

No. 722,858.

PATENTED MAR. 17, 1903.

E. J. LANE.  
IRONING MACHINE.  
APPLICATION FILED APR. 4, 1902.

NO MODEL.

4 SHEETS—SHEET 1.

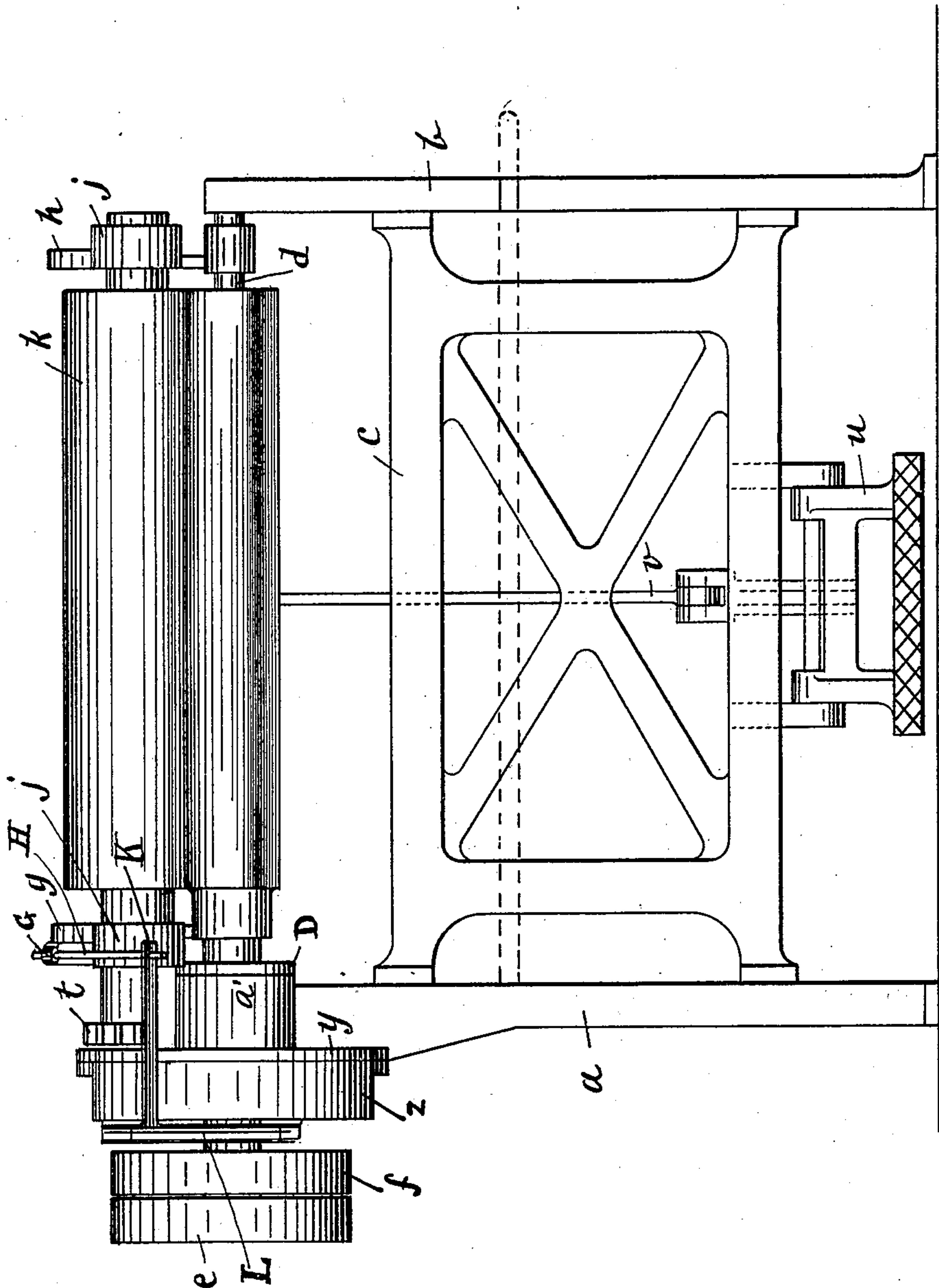


Fig. 1.

Witnesses  
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J. H. Dunham

Inventor  
E. J. Lane

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4 SHEETS—SHEET 2.

