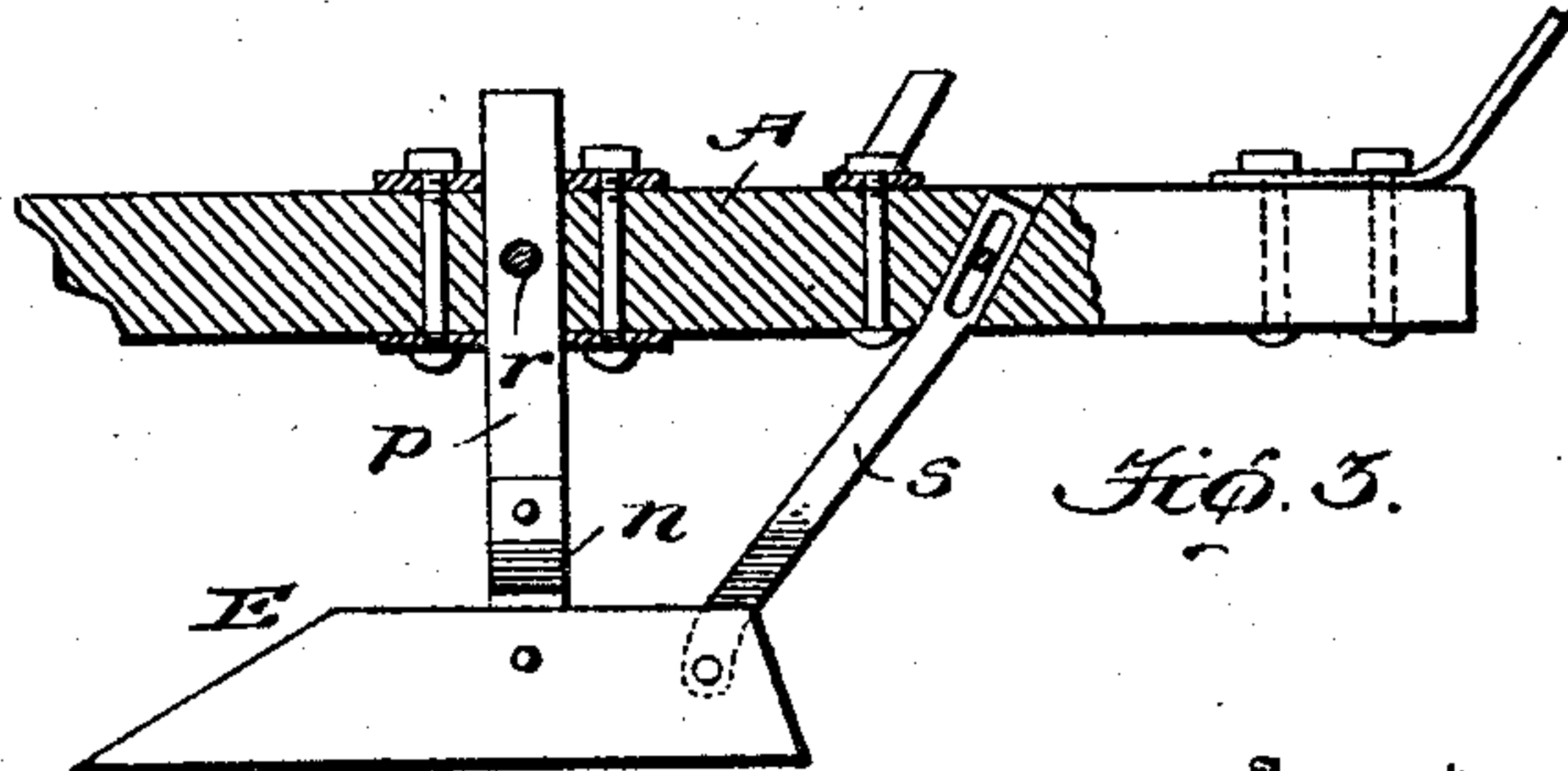
