

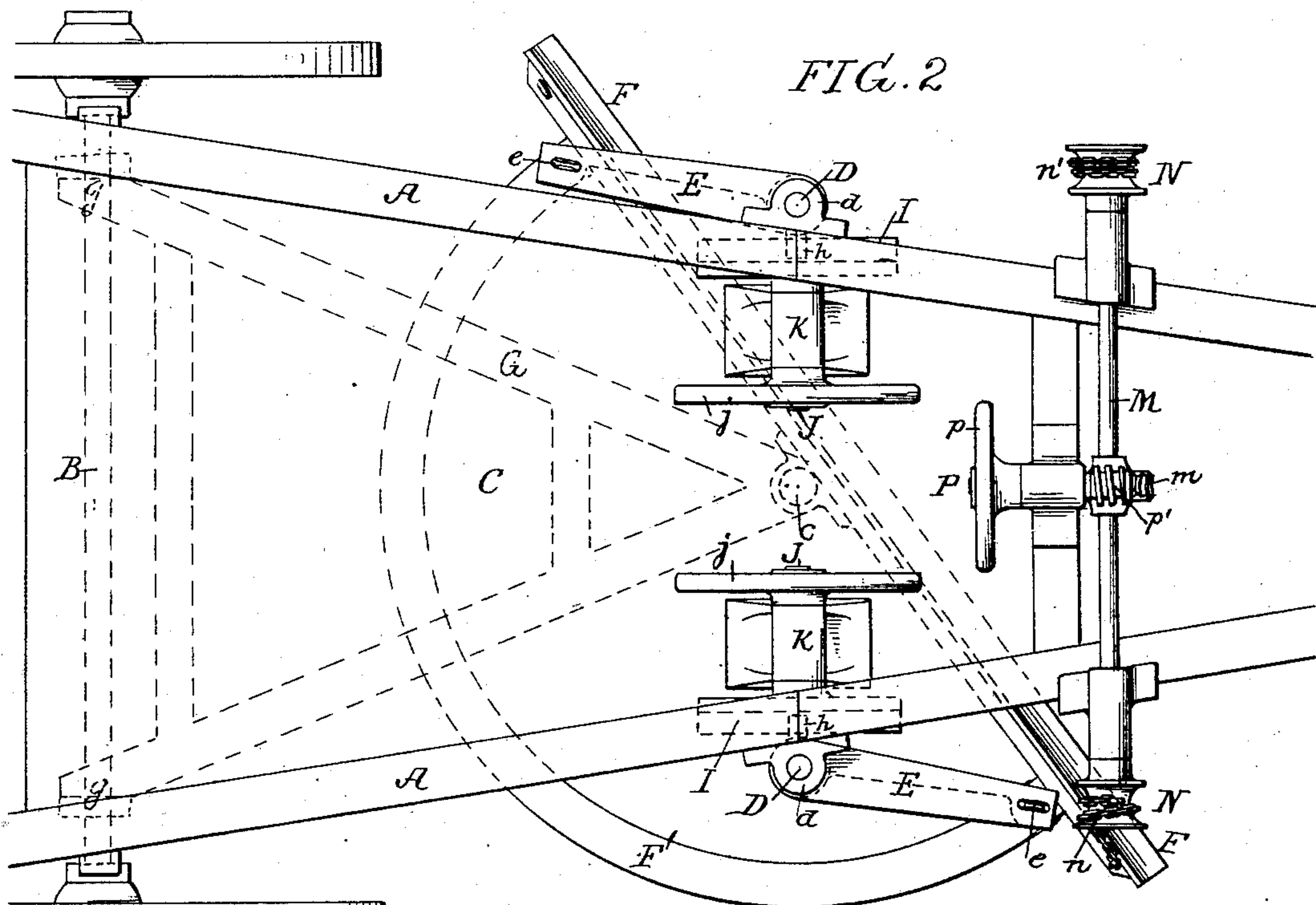
