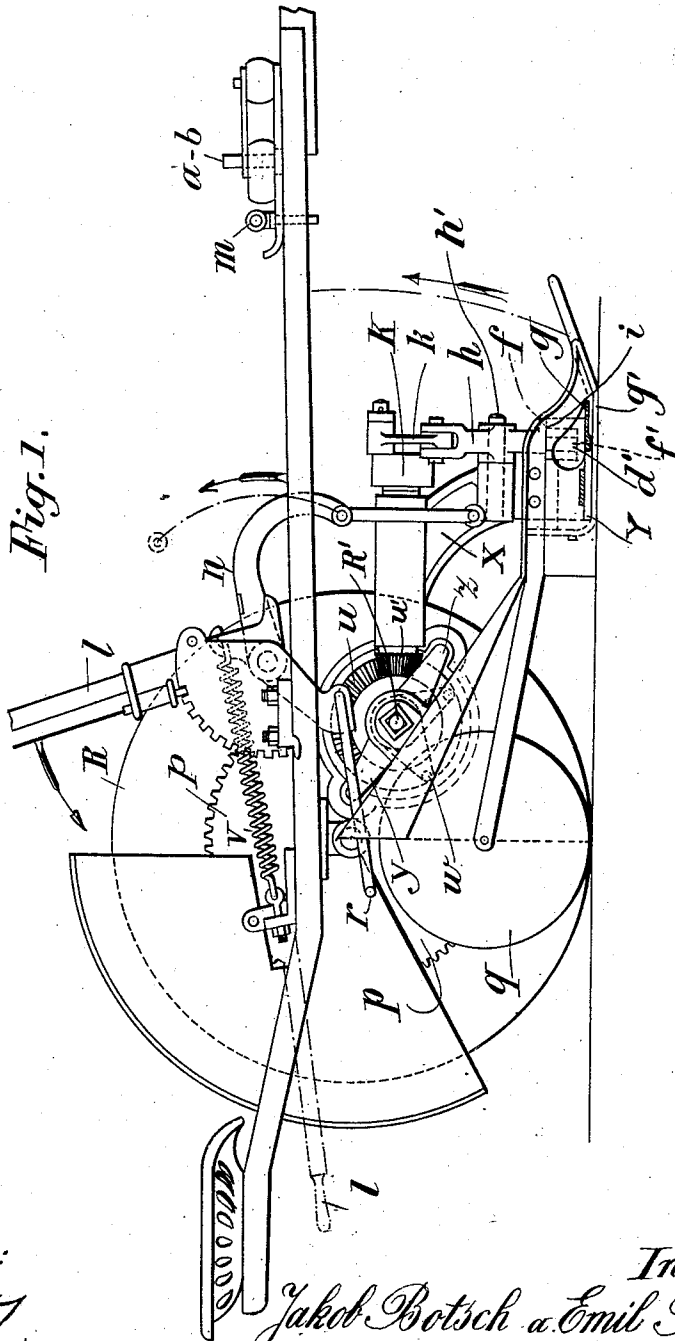


J. & E. BOTSCH.
MOWING MACHINE.
APPLICATION FILED JAN. 31, 1911.

992,704.

Patented May 16, 1911.

4 SHEETS—SHEET 1.



Witnesses:
M. E. Hay
J. M. Meyer

Inventors:
Jakob Botsch & Emil Botsch
J. M. Meyer Attorney

J. & E. BOTSCH.
MOWING MACHINE.
APPLICATION FILED JAN. 31, 1911.

992,704.

Patented May 16, 1911.

4 SHEETS—SHEET 2.

Fig. 2.