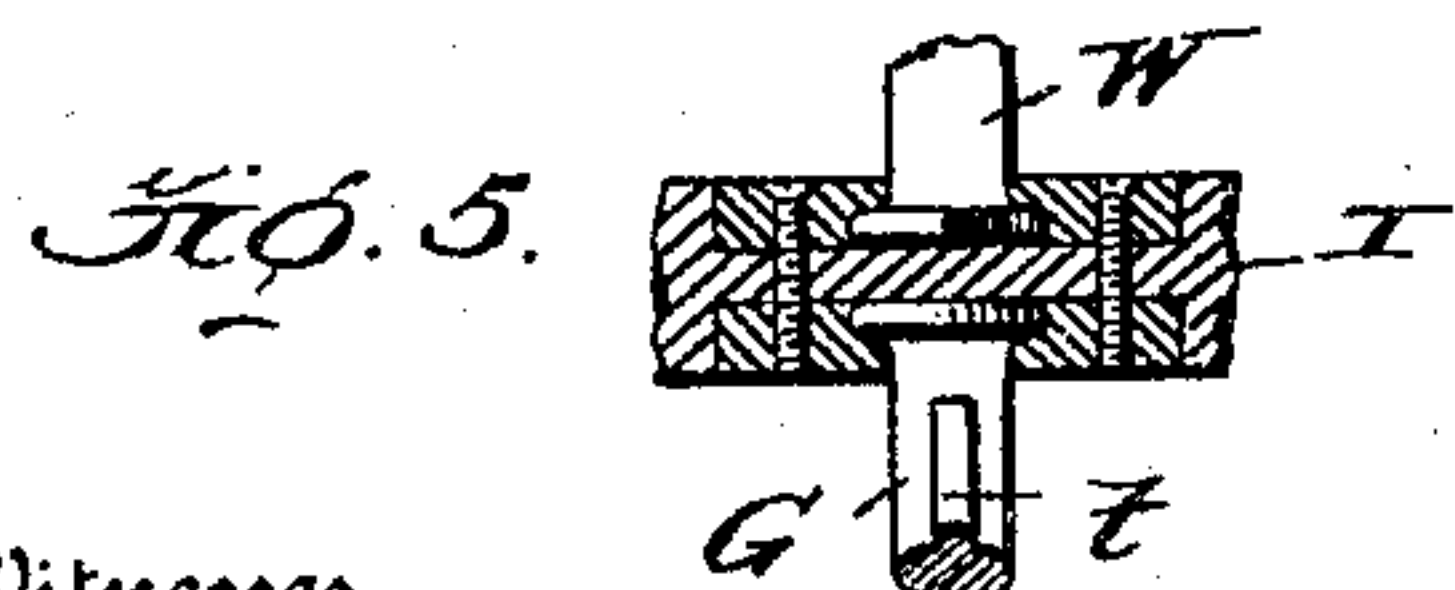
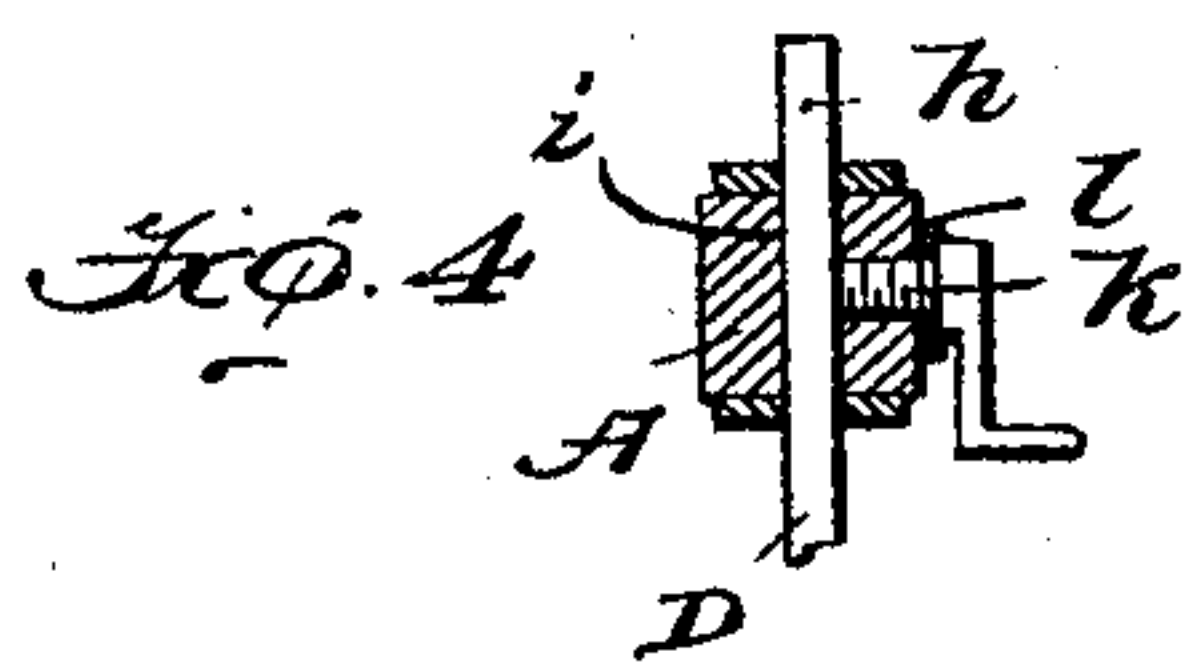