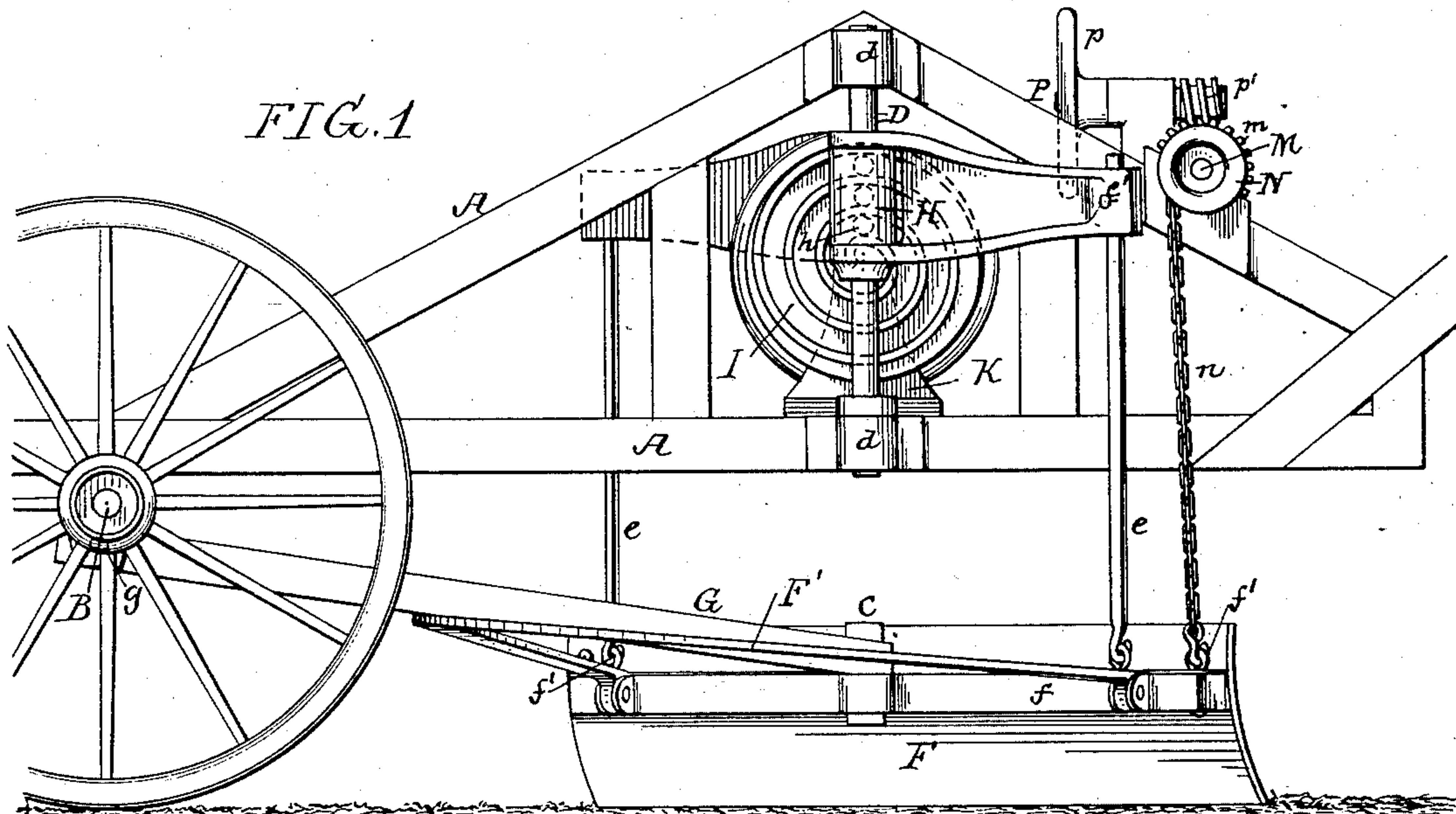
(No Model.)