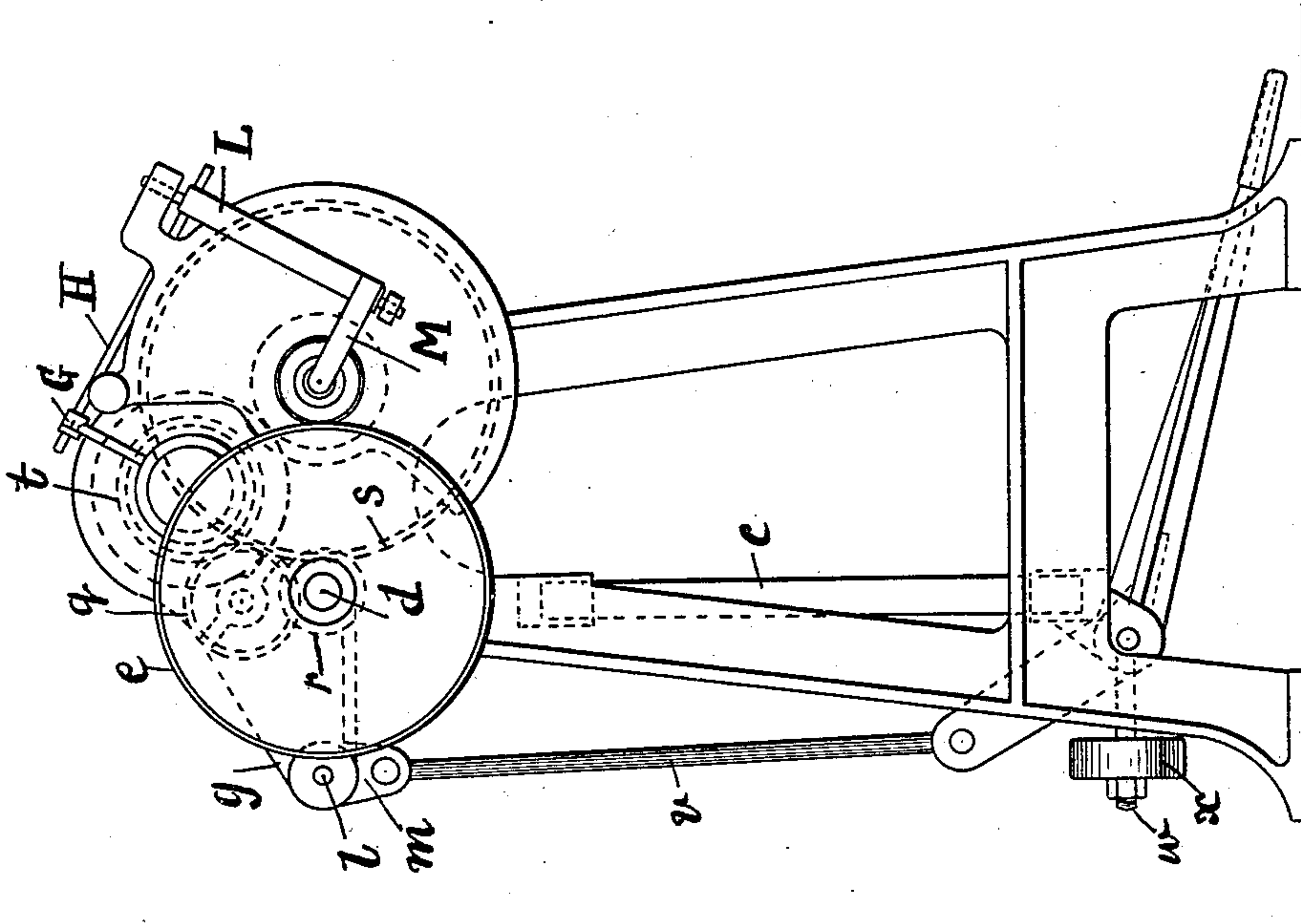


Fig. 2.