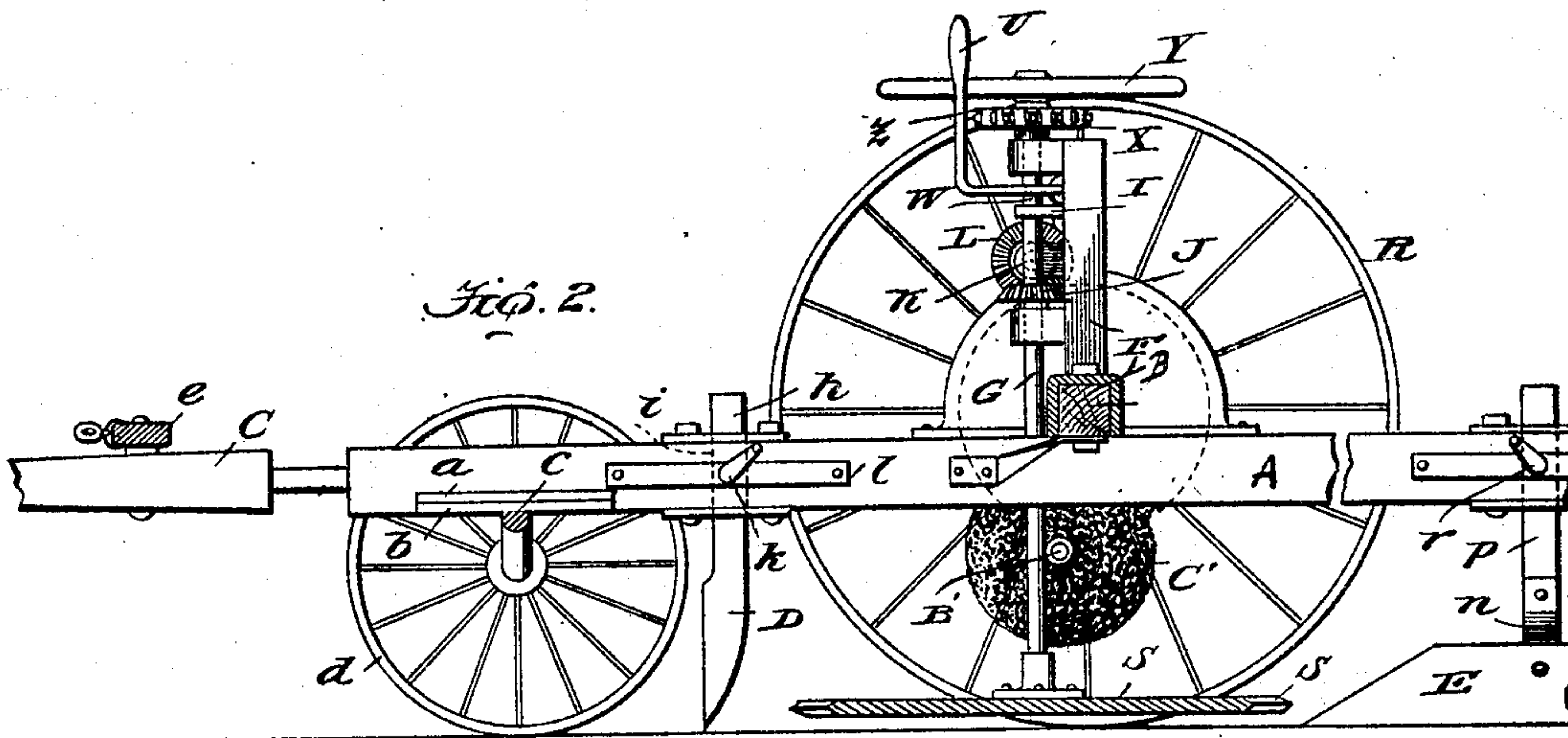