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ROAD SCRAPING MACHINE.

No. 367,659.

Patented Aug. 2, 1887.



Witnesses  
John E. Parker  
Alex. Barkoff

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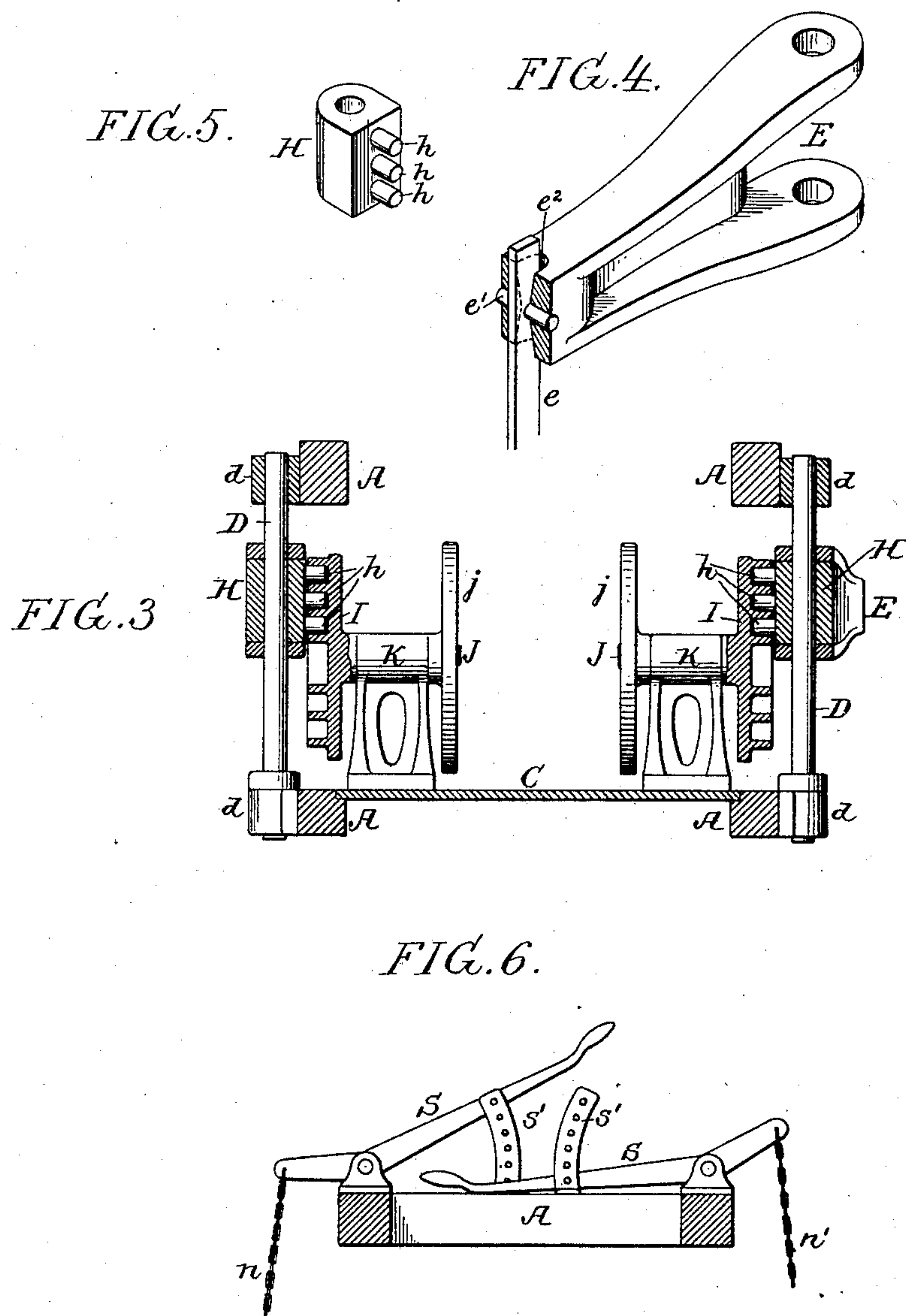
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# UNITED STATES PATENT OFFICE.

SAMUEL PENNOCK, OF KENNETT SQUARE, PENNSYLVANIA.

## ROAD-SCRAPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 367,659, dated August 2, 1887.

Application filed April 19, 1887. Serial No. 235,353. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL PENNOCK, a citizen of the United States, and a resident of Kennett Square, Chester county, Pennsylvania, have invented certain Improvements in Road-Scraping Machines, of which the following is a specification.

The object of my invention is to so construct a road-scraping machine that the blade of the same can be readily adjusted and locked in any desired position, a further object being to prevent the forward end or corner of the blade from digging too deeply into the ground.

In the accompanying drawings, Figure 1 is side view of part of a road-scraping machine with my improvements. Fig. 2 is a plan view of part of the machine. Fig. 3 is a transverse section on the line 1 2, Fig. 1, with some of the mechanism in elevation. Figs. 4 and 5 are detached perspective views of portions of the machine, and Fig. 6 is a view illustrating a modification of part of the invention.

A A are the side frames of the machine; B, the rear axle, and C a platform between the side frames, on which platform the operator stands.