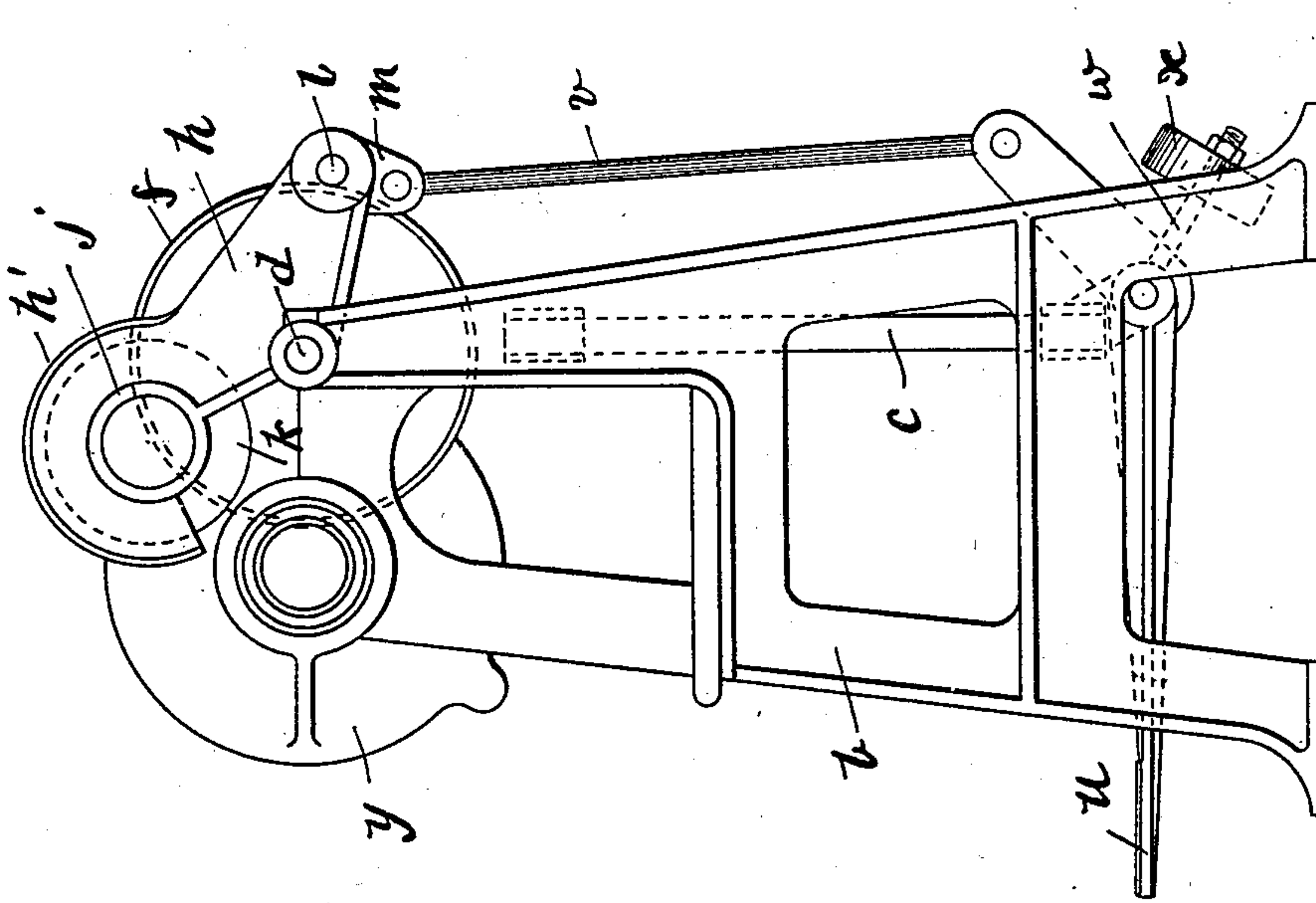


Fig. 3.

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4 SHEETS—SHEET 3.

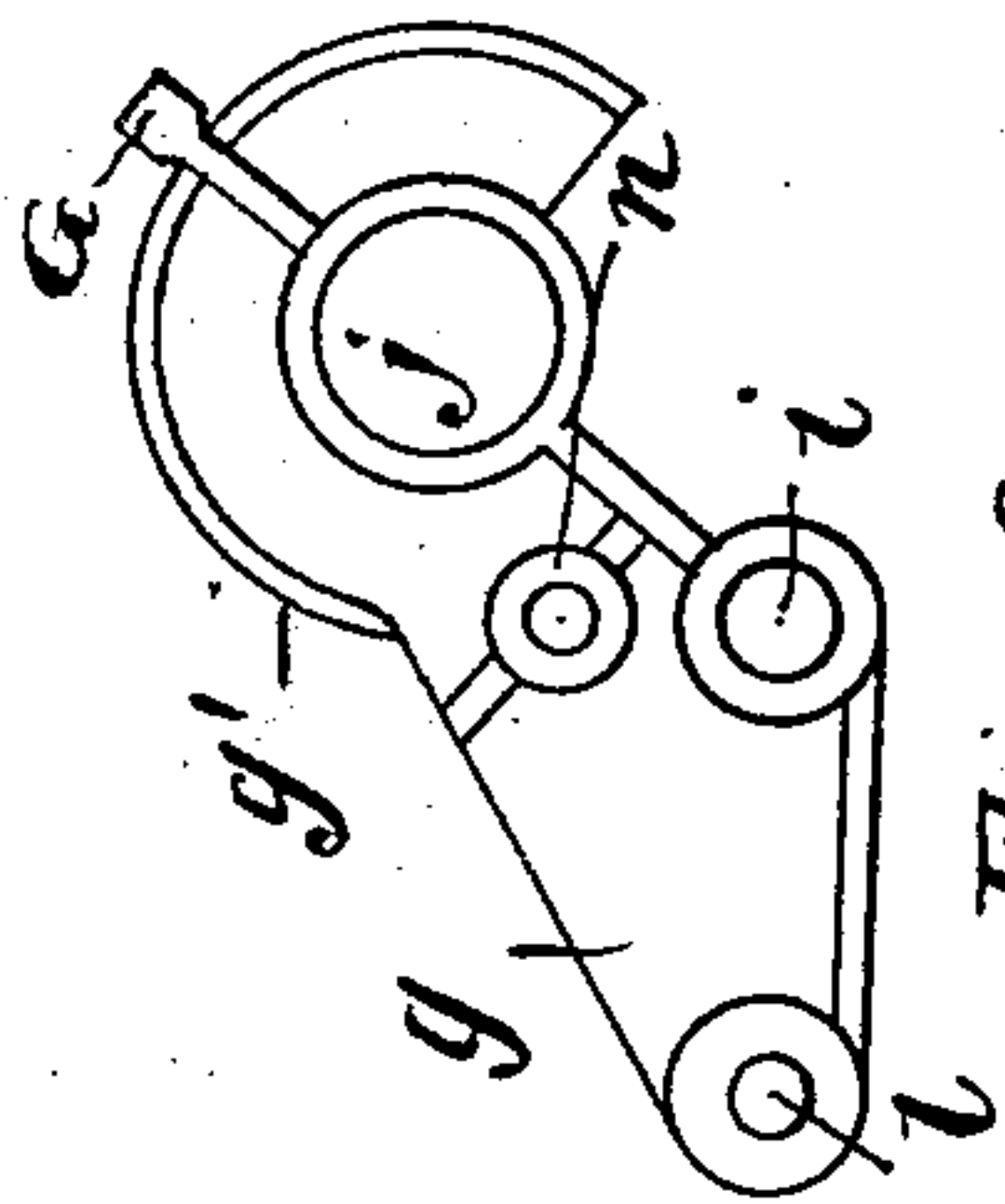


Fig. 9.