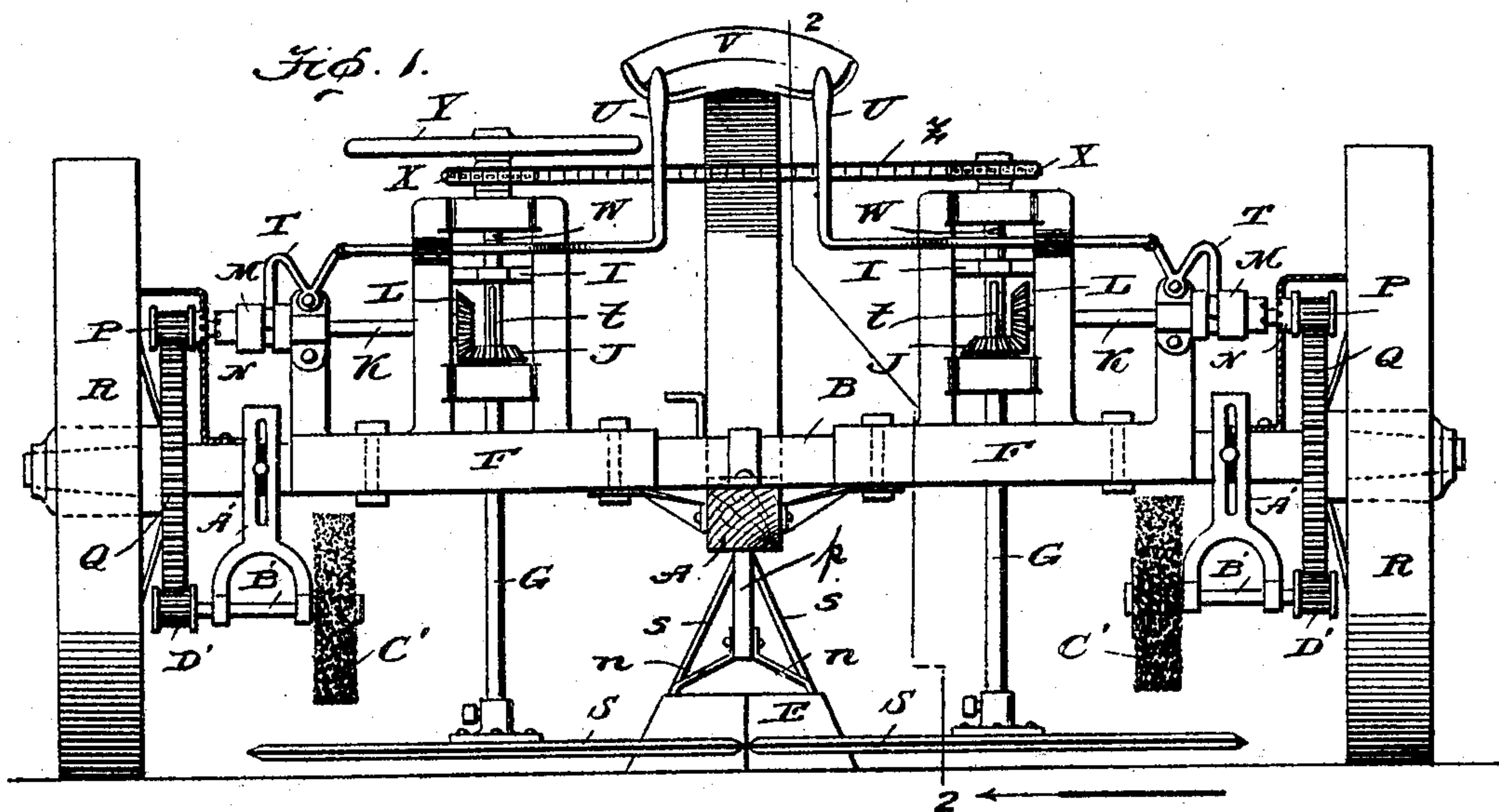