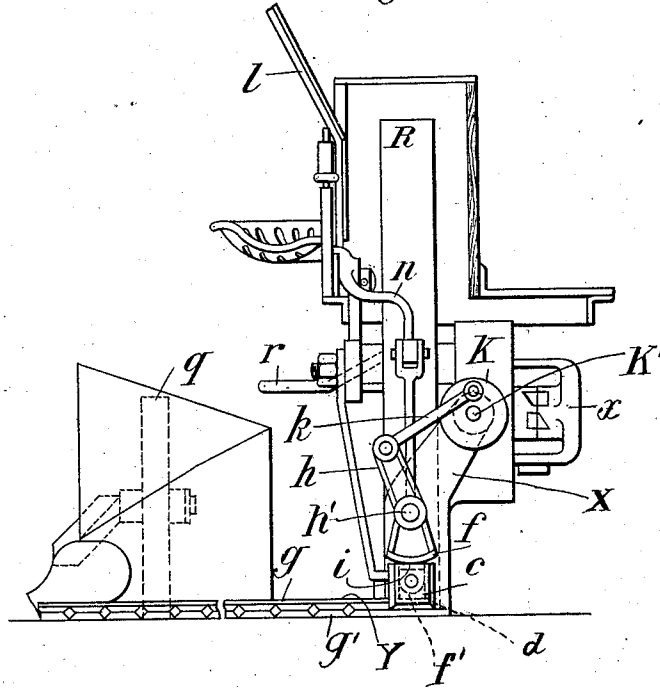


Fig. 4.

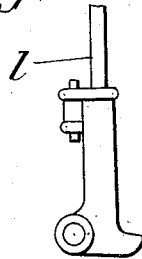


Fig. 5.

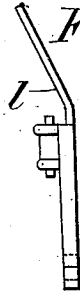


Fig. 6.



Fig. 7.

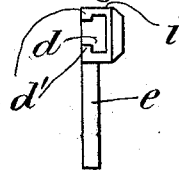


Fig. 8.

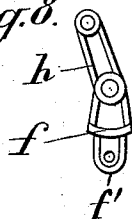


