

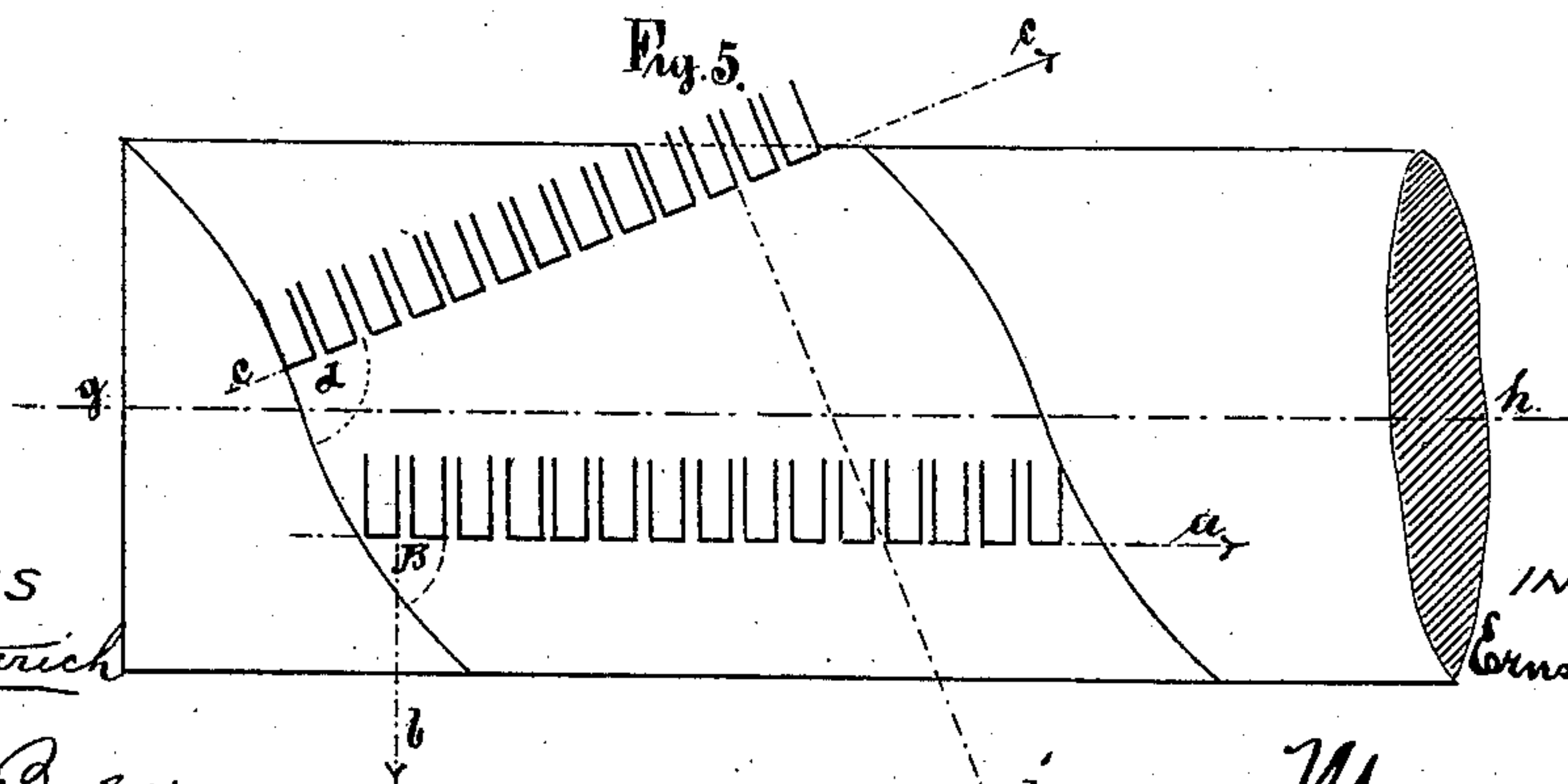