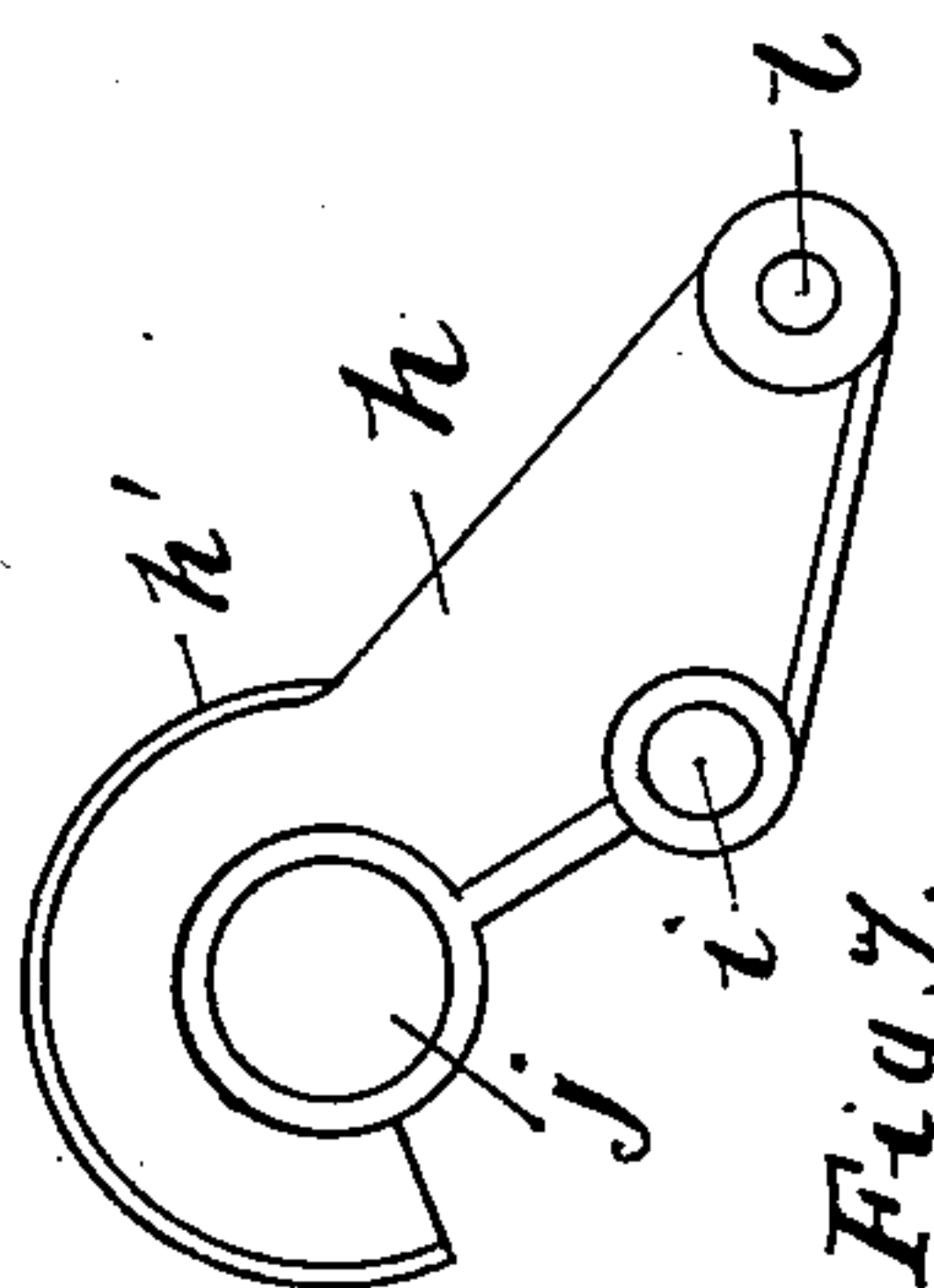


Fig. 7.

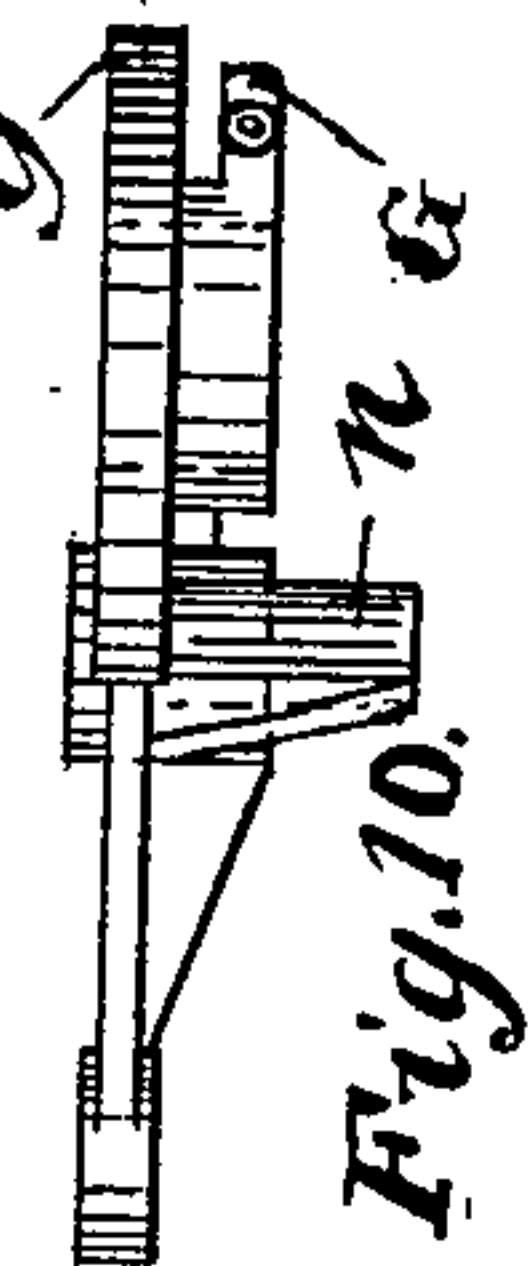


Fig. 10.