Fig. 9.

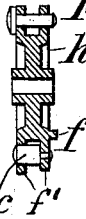
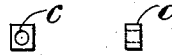


Fig. 10. Fig. 11.



Witnesses:
M. *Edray*
J. M. *Meyer*

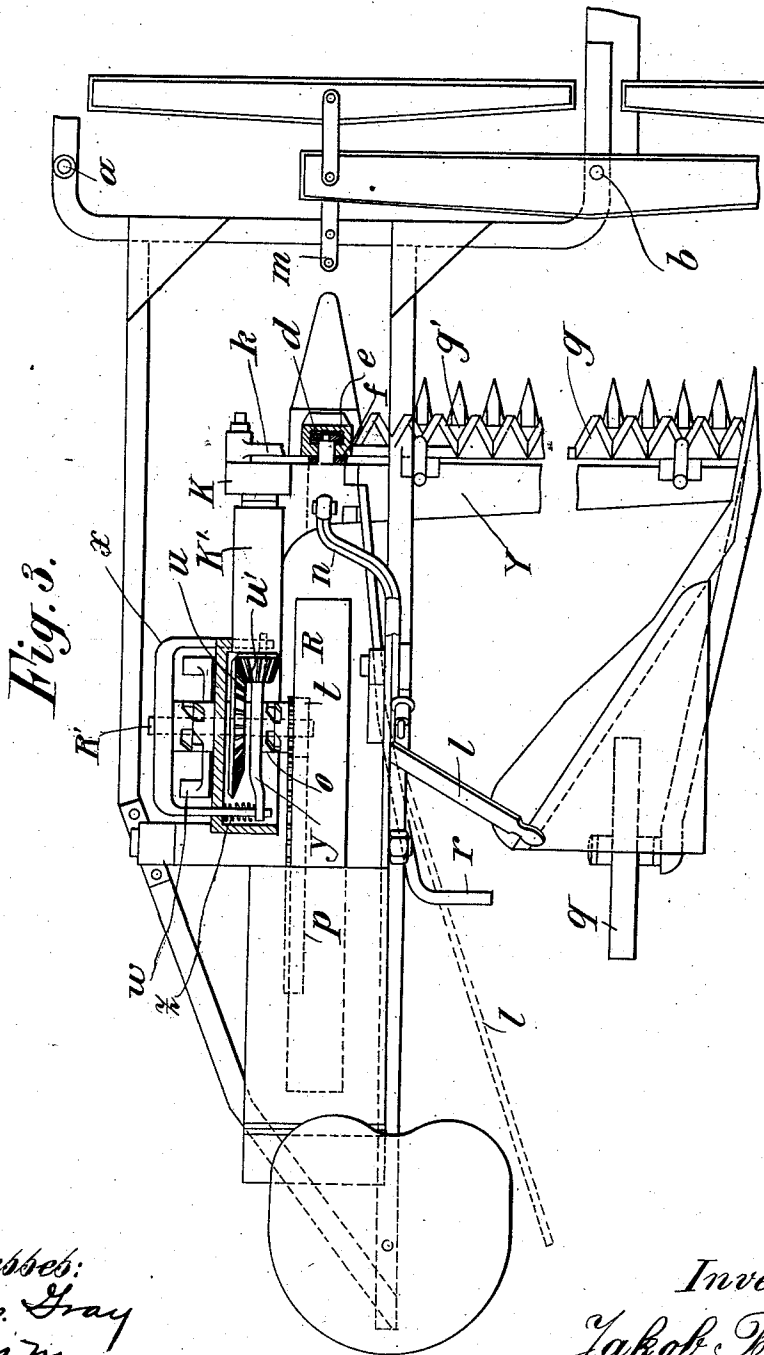
Inventors:
Jakob Botsch & Emil Botsch
J. M. Mue Attorney