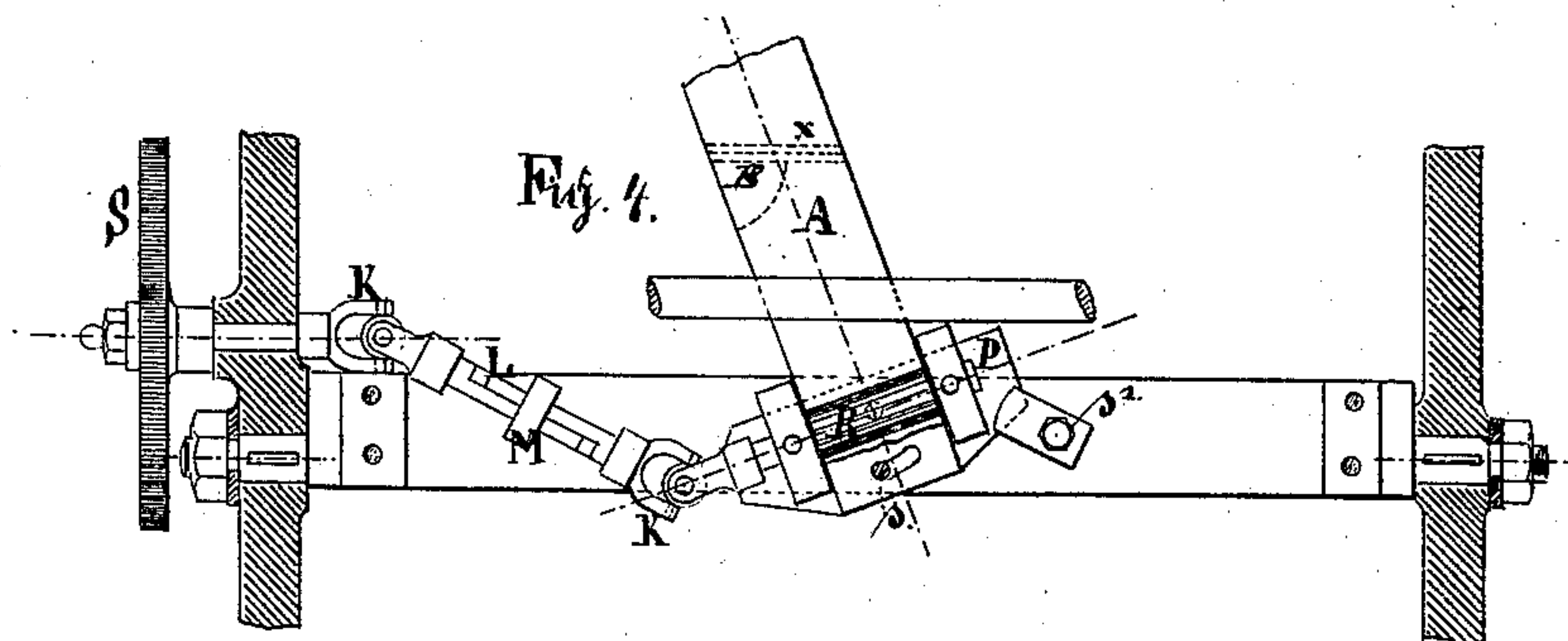
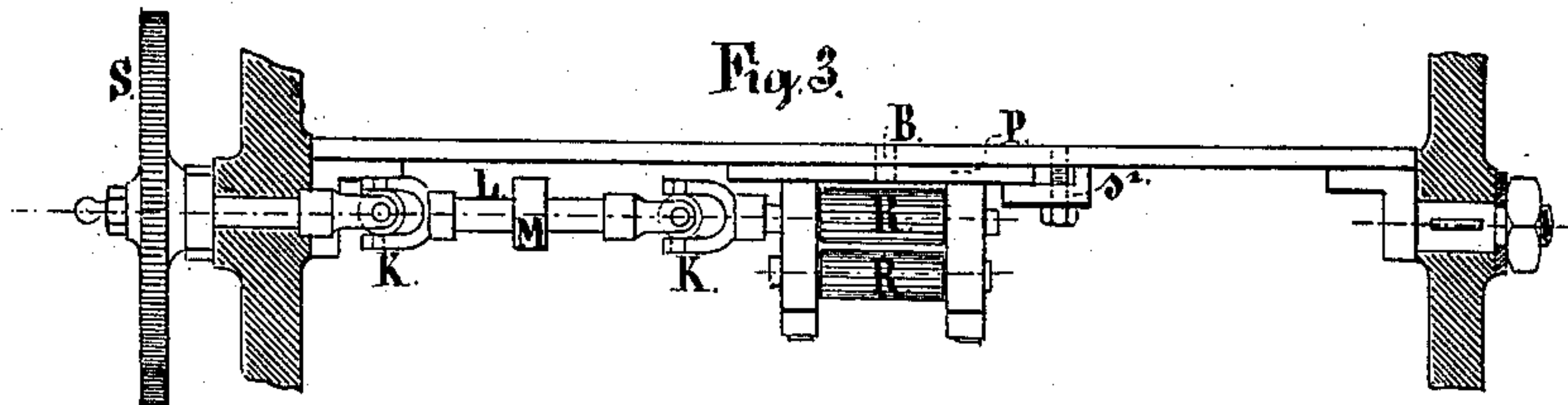