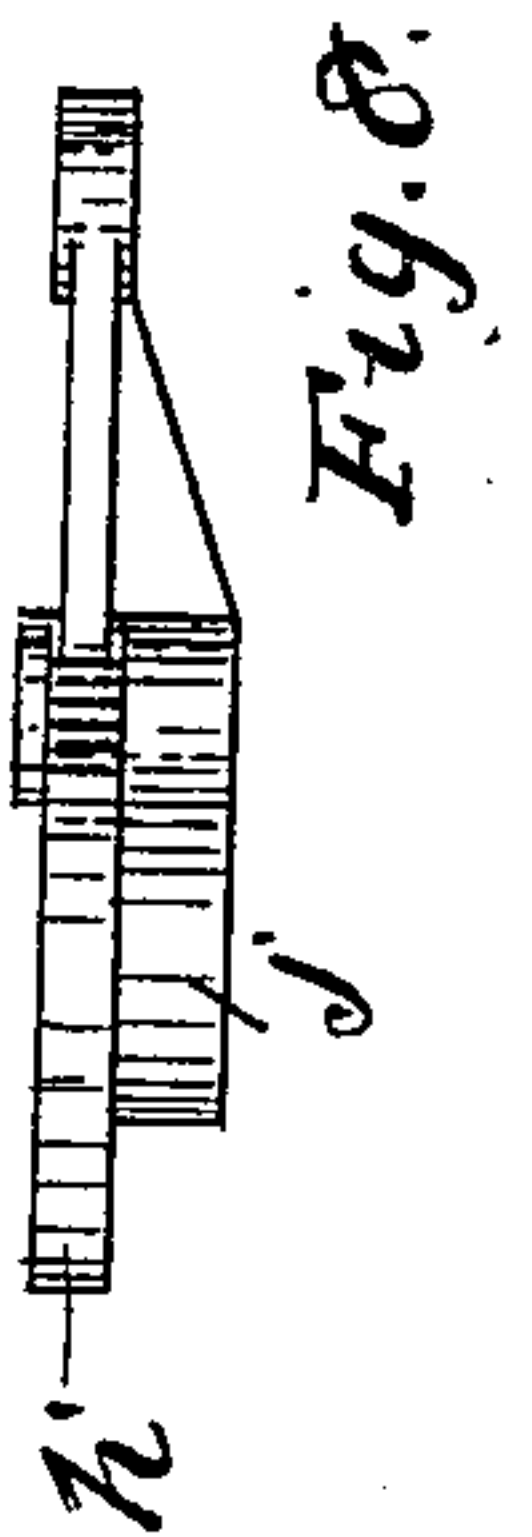


Fig. 8.

