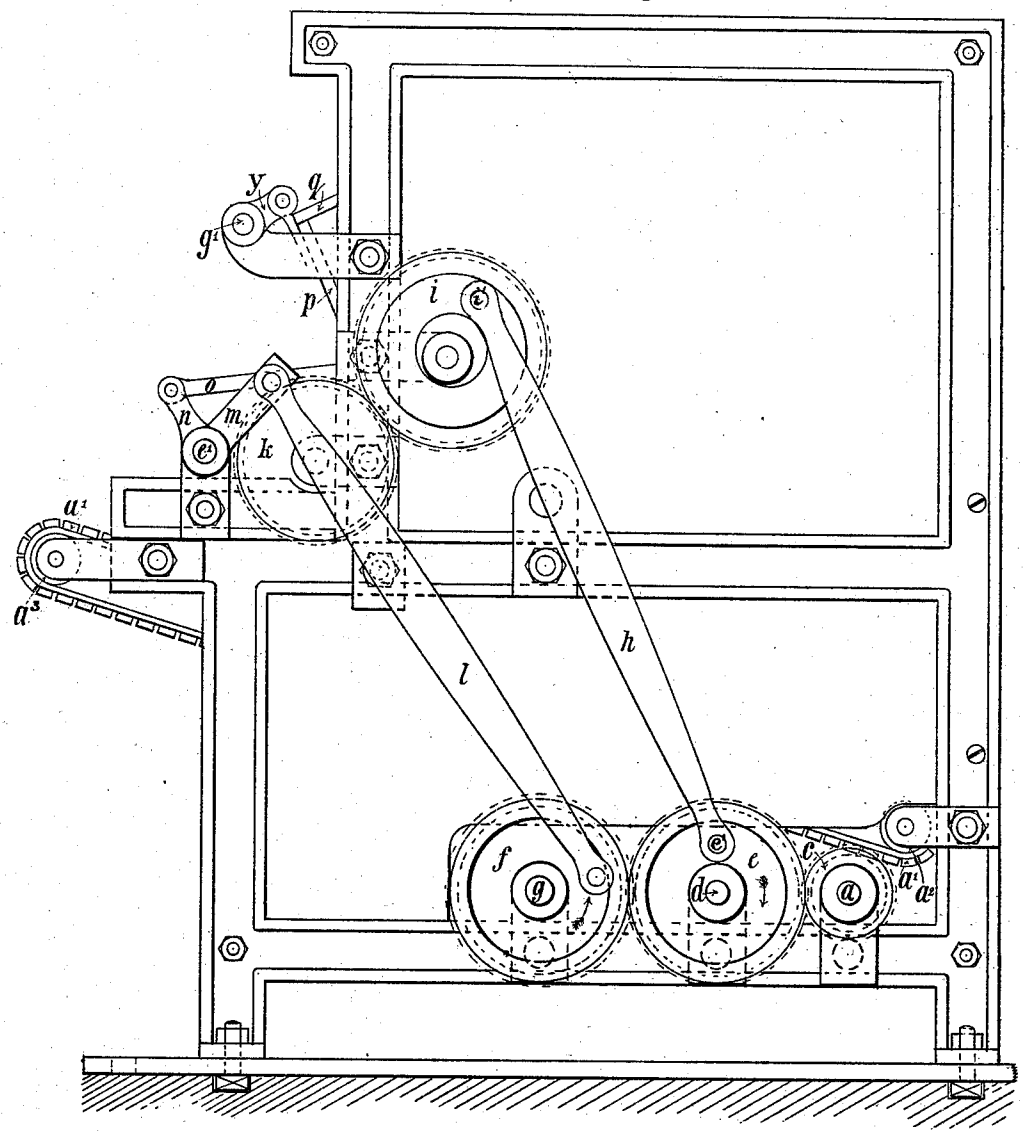
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J. T. LEMAIRE.

FEEDING DEVICE FOR CARDING ENGINES.

No. 255,519. Patented Mar. 28, 1882.

Fig. 1.



Witnesses.

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N. Montgomery

Inventor.

Jean Thomas Lemaire

per Burry & Carter

Attorney.