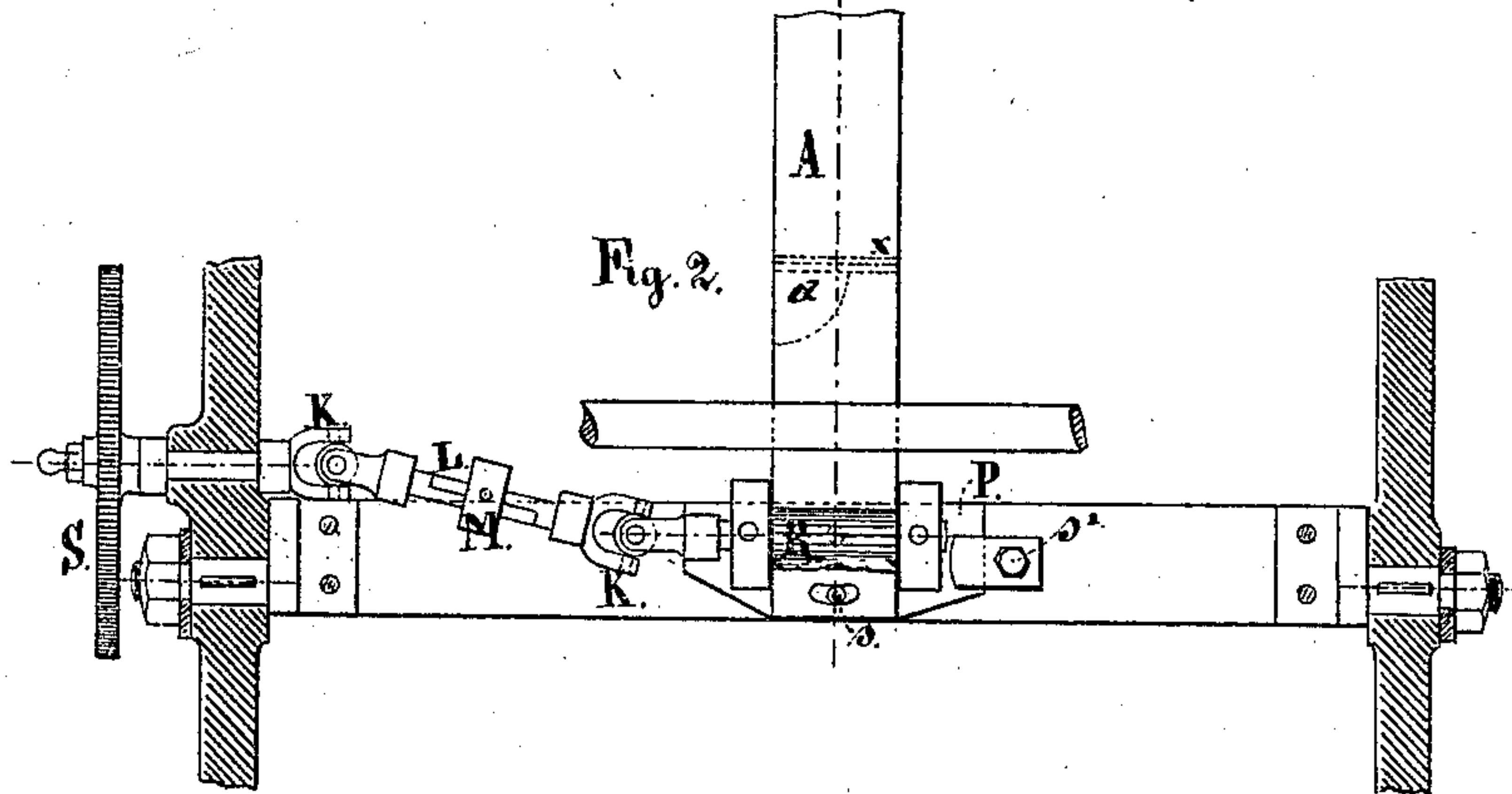