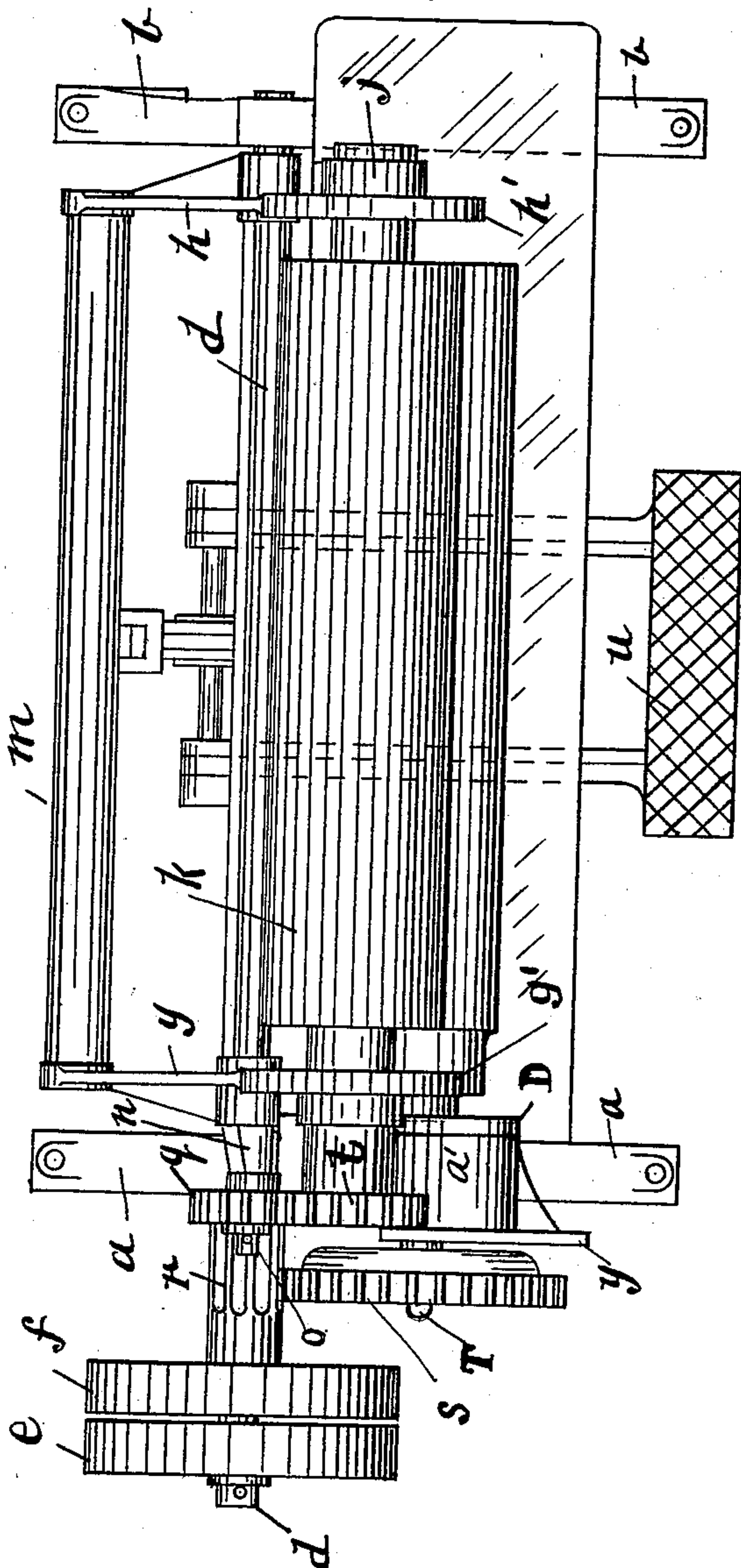


Fig. 4.

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4 SHEETS—SHEET 4.

Fig. 5.

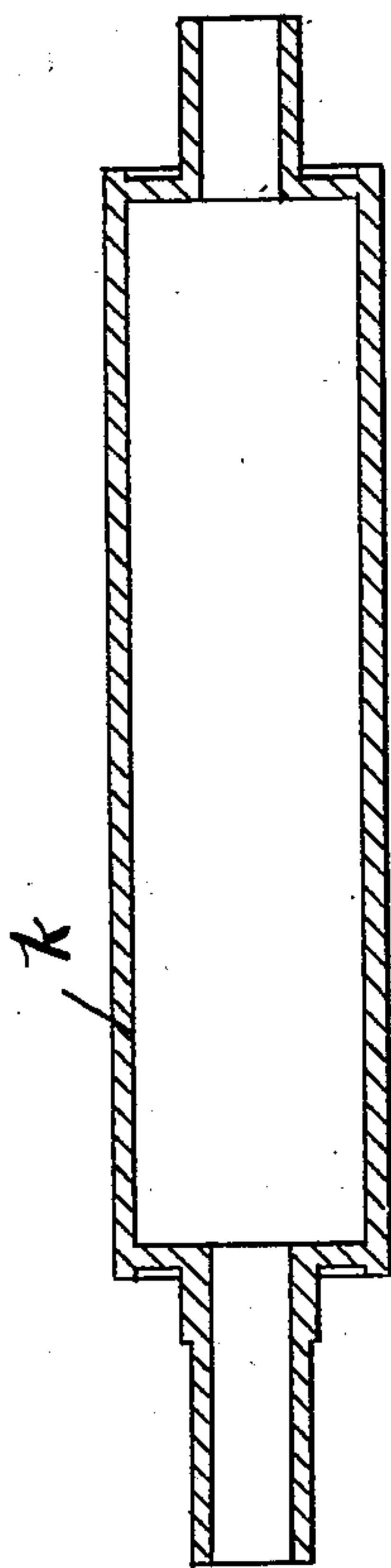


Fig. 6.