N. PETERS, Photo-Lithographer, Washington, D. C.

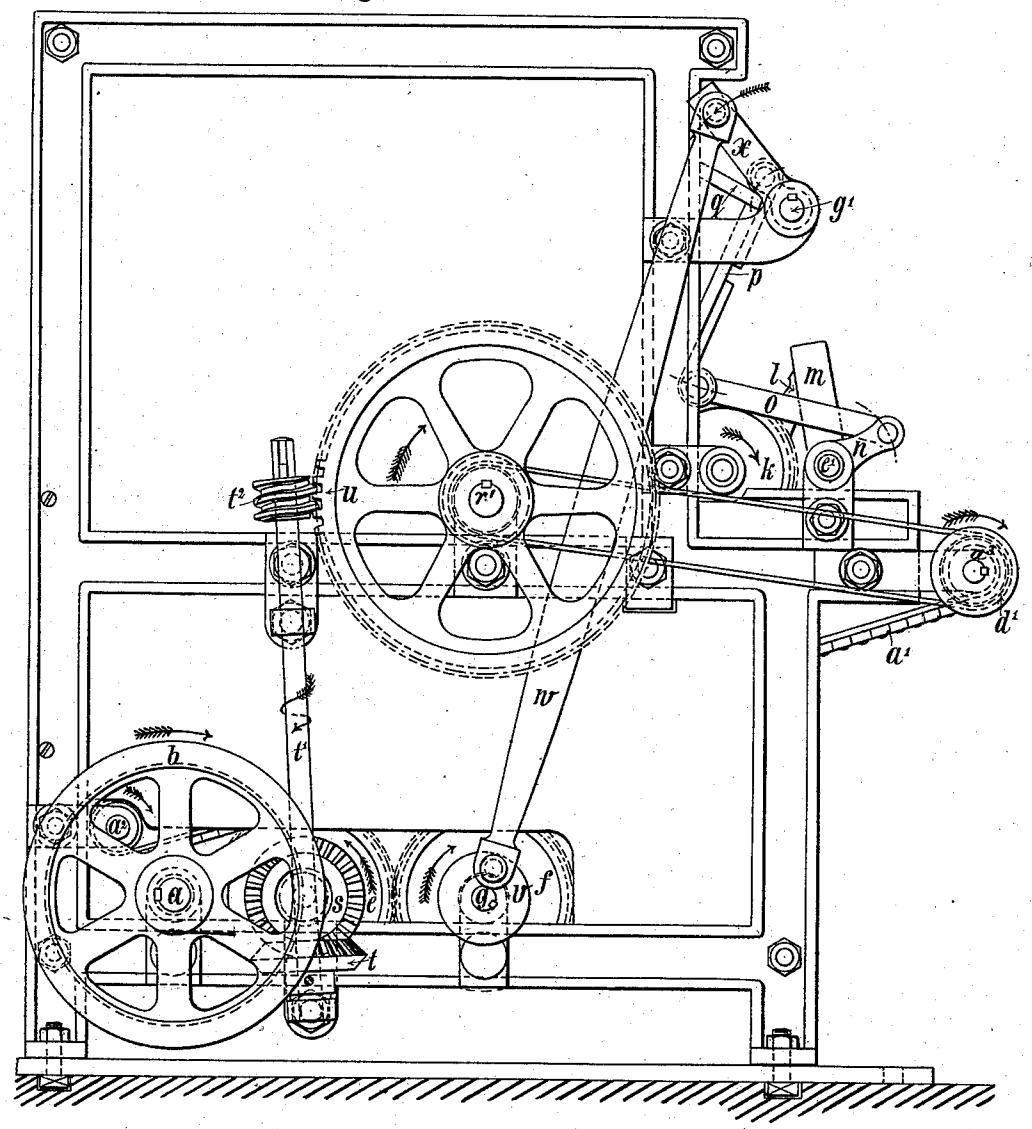
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J. T. LEMAIRE.

FEEDING DEVICE FOR CARDING ENGINES.

No. 255,519. Patented Mar. 28, 1882.

Fig. 2.



Witnesses.

