(No Model.)

N. WETZEL.

PITMAN CONNECTION.

No. 549,554. Patented Nov. 12, 1895.

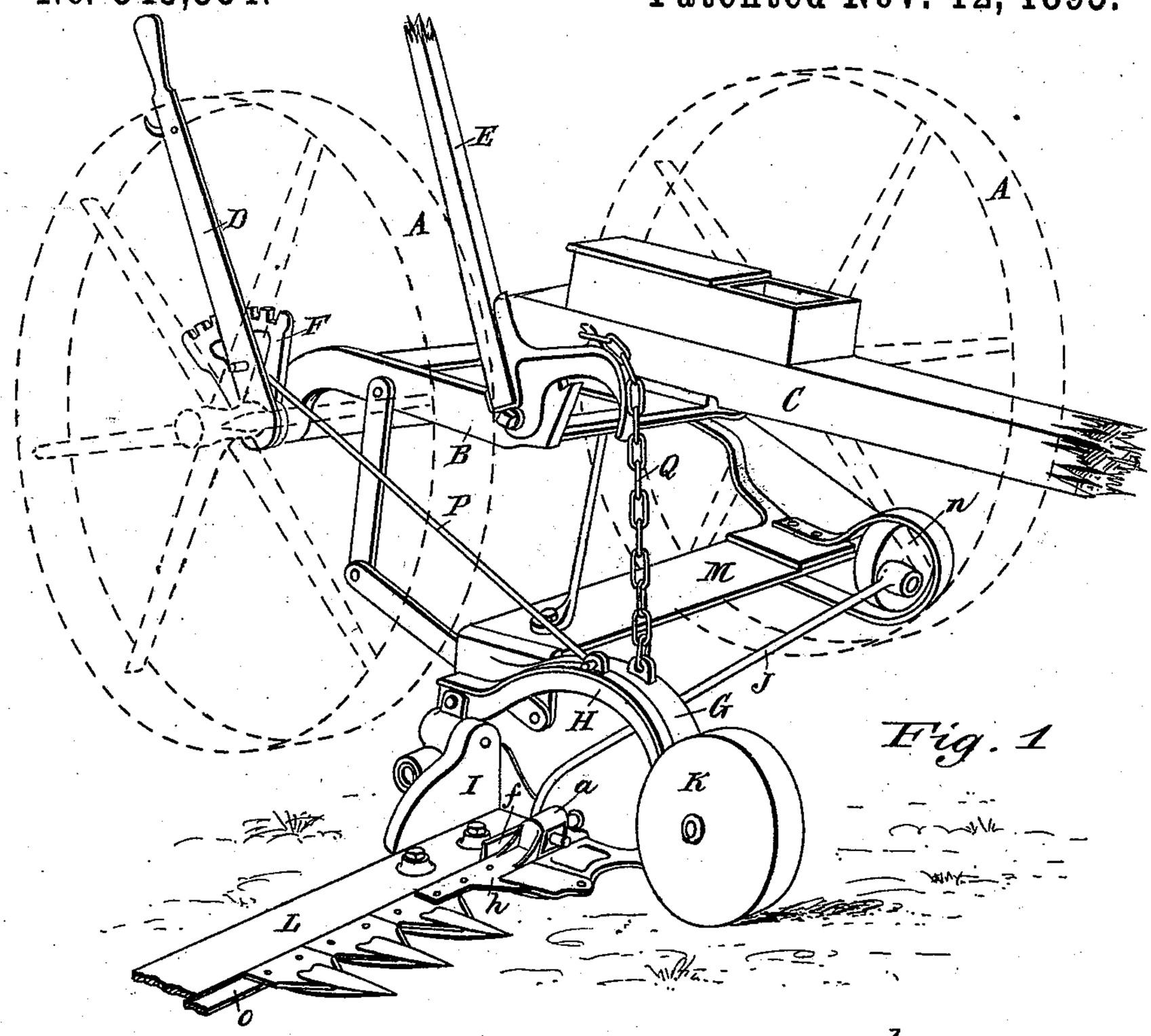

Fig. 1

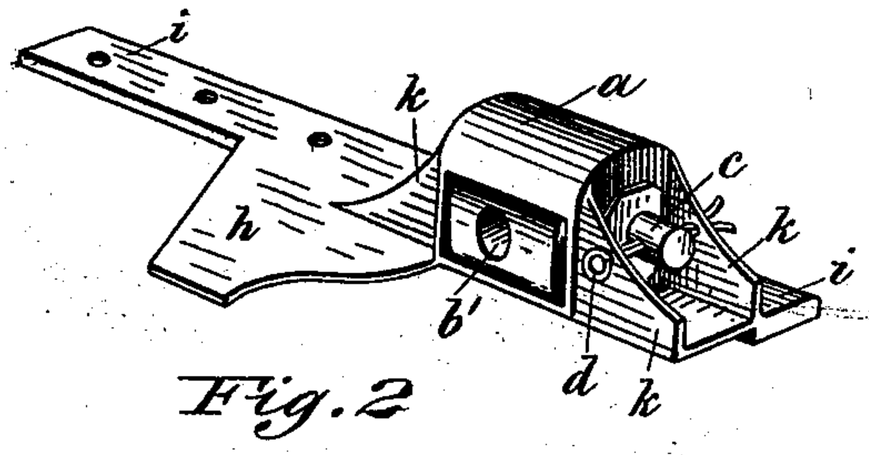

Fig. 2

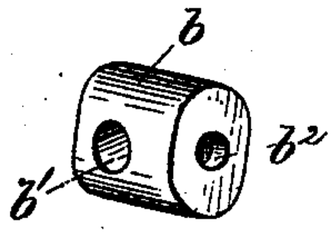

Fig. 3

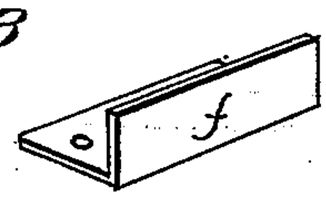

Fig. 6.

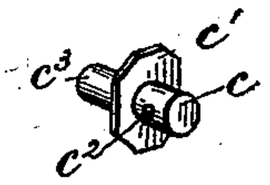

Fig. 5

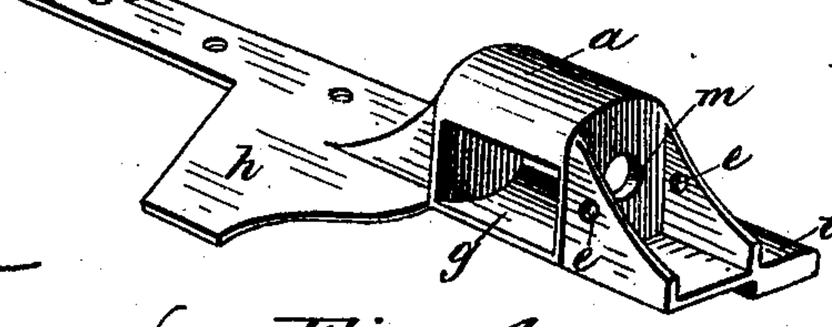

Fig. 4

WITNESSES.

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PITMAN CONNECTION.

SPECIFICATION forming part of Letters Patent No. 549,554, dated November 12, 1895.

Application filed September 14, 1889. Serial No. 323,917. (No model.)

To all whom it may concern:

Be it known that I, NATHAN WETZEL, of the city of Abilene, county of Dickinson, in the State of Kansas, have made certain new and useful Improvements in Scythe-Eyes and Pitman Connections for Harvesting-Machines; and I do declare the following to be a full, clear, and accurate description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a view in perspective of my device as applied to a mowing-machine, showing such parts of the mowing-machine as are necessary to illustrate the manner of its application. Fig. 2 is a view in perspective of the scythe-head and the movable block to which the lower end of the pitman is attached. The scythe-head forms a part of the knife, being riveted onto the back of the knife. Fig. 3 is a view in perspective of the movable block. Fig. 4 is a view in perspective of the knife-head with the block removed. Fig. 5 is a view in perspective of the pin which serves to hold the block in place when the knife is removed from the machine or the pitman is removed from connection with the block. Fig. 6 is a perspective view of the guide-piece used to retain the end of the pitman connected to the movable block.