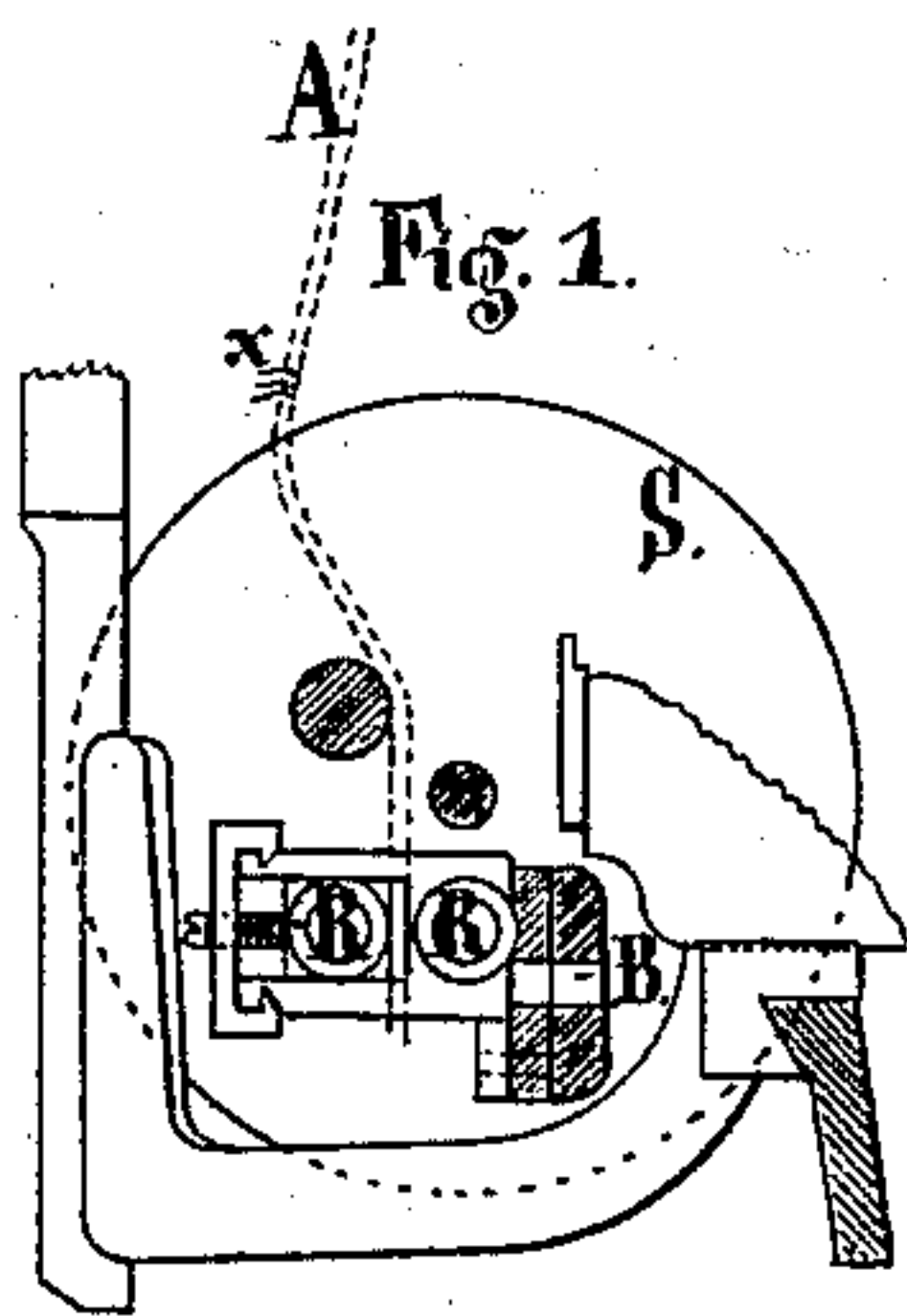
(No Model.)