J. & E. BOTSCH.
MOWING MACHINE.
APPLICATION FILED JAN. 31, 1911.

992,704.

Patented May 16, 1911.

4 SHEETS—SHEET 3.



Witnesses:
m. e. Gray
F. M. Meyer

Inventors:
Jakob Botsch &
Emil Botsch.
J. M. Muiie Attorney.

J. & E. BOTSCH.
MOWING MACHINE.
APPLICATION FILED JAN. 31, 1911.

992,704.

Patented May 16, 1911.

4 SHEETS-SHEET 4.

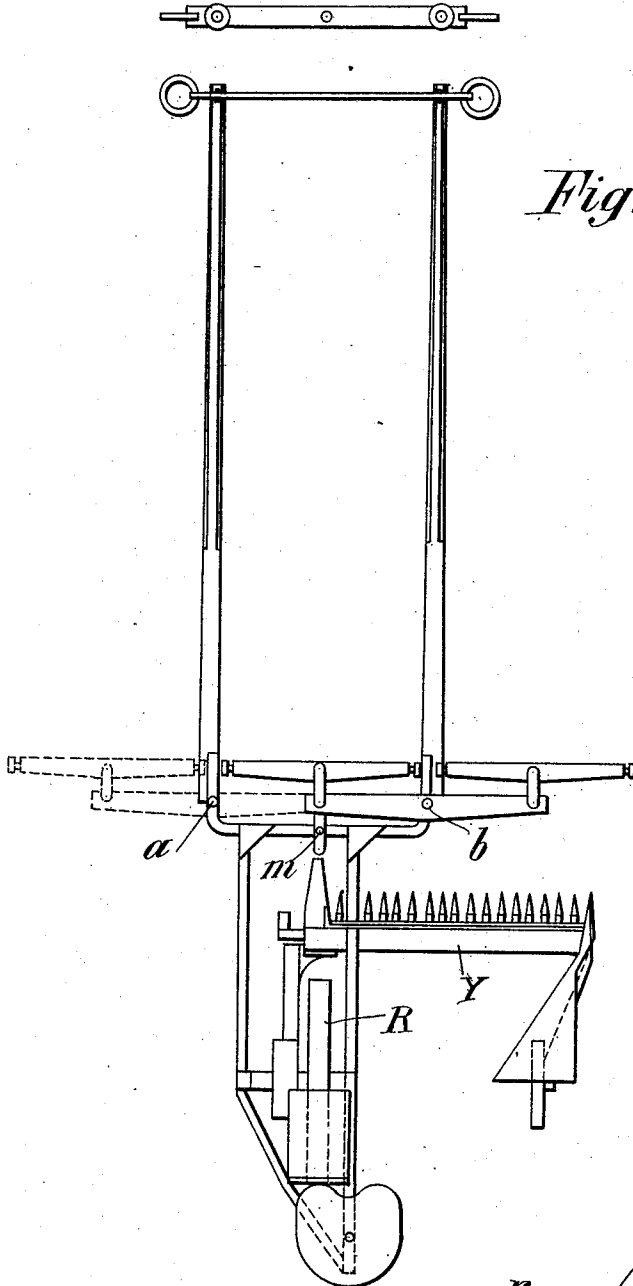


Fig. 13.

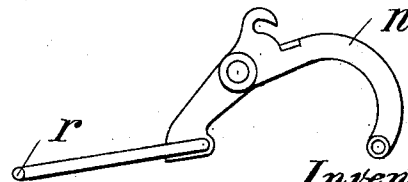


Fig. 12

Witnesses:
W. C. Gray
J. M. Meyer

Inventors:
Jakob Botsch & Emil Botsch
J. M. Meyer Attorney

UNITED STATES PATENT OFFICE.

JAKOB BOTSCH AND EMIL BOTSCH, OF RAPPENAU, GERMANY.

MOWING-MACHINE.

992,704.

Specification of Letters Patent.

Patented May 16, 1911.

Application filed January 31, 1911. Serial No. 605,754.

To all whom it may concern:

Be it known that we, JAKOB BOTSCH and EMIL BOTSCH, both subjects of the German Emperor, and resident of Rappenuau, Germany, have invented certain new and useful improvements in mowing-machines provided with a single driving and rolling wheel and intended to save the preliminary mowing by hand, of which the following is a specification.

This invention relates to improvements in mowing machines of that type wherein a traction wheel at one side of the machine is utilized to operate a single cutting mechanism.

The invention involves novel transmission connections between the drive wheel and the cutting mechanism enabling the latter to be extended in front of the driving wheel, and if desired, even beyond the driving wheel. This novel relation of the cutting mechanism has the advantage of avoiding the necessity of any preliminary mowing by hand, an operation which has heretofore been necessary because, owing to the arrangement of the machines, a strip immediately adjacent the adjoining close could not be mowed without trespassing upon or injuring the said close.

By using draft equalizers of suitable construction any desired number of draft animals may be used without any interference with the objects of the machine, although more than one draft animal will not ordinarily be required.

The invention is illustrated in the accompanying drawings wherein—

Figure 1 is a side elevation of a mowing machine conforming to the invention. Fig. 2 is a front end elevation thereof. Fig. 3 is a detail plan view. Figs. 4 and 5 are side and edge elevations, respectively, of a lever for raising and lowering the cutting mechanism. Figs. 6 and 7, are similar views of a cutter bar connection. Figs. 8 and 9 are side and sectional views respectively of a lever for operating the cutting mechanism. Figs. 10 and 11 are detail views of a connection between the lever and the said cutter bar connection. Fig. 12 is a detail view of an element of the connections for raising and lowering the cutting mechanism, and Fig. 13 is a diagrammatic plan view of the machine.

Similar characters of reference designate

corresponding parts throughout the several views.

