the upper

end of which is formed a flange or shoulder *k*, adapted to rest upon a bench *A*, through which said bolt passes. A nut *m*, turned onto the lower end of the bolt, clamps the standard firmly in position. A laterally-projecting plate or wing *p* is formed on the upper end of the standard, and a gear *q* is fitted to rotate on one face of said plate. From the outer end of the wing *p*, at either side thereof, arms *s* project laterally, and through each of said arms a horizontally-arranged rod *t* passes, said rods serving as guides for the yarn. The rods are adjustable longitudinally in the arms *s* and are held in position by set-screws *v*, passing through the top thereof. A vertically-adjustable wing or plate *r* is pivoted by means of a set-screw *w*, passing into the head *k* of the bolt *j*, said plate being fitted to swing vertically in the same plane as the wing *p*. A gear *x* is journaled on a face of said plate and meshes with gear *q*. The ends of the teeth of said gears are so cut that an eye *Z* is formed when the teeth are meshed. Said ends may be concaved slightly for this purpose, if desired.

A key *B* is dropped in between an arm *s* and the gear *q*, said key permitting the gear to rotate freely from left to right and checking its movement in the opposite direction.

In the use of my improvement the yarn *D* is passed downward between the gears, which rotate freely to admit it until it meets the guides *t*, as shown in Fig. 3. The yarn is thus inclosed between the meshing teeth of the companion gears through which it may be rapidly drawn and the imperfections thereon removed by the edges of said teeth. The tension of the gears is regulated by means of the set-screw *w* and adjustable plate *r* for use with yarn of different sizes and grades. It will be seen that as the key *B* stops the rotation of the gears outwardly the yarn cannot be disengaged from the gear-teeth unless accidentally broken. If desired, however, to so disengage it upon elevating the key *B*, the gears are freed and move in either direction. I do not, however, confine myself to the use of the key *B*, as it may be omitted, if desired, and the gears still employed to clear the yarn.

Having thus explained my invention, what I claim is—

1. A yarn-clearer comprising a body or

standard, and two intermeshing gears mounted thereon, the journal of one of said gears being adjustable, substantially as and for the purpose set forth.

5 2. In a yarn-clearer, the combination of a body, a gear journaled thereon, a plate adjustable on said body, a companion gear journaled thereon, horizontal yarn-guides disposed on opposite sides of said gears, and a key for
10 restricting the rotation of the gears in one direction, substantially as set forth.

3. In a yarn-clearer, a body provided with a wing, as p , and the gear q , journaled thereon, in combination with a pivoted wing r , mounted
15 on said body, and the gear x , journaled on said wing, substantially as set forth.

4. In a yarn-clearer, a body provided with a

wing, as p , and a gear q , journaled on said wing, in combination with the pivoted wing r , provided with the gear x , and the yarn-guides t ,
20 mounted on said body, substantially as set forth.

5. In a yarn-clearer, the body A , provided with a wing p and pivoted wing r , combined with the gears q x , journaled, respectively, on
25 said wings, the horizontal yarn-guides t , mounted on the wing p , and the key B , arranged to restrict the movement of said gears, substantially as and for the purpose set forth.

JULIUS MYRON WEAVER.

Witnesses:

O. M. SHAW,
K. DUFFEE.