No. 795,686.

PATENTED JULY 25, 1905.

P. CAFFAREL.
STUBBLE SHAVER.

APPLICATION FILED APR. 24, 1905.



Inventor

Witnesses

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PAUL CAFFAREL, OF SUNSHINE, LOUISIANA.

STUBBLE-SHAVER.

No. 795,686.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PAUL CAFFAREL, a citizen of the United States, residing at Sunshine, parish of Iberville, and State of Louisiana, have invented new and useful Improvements in Stubble-Shavers, of which the following is a specification.

My invention pertains to stubble-shavers; and it has for one of its objects to provide a stubble-shaver which while highly efficient in operation and light of draft is simple and inexpensive in construction and is well adapted to withstand the usage to which stubble-shavers are ordinarily subjected.

Another object of the invention is the provision in a stubble-shaver of means whereby the knives may be quickly and thoroughly sharpened when they become dull without effort on the part of the operator other than the effort required to adjust the knives into engagement with the sharpening or grinding wheels.

Other objects and advantages of the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a transverse section of the stubble-shaver constituting the present and preferred embodiment of my invention, the said section being taken in a plane immediately in rear of the colter and looking rearwardly. Fig. 2 is a broken section taken on the line 2 2 of Fig. 1 looking toward the left. Fig. 3 is a view, partly in side elevation and partly in vertical section, of the rear part of the beam of the machine and the parts carried thereby. Fig. 4 is a detail section, on an enlarged scale, illustrative of the manner in which the shanks of the beam appurtenances are adjustably fixed with respect to the beam; and Fig. 5 is an enlarged detail section illustrative of the manner in which the knife-shafts and the threaded rods for raising the knives are connected.

Similar letters designate corresponding parts in all of the views of the drawings.

Referring to the drawings, A is the beam of my novel machine. The said beam is fixedly connected at an intermediate point of its length to an axle B and is provided adjacent to its forward end with a fifth-wheel member *a*, Fig. 2. This fifth-wheel member *a* is arranged on and connected with a complementary fifth-wheel member *b*, carried by an axle *c*, which has drop portions adjacent to its ends

and terminates in spindles, on which are mounted forward or guiding wheels *d*, only one of which is illustrated. In front of the beam A is disposed a tongue C, which is equipped with the conventional or any other suitable doubletree *e* and is connected with the axle *c* in the conventional or any other suitable manner.

D is a colter carried by the beam A and disposed about the proportional distance illustrated in rear of the forward axle *c*. The said colter is provided with a shank *h*, which extends up through an aperture *i* in the beam and is adjustably fixed with respect to the said beam by a screw *k*, which bears in a plate *l* on one side of the beam after the manner illustrated in Figs. 2 and 4. In virtue of this construction it will be observed that the colter may be readily raised or lowered and as readily fixed with respect to the beam to suit it to the conditions under which the shaver is to be operated.