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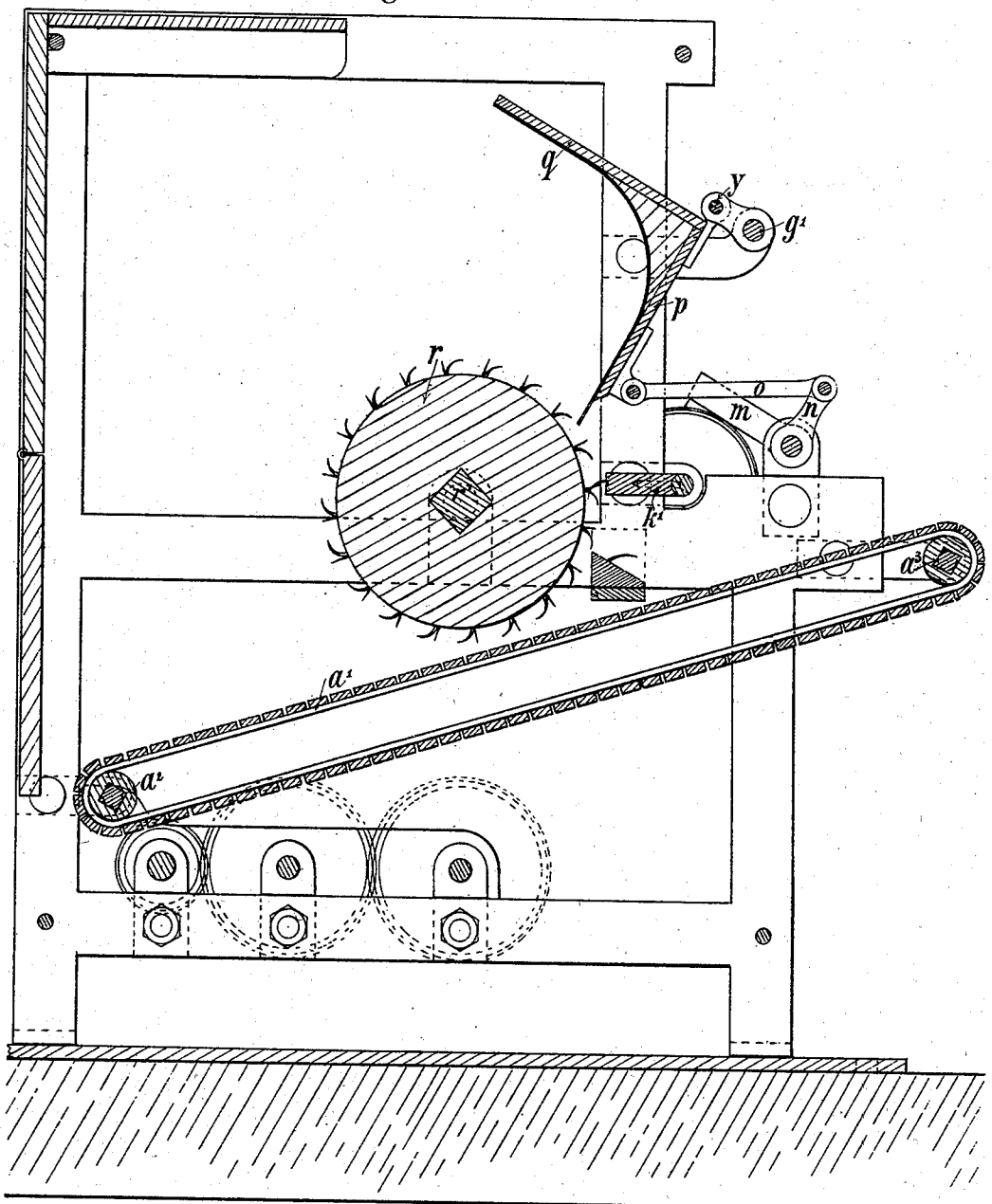
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J. T. LEMAIRE.

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Fig. 3.