The nature and object of my invention are to provide a simple form of connection between the crank and the reciprocating knife-heads of harvesting-machines such as will allow for the pivotal movement of the pitman as it is moved by the crank-wheel and also for the tilting movement of the knife-head and cutter-bar independent of the pitman. I also provide a substantial bearing for the pitman in the knife-head and make such bearing removable, whereby it may be replaced when worn to avoid the use of screws, bolts, or rivets in connecting the pitman to the knife-head, and a guide and holding plate which will retain the pitman in place.

Referring to the drawings, A A, Fig. 1, represent the driving-wheels of a mowing-machine in dotted lines; C, the pole by which the machine is drawn, fastened to the draft-frame B, which draft-frame is hinged to the axle of the machine between the wheels, and on which the driver's seat is mounted. The driver's seat is not shown in the drawings.

E is a lever within reach of the driver, by means of which, through a chain connection with the portion G of the main shoe, the cutting apparatus and its carrying-frame can be raised from the ground. The lever D, also located within reach of the driver and pivoted on the axle or some other convenient part of the machine, serves through its connection to one portion of the main shoe H, by means of the rod P, to tilt the finger-bar L and with it the cutter-bar *o*, thus causing it to rock or roll in the line of its length. The portion of the shoe H to which the rod P is attached is hinged to the other portion G to which the chain is attached, and that portion of the shoe to which the finger-bar is fastened is attached to the hinged portion. It is plain that when the lever D is moved forward or back the points of the guard-fingers and the cutters will be tilted downwardly or upwardly, as the case may be. It is also plain that when this tilting motion takes place the pitman J, being fastened by means of a straight and fixed bearing upon the pin on the crank-wheel *n* at its upper end, must have means provided at its lower end to permit it to turn freely or the pitman would bind or cramp and stop the machine. The straight connection of the pitman with the revolving crank-wheel is much more simple and more durable than the use of a ball-and-socket joint and can be made much lighter, and the lighter the connection the less power will be consumed in driving it, and as the crank-wheel runs very fast much power will be saved.

I provide the scythe-eye with a projection *a*, which is preferably cast thereon and which is hollow, having a curved top and bottom and made long enough to receive a block *b*, which also has its top and bottom surfaces curved to fit the interior curved surfaces of the part *a* of the knife-head. The block *b* is oblong in shape as to its cross-section, so that one diameter is much less than the other diameter at right angles to it; or, in other words, if it is made cylindrical in cross-section and a segment cut off on two opposite sides the

same result is obtained. The part *a* of the knife-head has an opening *g* of sufficient size to receive the block *b* when the block *b* is turned down flatwise. When this block is inserted in the opening and then turned one-quarter over, the curved surfaces of the block will fit the upper and lower interior curved surfaces of the opening, so as to form a bearing, and the block being of proper length its ends will abut against the interior end walls of the opening in the scythe-head and sufficiently snug to prevent endwise movement. The block being thus inserted and turned one-quarter around, the hole *b'* comes in proper position to receive the hook end of the pitman J. When the bar is turned or tilted in either direction, the block will turn in the cavity in the scythe head or eye. Behind the pitman J is fastened to the finger-bar a guide-piece *f*, which will hold the pitman in place, and when the guide is removed the hook end of the pitman can be sprung out. The block then can be turned one-quarter around, so that its shortest diameter will be opposite the opening and will then readily slip out, so that when it has become worn from use a new block can be inserted at a very trifling cost. The part *a* of the knife-head being made in one piece—that is, the two end walls connected together—is very strong and will stand a great strain, whereas if these walls were not connected together, but were simple projections, the strain of the pitman would soon push them apart. The end walls may be braced by brackets *k*. *c*, Fig. 5, is a pivot-pin with a stop *c'* at or about in its center. The block *b* is provided with a hole b^2, which matches a corresponding hole *m* in the part *a* of the knife-head and the brackets. One end of the knife-head is perforated with holes *e*, through which a spring-key passes and also passes through a portion of the pin *c*, as shown in Fig. 2. The object of this device is to prevent the block *b* from being lost out when the finger-bar or cutter-bar is removed from the machine. Any other device, like a set-screw, would answer the same purpose.

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

A pitman connection comprising a hollow cylindrical scythe-head having an end hole, a bearing block having flattened sufaces, a transverse perforation to receive the pitman, and an end hole, a pivot pin for the end of the bearing block, and a guide piece to hold the pitman in the bearing block, substantially as described.

NATHAN WETZEL.

Witnesses:
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