E. GESSNER.

MACHINE FOR MAKING CARD CLOTHING.

No. 364,816.

Patented June 14, 1887.



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UNITED STATES PATENT OFFICE.

ERNST GESSNER, OF AUE, SAXONY, GERMANY.

MACHINE FOR MAKING CARD-CLOTHING.

SPECIFICATION forming part of Letters Patent No. 364,816, dated June 14, 1887.

Application filed January 27, 1887. Serial No. 235,648. (No model.) Patented in Belgium September 15, 1886, No. 74,548.

To all whom it may concern:

Be it known that I, ERNST GESSNER, of Aue, Saxony, Germany, have invented a new and useful Improvement in Machines for Making
5 Card-Clothing, of which the following is a specification.

The narrow bands of card-clothing produced by card-setting machines ordinarily are provided with teeth set in rows at right angles to the length of the band, their braces or elbows
10 being bent in the direction of the length of the band. When these bands of card-clothing are fixed on rollers and wound up in a helical line, the rows of teeth are not parallel to the
15 axis of said roller, and the elbows of the teeth are not radial to said axis. This oblique position of the cards on the rollers is of disadvantage to the working effect and resistance of the teeth. The said disadvantage is re-
20 moved by setting the rows of teeth in an oblique angle to the length of the band, and by bending the elbows of the teeth in a right angle to the rows, the degree of the said oblique angle bearing a definite proportion to the width
25 of the band and to the diameter of the roller onto which the band is to be fixed, so that the rows of teeth stand parallel to the axis of the roller, and the elbows of the teeth stand in radial position to said axis.

30 My invention consists in an improved machine for setting the card-teeth in rows which are arranged obliquely to the length of the band.

In the accompanying drawings is shown my
35 improved machine, in which—

Figure 1 shows an end view. Figs. 2 and 4 are side views, showing different positions of the band; Fig. 3, a plan view of the machine, and Fig. 5 a detail of a roller covered with a
40 band of card-clothing.

Figs. 2 and 4 show the band set with rows of teeth *x*, Fig. 2 showing the rows set at right angles, as at *d*, and Fig. 4 in an oblique angle, as at *B*.

45 The band *A* is fed forward by one of the pair of fluted rollers *R R*, to which motion is imparted from a ratchet-wheel, *S*, already existing in common card-setting machines, by double universal joints *K K*. The two fluted
50 rollers *R R* are mounted on a plate, *P*, movable on a pivot, *B*, so that by the plate *P* the

rollers *R R* can be put in an oblique position of any required degree. The screw *s* and the clamp *s'* serve for fixing the plate *P* in the required position.

In altering the position of the plate *P* the length of the shaft *L* must be altered at the same time. For this purpose the said shaft is divided into two splice-sections connected by a coupling-box, *M*. Instead of using the double
60 universal joints *K K*, motion might as well be imparted to the fluted roller *R* by such other mechanical means as ball-and-socket joints, or by bevel-wheels, &c., or directly from the ratchet-wheel *S*.
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The fluted rollers *R R* might as well be mounted in a fixed oblique position, without being adjustable, for setting the rows of teeth only at a certain angle. The feed of the band in oblique direction might as well be effected
70 by other means instead of using the fluted rollers *R R*.

Fig. 5 shows a band fixed on a roller, with two rows of teeth. One of them represents a row set in the ordinary way in a right angle
75 to the length of the band. (See angle *d*, Figs. 2 and 5.) The said row of teeth is not parallel to the axis when laid on the roller, but forms a line in the direction of the arrow *c*, the elbows of the teeth being bent in the direction
80 of the arrow *d'*.

The other row is set in the new way, in an oblique angle to the length of the band, (see angle *B* at Figs. 4 and 5,) the obliquity being in proportion to the diameter of the roller and
85 the width of the band, forming a line in the direction of the arrow *a*, Fig. 5, parallel to the axis *g h*, the elbows of the teeth being bent radially to the axis in the direction of the arrow *b*.
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The means for setting the teeth in the band is that ordinarily used, and need not be specially described.

Having thus described my invention, what I claim as new is—

1. In a machine for setting the teeth of card-clothing, the combination, with the actuating mechanism, of a pair of feed-rolls for the band set obliquely with reference to the rows of card-teeth, as and for the purpose described.
95 100

2. In a machine for setting the teeth of card-clothing, the combination, with the actuating

mechanism, of a pair of feed-rolls, and a pivoted frame or plate carrying the feed-rolls for changing the angle of feed, substantially as and for the purpose described.

- 5 3. In a machine for setting the teeth of card-clothing, the combination of a pair of feed-rolls, a pivoted plate or frame bearing the same, a driving-gear, and a shaft connecting

the driving-gear to one of the rolls, the said shaft having two universal joints in its length 10 and being made also adjustable in its length, substantially as and for the purpose described.

ERNST GESSNER.

Witnesses:

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