R indicates a driving wheel, mounted on a shaft supported in the main frame of the machine. Also mounted in the main frame is a short shaft R' provided with a bevel gear *u*, meshing with a bevel pinion *u'* on a shaft K', supported in a stationary arm *x*, fastened to the finger bar *y*. On the outer end of the shaft K', is a crank disk K, having pivoted thereto a connecting link *h*, pivoted at its opposite end to an oscillating lever *h*, pivotally mounted on a pin *h'*, projecting from the stationary arm *x*. The lower end of the oscillating lever *h*, is formed with a segment *f*, and depending ears *f'*, between which is rotatably mounted a block *c*. A cutter head *e*, is attached to the cutter bar, and it is formed with a slot *d*, formed with overhanging flange walls *d'*, at one edge. The rotatable block *c* fits in the slot *d* between the flanges *d'*, one of the ears *f'* fitting in the main portion of the slot *d*, while the companion ear *f'* engages the outer surface of the head *e*, whereby to hold the block *c* in position. The edge surface of the segment *f*, rocks on the upper end *i*, of the block *e* when the oscillating lever operates the cutter bar. When the oscillating lever *h*, is rocked by the disk K, it reciprocates the cutter bar in the usual manner, the block *c*, being guided in the slot *d*, and the segment rocking on the head *e*, serves to reduce the friction between the parts to a minimum. The oscillating lever bearing on the head *e*, tends to press the cutter bar down on the finger plate *g'*, to insure obtaining an effectual cutting operation.

The driving mechanism is thrown into or out of gear in the well known manner by means of a claw ring *o* which is adapted to be shifted longitudinally of the axle on the square hub of the bevel wheel *u*, Figs. 1 and 3, which is loosely mounted on the shaft, the said ring *o* being adapted to engage the claws of the small gear wheel *t*, which continuously meshes with the toothed ring *p* and loosely rotates on the shaft. The claw ring *o* is provided with a circular groove which is adapted to be engaged by a yoke *γ* which is rigidly connected with the claw stirrup which is continuously pressed against the claws of the disengaging lever *w* by means of the springs *z*. When the disengaging lever *w* is rotated, its claws either

engage each other or are removed from each other thus causing the claw ring *o* to be shifted.

The cutting mechanism may be raised by means of a lever for the purpose of the adjustment of the height of the cutting as well as for convenience in mowing and turning the machine, the raising of the cutting mechanism being limited by the frame of the pole of the machine. The said raising is carried out by rotating the adjustable lever *l*, Figs. 4 and 5 and the lever *n*, Fig. 12 in the direction of the arrow shown in Fig. 1, the raising of the cutting mechanism taking place throughout its entire width as it is supported by the bearings which extend from the shafts of the wheels *R* and *q* they being coaxial in order to prevent the carrying wheel *q* from digging the ground when the machine is moved along a curve. The raising is facilitated by the spring *v* of the lever *n* which according to its tension and strength transmits the weight of the cutting mechanism and of the driving mechanism to the pole frame, which pole frame is in turn balanced by the weight of the driver. In a similar manner the raising of the cutting mechanism may be effected by means of the pedal lever *r* which is carried by the lever *n*.

Having now fully described our said invention, what we claim and desire to secure by Letters Patent is:—

1. In a mowing machine, the combination with a finger beam, a reciprocating cutter beam coöperating therewith and a traction

wheel located at one side of the machine in the rear of said beam and serving to operate the cutter beam, of transmission connections between the traction wheel and the cutter beam including an oscillatory lever disposed above the cutter beam and movable in a vertical plane, the lever having a curved segment which rocks upon the cutter beam as the lever oscillates and presses the cutter beam against the finger beam, and an operative connection between the cutter beam and the lower end of said lever.

2. In a mowing machine, the combination with a finger beam, a reciprocating cutter beam coöperating therewith and a traction wheel located at one side of the machine in the rear of said beams and serving to operate the cutter beam, of transmission connections between the traction wheel and the cutter beam including an oscillatory lever disposed above the cutter beam and movable in a vertical plane, the lever having a curved segment which rocks upon the cutter beam as the lever oscillates and presses the cutter beam against the finger beam, the lever having an extension below the segment and a block pivoted on the extension, and a head associated with the cutter beam and provided with a slot in which the block works.

In testimony whereof we have hereunto set our hands in presence of two witnesses.

JAKOB BOTSCH.

EMIL BOTSCH.

Witnesses:

A. O. TILLMANN,
SAM. H. SHANK.