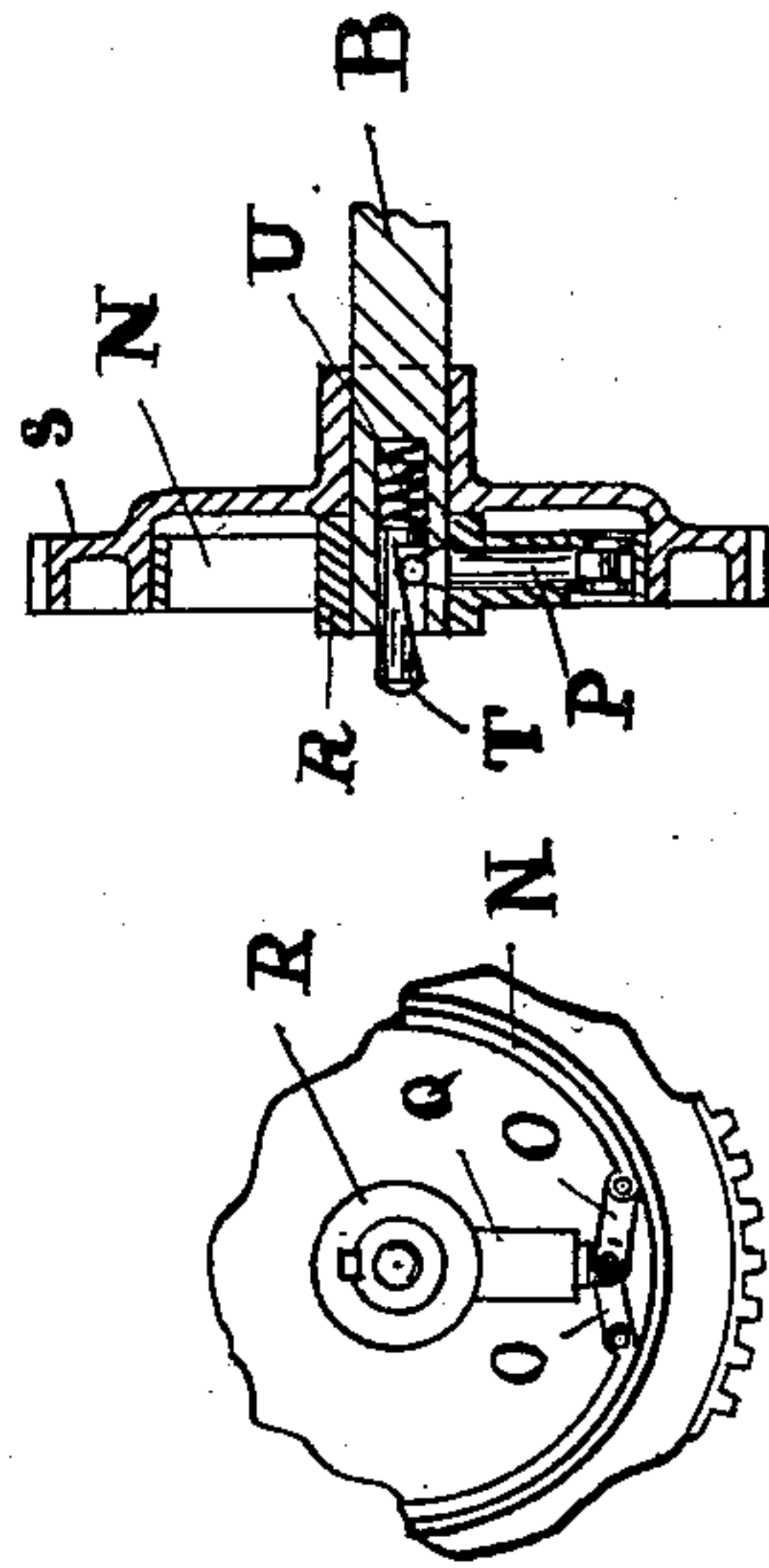
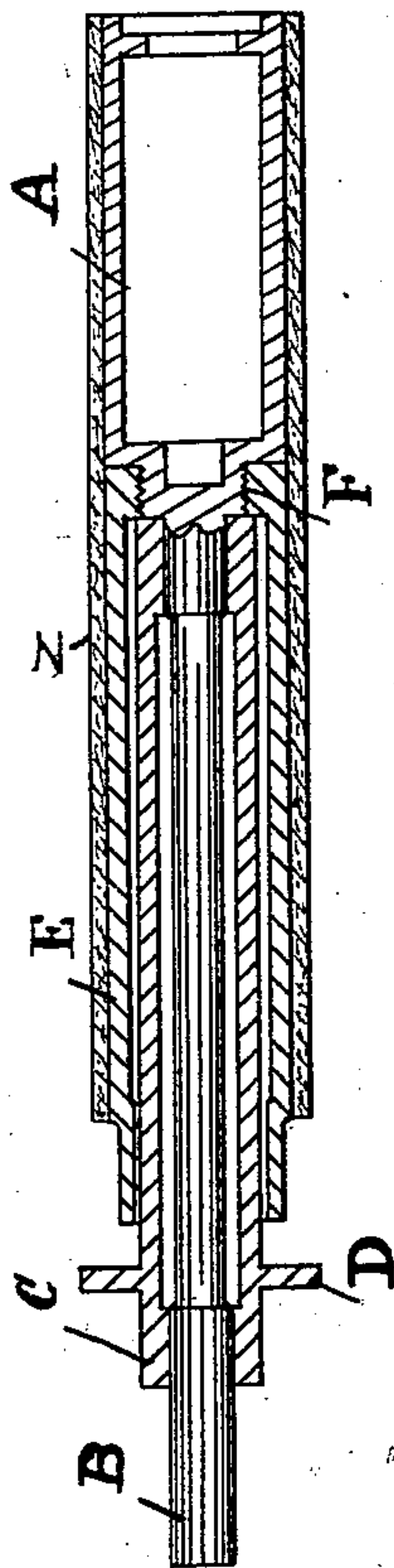


Fig. 11.

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# UNITED STATES PATENT OFFICE.

EDWIN JOHN LANE, OF SOUTH HACKNEY, LONDON, ENGLAND.

## IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 722,858, dated March 17, 1903.

Application filed April 4, 1902. Serial No. 101,417. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN JOHN LANE, a subject of the King of Great Britain, residing at 23 Gascoyne road, South Hackney, London, England, have invented new and useful Improvements in Ironing-Machines, of which the following is a specification.

My invention relates to ironing-machines of the type known as "body-linen ironers," in which a padded roller rotates in contact with a heated roller or concave bed above it; and the objects of my improvements are, first, to reduce the length of the machine, thereby economizing space; second, to insure more even pressure between the rollers or between the padded roller and the bed than can be attained by the overhung rollers and beds now generally used in these machines; third, to minimize the risk of accident to the person operating the machine. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a front view of an ironing-machine constructed according to this invention. Fig. 2 is an elevation of the driving end of the said machine. Fig. 3 is an elevation of the other end of the machine. Fig. 4 is a plan of machine. Fig. 5 is a section through the heated roller. Fig. 6 is a section through padded roller. Fig. 7 is an elevation of lever carrying one end of the heated roller. Fig. 8 is a plan of same. Fig. 9 is an elevation of lever for carrying the heated roller at driving end of the machine. Fig. 10 is a plan of same. Fig. 11 consists of two views showing the clutch mechanism for stopping and starting the padded roller.

The same letters denote the same parts in all the figures.

*a* is the end frame, to which the driving-gear is secured.

*b* is the frame at the opposite end of the machine.

*c* is a cross-frame, which are bolted to the frames *a* and *b*.

*d* is a shaft on which oscillate the levers carrying the heated upper roller. The pulleys *e f* also rotate on the shaft *d*.

*g h* are levers which oscillate at *i* on the

shaft *d*, the said levers being provided at *j* with bearings in which the roller *k* rotates.

*l* is an aperture to receive a bolt, by means of which the counterweight *m* is secured to the levers *g h*.