Witnesses.
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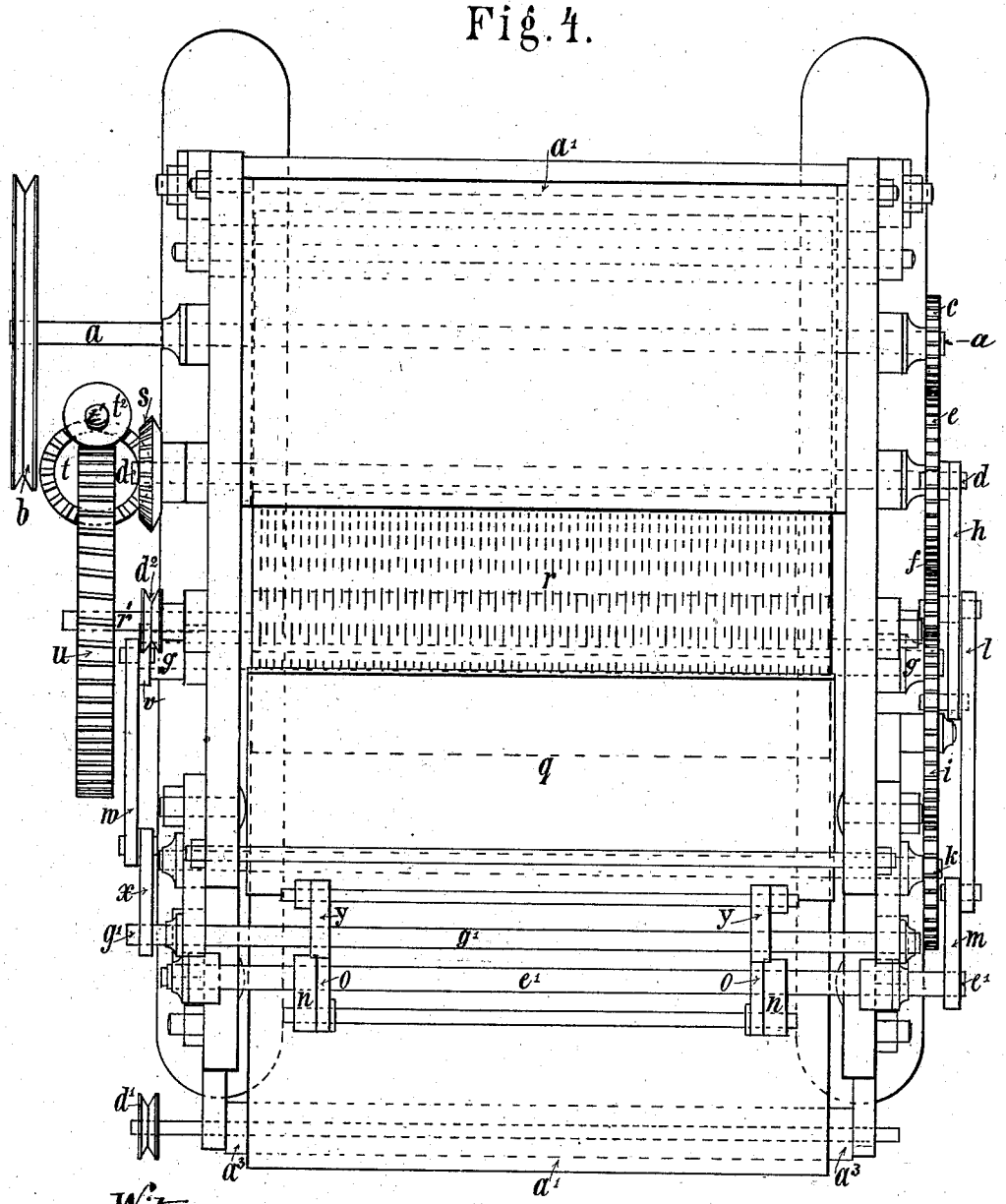
(Model.) 4 Sheets—Sheet 4.

J. T. LEMAIRE.

FEEDING DEVICE FOR CARDING ENGINES.

No. 255,519. Patented Mar. 28, 1882.

Fig. 4.



Witnesses.

W. H. Cornell

N. Montgomery

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UNITED STATES PATENT OFFICE.

JEAN TH. LEMAIRE, OF HODIMONT-VERVIERS, BELGIUM.

FEEDING DEVICE FOR CARDING-ENGINES.

SPECIFICATION forming part of Letters Patent No. 255,519, dated March 28, 1882.

Application filed October 2, 1880. (Model.) Patented in Belgium June 9, 1879, in France August 29, 1879, and August 12, 1880, in Germany June 8, 1880, and in Austria-Hungary October 12, 1880.

To all whom it may concern:

Be it known that I, JEAN THOMAS LEMAIRE, a subject of the King of Belgium, residing at Hodimont-Verviers, in the Kingdom of Belgium, have invented a new and useful Feeding Device for Carding-Engines, (for which I have obtained a patent in Belgium bearing date June 9, 1879, No. 48,437,) of which the following is a specification.

My invention relates to improvements in feeding devices for carding-engines, in which a cylinder provided with straight and crooked hooks works in connection with a combing apparatus; and the objects of my improvements are, first, to lay the fibers of the wool and other fibrous material to be mixed together parallel to each other; and, second, to deliver the fleece equally mixed of the different material—such as wool, silk, cotton, &c.—to the carding-engine or other preparing-machine. I obtain these objects by the mechanism illustrated in the accompanying drawings, where—

Figures 1 and 2 represent side views of the two sides of the machine. Fig. 3 is a vertical section of the same, and Fig. 4 is a top view.

Similar letters represent similar parts in all the figures.

The driving-shaft *a* is provided with a suitable pulley, *b*, to communicate the desired motion to the same. To this shaft *a* a gear-wheel, *c*, is attached, working into a gear-wheel, *e*, attached to a shaft, *d*, and this wheel *e* works into another gear-wheel, *f*, fast to a shaft, *g*. By this arrangement the shafts *d* and *g* receive the desired motion.