E, Figs. 1 and 3, is a V-shaped plow, which has for its purpose to clear the row subsequent to the shaving of the stubbles therein. This plow is pivoted to a yoke *n*, carried at the lower end of a shank *p*, which extends through an opening in the beam A and is adjustably fixed thereto through the medium of a set-screw *r*. The plow also has its rear portion connected in a pivotal manner to braces *s*, which extend up to and are loosely connected to the beam A after the manner shown in Fig. 3. From this it follows that the plow is free to rock within certain limits on the yoke *n*, so as to accommodate itself to uneven ground and operate to the best advantage.

F F are castings disposed on and connected to the axle B and adjustable in the direction of the length of said axle for a purpose presently set forth. G G are vertical shafts journaled in the castings F and having feathers *t* on their upper portions and also having their upper ends swiveled in cross-heads I, movable vertically in the castings F. J J are miter-gears mounted on the shafts G and having grooves receiving the feathers *t* thereof. K K are transverse shafts journaled in suitable bearings carried by the castings F and carrying miter-gears L, intermeshed with the gears J, and also carrying endwise movable clutch members M. N N are clutch members loosely mounted on the shafts K and fixed with respect to pinions P, and Q Q are spur-gears connected to the spokes of rear traveling wheels R, mounted on the axle B and

intermeshed with the pinions P. In virtue of this construction it will be observed that when the clutch members M, which are keyed on the shafts K, are moved into engagement with the complementary clutch members N rotary motion will be transmitted from the traveling wheels R to knives S on the lower ends of the shafts G through the medium of the spur-gears Q, pinions P, the shafts K, the intermeshed miter-gears L and J, and the shafts G. To enable the driver of the machine to conveniently stop or start the rotation of either of the knives S, as occasion demands, I provide bell-crank levers T in engagement with the clutch members M and handle-rods U extending through suitable guides on the castings F and connected at one end to the levers T and having their opposite ends disposed within convenient reach of the driver's seat V, which is connected with the beam A, as best shown in Figs. 1 and 3.

W W are threaded rods extending loosely through the upper ends of the castings F and having lower square ends secured in the cross-heads I after the manner best shown in Fig. 5.

X X are sprocket-gears disposed upon the castings F and having threaded apertures receiving the rods W.

Y is a horizontally-disposed hand-wheel arranged on and fixedly connected to one of the sprocket-gears X, and Z is a sprocket-belt connecting the said sprocket-gear X and the other sprocket-gear.

When the hand-wheel Y is turned by the driver of the machine in one direction, the threaded rods W will be raised and will carry with them the cross-heads I, the shafts G, and the knives S, so as to raise the latter above the ground to permit of the machine being readily moved along a road from place to place. It will also be observed that when the hand-wheel Y is turned in the opposite direction the rods W will be moved downwardly, as will also the cross-heads I, the shafts G, and the knives S.

In virtue of the castings F being adjustable on the axle B in the direction of the length of said axle, as before mentioned, it will be observed that wear of the knives S may be taken up and the usefulness of the knives thereby materially prolonged.

In the practical operation of my novel machine it will be observed that when the colter D, the knives S, and the plow E are properly adjusted relative to the ground and the machine is drawn across a stubble-field the colter will loosen the earth in advance of the knives, the knives in turn will shave the stubbles, and the plow E, following the knives, will clear the row subsequent to the shaving of the stubbles. It will also be observed that incident to the operation of the machine the driver on the seat V is enabled to quickly and easily throw either of the knives S into or out of operation, as necessity demands.