The lever *g* has a boss *n* thereon to receive a stud *o*, on which revolves the pinion *q*.

The loose pulley *e* rotates on the shaft *d* in the usual way. The pulley *f* also rotates on the shaft *d*, but is made with a long boss, the inner end of which has spur-teeth cut therein to form the pinion *r*, which pinion gears with the pinion *q* and also with the wheel *s*, which runs loose on the shaft of the lower roller, but is capable of being locked to the said shaft by means of a suitable clutch. The pinion *q* gears with the pinion-wheel *t*, which is secured to the axis of the roller *k* and serves not only to transmit the motion of the driving-pinion *r* to the roller *k*, but also to compel the roller *k* to rotate in the contrary direction to the direction of rotation of the lower roller and to enable the roller *k* to be raised out of contact with the lower roller by means of the counterweight *m* or brought down into contact with the lower roller by the treadle *u* without interfering with the rotation of the roller *k*.

The treadle *u* is connected by the rod *v* to the counterweight *m*. The said counterweight serves as a tie to connect the levers *g h* to each other and prevent side movement of the said levers and roller *k*.

*w* is a rod secured to the treadle *u*, and *x* is a supplementary balance-weight for final adjustment to insure the upper roller rising when the treadle is released and also to enable the upper roller to be brought down to the lower roller without too much exertion on the part of the operator.

*y* is a segmental portion of metal cast on the frame *a*, to which is bolted the gear-case *z*.

The lower padded roller is constructed as shown in detail by Fig. 6 and consists of two portions. The portion A is made integral with or attached to the wrought iron or steel shaft B, which rotates in bearings formed one in each end of a sleeve C, which sleeve is bolted to the frame *a* at *a'* by means of the flange D.



The other portion E of the lower roller is secured to the portion A at F, so that, as the said roller is supported in the middle, an even pressure is maintained throughout the length of the rollers.

Z is the padding. The lower roller is padded to the required thickness and is stationary when the roller *k* is out of contact therewith; but as soon as the upper heated roller, which always rotates while the machine is running, is brought into contact with the lower roller the latter is set in motion by means of a friction-clutch and continues to rotate so long as the treadle is depressed.

The lever *g* has a boss G thereon, in which is secured one end of a rod H, the other end of the said rod passing through an eye at the end of an arm K and secured thereto, which arm is attached to or formed integral with a long sleeve L, which has formed integral with or secured to it a short arm M, which short arm bears on the end of a wedge T, which forces a friction-ring N against the inside of the wheel S and locks the same to the shaft B when the treadle *u* is depressed. The sleeve L oscillates on centers, and when the treadle is released a spring U forces the wedge outward and stops the rotation of the lower roller.

The clutch shown by the drawings consists of a friction-ring N, to the ends of which are attached toggles O O, the inner end of the said toggles being connected to a plunger P, working in a boss Q on the collar R, which collar is keyed to the shaft B. A wedge T bears on the other end of the plunger P, the said wedge being normally forced outward by a spring U. When the wedge T is forced inward by the arm M, the ring N is forced into contact with the inside of the wheel *s*, and the wheel *s* and shaft B rotate together. By this arrangement of the machine-rollers there is no chance of the operator's fingers being caught between the rollers while placing the work on the machine or while removing the same when ironed, and no reversing-gear for the rollers is necessary. The work also can hang over the free end of the padded roll, as usual.

Instead of the levers *g h* oscillating on the shaft *d* they may be keyed or otherwise secured thereto, and the said shaft may oscillate in bearings in the frames *a b*.

A guard or screen may be attached to the portions *g' h'* of the levers *g h*.

If desired, the upper roller may be omitted, and a hollow heated concave bed may be used

instead of the said roller, the bed being supported by the levers *g h*.

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

1. In an ironing-machine the combination of a heated roller *k* supported in bearings formed in oscillating levers *g h* a padded roller supported by means of a sleeve or tubular bracket C, a driving-pulley *f* having a long pinion *r* on the boss thereof, an idle pinion *q* gearing with the pinion *r*, a pinion *t* secured to the heated roller and gearing with the pinion *q*, a wheel *s* running loose on the shaft B of the padded roller, a friction-clutch inside the wheel *s*, a rod H secured to the lever *g* and to the long arm K of a bell-crank lever, the short arm M of which operates the said clutch, and locks the wheel *s* to the shaft B when the heated roller is brought into contact with the padded roller by depressing the treadle *u*, substantially as shown for the purpose specified.

2. In an ironing-machine the combination of a padded roller made in two portions A and E, a shaft B made integral with the portion A, a sleeve or tubular bracket C having a bearing at each end to receive the shaft B, and a flange D by which the said bracket is attached to the frame of the machine all substantially as shown for the purpose stated.

3. In an ironing-machine the combination of a heated roller *k* supported in bearings formed in oscillating levers *g h*, a shaft *d* supporting the said levers, a counterbalance *m* secured to the said levers, a treadle *u* connected by a rod *v* to the counterbalance, a padded roller below the roller *k* supported by means of a sleeve C, a shaft B made integral with part of the padded roller, a wheel *s* running loose on the shaft B, a collar R, having a boss Q thereon, keyed to the shaft B, a friction-ring N inside the wheel *s*, a plunger P sliding in the said boss and connected by toggles O O to the ends of the ring N, a wedge T bearing on the plunger P, a spring U normally forcing the wedge T outward and means for moving the said wedge inward by the movement of the treadle *u* and levers *g h* all substantially as shown for the purpose stated.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWIN JOHN LANE.

Witnesses:

T. E. HALFORD,  
G. H. DUNHAM.