D D are vertical standards secured to bearings *d d* on the side frames, and on each side of the machine are arms E E, which are free to slide vertically on the posts D D and also to swing thereupon. From these arms is suspended the scraper-blade F, which extends transversely across the machine, rods *e e*, connected to the outer ends of the arms, being hooked into eyes at the rear of the blade F, which is stiffened, as usual, by a bar, *f*. The blade F is pivoted to a frame, G, beneath the platform C by a pin, *e*, and said frame is pivoted by pins *g* to lugs on the rear axle, B, as shown in Fig. 2, the pin *e* being vertical and the pins *g* horizontal, so that the blade F is free to swing either vertically or in a horizontal plane. A segment, F', on the back of the blade is detachably and adjustably secured to the frame G, the frame and segment being in effect connected together, as in ordinary road-scraping machines of this class. The arms E are adapted to swing to any position required in order to change the angle of the blade F and throw the dirt from right to left or from left to right, as desired.

Between the pivot-lugs *b b* of each arm E is confined a block, H, Fig. 5, which is free to slide on the standard D with the arm.

On the face of each block H are a series of pins or anti-friction rollers, *h*, forming teeth, which enter the slot of a snail, I, secured to a shaft, J, which has its bearings in a frame, K, on the platform C, the inner end of the shaft being provided with a hand-wheel, *j*, by which it is operated. Each hand-wheel J is within easy reach of the operator, and by turning either one or other of the hand-wheels the block H controlled thereby can be raised or lowered by means of the snail, and as the blocks are confined to the arms E, said arms must consequently rise or fall, so as to elevate or depress that end of the scraping-blade carried thereby.

The snails may both be carried by a single shaft if a parallel movement of the blade is all that is required.

In advance of the standards D D, and having its bearings on the frame of the machine, is a transverse shaft, M, provided at the outer ends with chain-drums N N, to which are secured two chains, *n n'*, the lower end of each chain being provided with a hook which can be adapted to an eye, *f'*, near the ends of the scraper-blade, one chain being always hooked to the end of the blade that is foremost. In some cases the chain may be detachably secured to the drum N. As shown, the chain *n* is attached to the foremost end of the blade and serves as a check-chain to prevent this end from nosing too deeply into the ground, the opposite chain, *n'*, hanging loosely or being hung upon a hook on the frame.

The shaft M is operated by a shaft, P, having a hand-wheel, *p*, and worm *p'*, the latter gearing with a worm-wheel, *m*, on the shaft M, so that no matter to what position the shaft M is turned it will always be locked by the worm, and the end of the blade controlled by the chain will thus be held in position and prevented from nosing into the ground.

The shaft P has its bearings in a bracket on a cross-brace secured to the side frames of the machine, and the hand-wheel *p* is within reach of the attendant.

In the modification shown in Fig. 6 levers S take the place of the chain-drums and their



operating mechanism, these levers being retained in position by means of pins adapted to openings in segments S'.

Referring to Fig. 4, which is a perspective view of one of the arms E, it will be seen that the rod or bar *e* is secured to the arm by a pin, *e'*, and the orifice *e<sup>2</sup>*, in which the bar rests, is larger at its two ends than at the middle. This enlargement of the orifice allows the rod or bar *e* to have sufficient play in the arm E when the blade F is adjusted from one position to another.

I claim as my invention—

1. The combination, in a road-scraping machine, of the upright standards having arms carrying the scraping-blade, toothed blocks confined to said arms and guided on the standards, snails to which the teeth of the blocks are adapted, and mechanism for operating said snails, all substantially as set forth.

2. The combination, in a road-scraping machine, of the frame having vertical standards, arms hung thereto and carrying the blade, toothed blocks confined to the arms and sliding on said standards, and snails engaging with said toothed blocks and carried by independent shafts provided with hand-wheels, all substantially as specified.

3. The combination, in a road-scraping machine, of the scraping-blade, and mechanism for raising and lowering said blade, with a supplementary checking-chain attached to the forward end of the blade and to an adjustable retaining device on the frame of the machine, substantially as and for the purpose specified.

4. The combination of the transverse shaft and operating and locking mechanism therefor, a chain-drum at each end of the shaft, chains connected thereto, and a scraping-blade to the ends of which the chains can be secured, as and for the purpose set forth.

5. The combination, in a road-scraping machine, of the arm E, having a flaring orifice, *e<sup>2</sup>*, with a bar, *e*, resting in said orifice, and secured to the arm by a pin, *e'*, substantially as and for the purpose set forth.

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

SAMUEL PENNOCK.

Witnesses:

JOHN OCHELTREE,  
WILLIAM W. POLK.