In order to sharpen the knives S when sharpening thereof is necessary, I provide hangers A', adjustably connected to the axle B, and shafts B', journaled in the said hangers and provided with grinding wheels or stones C' and spur-pinions D'. The spur-pinions D' normally rest out of engagement with the spur-gears Q, this in order to prevent unnecessary wear of the said spur-gears Q and the pinions D' during the ordinary operation of the machine. When, however, the knives S are to be sharpened, the hangers A' are raised and adjustably fixed with respect to the axle, so as to hold the pinions D' in mesh with the gears Q, as shown in Fig. 1. The knives S are then raised, through the medium of the devices before described, until their upper sides are presented to the perimeters of the grinding wheels or stones C'. With this done the machine is set in motion, when, as will be readily appreciated, the knives S will be ground and sharpened, and this without effort on the part of the driver of the machine.

It will be gathered from the foregoing that my novel stubble-shaver is simple and inexpensive in construction and is well adapted as a whole to withstand the rough usage to which stubble-shavers, are ordinarily subjected.

I have specifically described the construction and relative arrangement of the parts comprised in the present embodiment of my invention in order to impart a definite understanding of the said embodiment. I do not desire, however, to be understood as confining myself to the said specific construction and relative arrangement of parts, as such changes and modifications may be made in practice as fairly fall within the scope of my invention as claimed.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a stubble-shaver, the combination of a frame comprising a longitudinal beam and an axle fixed with respect to said beam, traveling wheels carried by the said axle, horizontally-disposed knives carried by the frame, driving connections intermediate of the traveling wheels and the knives for driving the latter by the former, a colter having a shank vertically disposed in the beam of the frame; said colter being arranged in advance of the knives, a set-screw bearing in the beam and engaging the colter-shank to adjustably fix the colter with respect to the beam, a plow disposed in rear of the knives, a shank pivoted to the plow and disposed in a vertical aperture in the beam, a set-screw bearing in the beam and engaging the plow-shank, and braces interposed between the plow and the beam and loosely connected to the latter.

2. In a stubble-shaver, the combination of a frame, wheels supporting the same, castings mounted on the frame, cross-heads movable

vertically in the castings, vertically-movable shafts arranged in the castings and having their upper ends swiveled in the cross-heads, gears keyed on the said shafts, driving connections intermediate of the traveling wheels and the said gears, threaded rods connected to and extending upwardly from the cross-heads, sprocket-gears having threaded apertures receiving the threaded rods, a sprocket-belt connecting the sprocket-gears, a hand-wheel fixed with respect to one of the sprocket-gears, and horizontally-disposed knives carried by and movable with the shafts.

3. In a stubble-shaver, the combination of a frame, wheels supporting the frame, vertical shafts carried by the frame, horizontally-disposed knives carried by the shafts, spur-gears fixed with respect to the traveling wheels, miter-gears arranged to transmit motion to the vertical shafts, horizontal shafts having miter-gears intermeshed with the first-mentioned miter-gears, pinions loosely mounted on the horizontal shaft and intermeshed with the spur-gear, clutch members fixed with respect to said pinions, complementary clutch members keyed on and movable lengthwise of the horizontal shafts, and means connected with the last-mentioned clutch members for moving the same on the horizontal shafts.

4. In a stubble-shaver, the combination of a

frame, wheels supporting the same, spur-gears fixed with respect to the said wheels, horizontally-disposed rotary knives carried by and movable vertically with respect to the frame, connections between the spur-gears and the knives for driving the latter by the former, means for raising and lowering the knives, hangers adjustably connected to the frame, and shafts journaled in the said hangers and bearing pinions arranged to be intermeshed with the spur-gears, and also bearing grinding-wheels arranged to engage the knives.

5. In a stubble-shaver, the combination of a frame, wheels supporting the same, horizontally-disposed rotary knives carried by and movable vertically with respect to the frame, connections between the wheels and the knives for driving the latter by the former, means for raising and lowering the knives, wheels for grinding the knives, and connections intermediate of the first-mentioned wheels and the grinding-wheels for driving the latter by the former.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

PAUL CAFFAREL.

Witnesses:

J. A. BARTHEL,

CLARENCE HOFFMAN.