To the wheel *e* a connecting-rod, *h*, is attached to transfer the motion from the same to the gear-wheel *i*, which latter meshes into a smaller gear-wheel, *k*, producing only an oscillating motion to the shaft carrying this wheel *k*, and consequently to the comb *k'*, Fig. 3, attached to said shaft. The connecting-pin *e'* of the rod *h* in the wheel *e* is nearer to the center of said wheel than the connecting-pin *i'* of said rod *h* in the wheel *i*, in consequence of which, while the connecting-pin *e'* in wheel *e* makes a regular complete revolution, the connecting-pin *i'* in the wheel *i* makes only a partial revolution backward and forward, and which is the motion communicated to said wheel *i*, which, being again communicated to the wheel *k*, produces thereby the desired oscillation to the shaft carrying said wheel *k* and comb *k'*. This comb *k'* serves to take off the fleece, previously combed and evened, from the collecting-cylinder *r*.

To the gear-wheel *f* a connecting-rod, *l*, is attached, connected to a lever, *m*, fixed to a shaft, *e'*, which carries the levers *n*, and which latter are connected through rod *o* with the combing mechanism *p q*, communicating a forward and backward motion to said combing mechanism. To the other end of the shaft *d* a bevel-gear wheel, *s*, is attached, working into a corresponding bevel-gear wheel, *t*, fast upon an upright shaft, *t'*, and provided at its upper end with a worm, t^2, Fig. 2, working into a large wheel, *u*, attached to the shaft *r'*, upon which the collecting-cylinder *r* is fastened, communicating thereby the desired motion to this cylinder *r*. This cylinder is provided around its periphery with long crooked and short straight hooks, which retain the wool and other material on this cylinder *r* until the same are withdrawn from its surface by the oscillating comb *k'* and the feeding-cylinders of the carding-engine or other preparing-machine arranged for that purpose.

An endless band, *a'*, running over rollers a^2 a^3, receives its motion through the pulley d^2, attached to the shaft *r'*, and the pulley *d'*, attached to the shaft carrying the roller a^3. This band *a'* delivers the wool, &c., to the collecting-cylinder *r*, when the teeth and the circumference of said cylinder take off the wool, &c., to be combed and evened by means of the combing mechanism *p q*, when the thus combed and evened material is taken off by the comb *k'*, which delivers the fleece again upon the other part of this band *a'*, to be delivered at its end to the carding-engine or other preparing-machine. The combing apparatus *p q*, moved by the rod *o*, strikes only while moving away from the comb *k'* through the fleece collected on the surface of the cylinder *r*, and lays during this operation the fibers of the wool or other material all parallel to each other. When this combing apparatus *p q* is moved by means of the rod *o* toward the comb *k'* the levers *y*, supporting the upper end of this combing appa-

ratus *p q*, raise this apparatus so that its teeth do not strike the fleece. This raising motion of the combing apparatus is produced in the following manner:

The levers *y*, which support the upper end of the combing apparatus *p q*, are attached to a shaft, *g'*, to which a lever, *x*, is fastened, Fig. 2. At the end of the shaft *g* a wheel, *v*, is fastened, to which a connecting-rod, *w*, is attached, the other end of which is attached to the lever *x*, fast upon the shaft *g'*. By this arrangement the levers *y* are moved upward, and consequently the combing apparatus, at the time when said combing apparatus is moved toward the comb *k'* by the action of the rod *o*.

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

1. The collecting-cylinder *r*, provided with straight and crooked hooks or teeth, gear-wheel *u*, worm t^2, shaft *t'*, bevel-gear wheels *t* and *s*, and shaft *d*, and driving-shaft *a*, in combination with the combing apparatus *p q*, with drawing-comb *k'* and endless band *a'*, and means for operating the same, the whole arranged to operate substantially in the manner and for the purpose herein described.

2. The combing apparatus *p q*, in combination with levers *y* and *x*, connecting-rod *w*, and wheel *v*, shaft *g*, the rod *o*, levers *m* and *n*, connecting-rod *l*, gear-wheels *f*, *e*, and *c*, and driving-shaft *a*, the whole being arranged and combined to operate in the manner and for the purpose substantially as set forth.

3. In combination with the withdrawing-comb *k'*, the gear-wheels *k* and *i*, the connecting-rod *h*, and gear-wheels *e* and *c*, shaft *d*, and driving-shaft *a*, substantially in the manner and for the purpose described.

JEAN TH. LEMAIRE.

Witnesses:
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