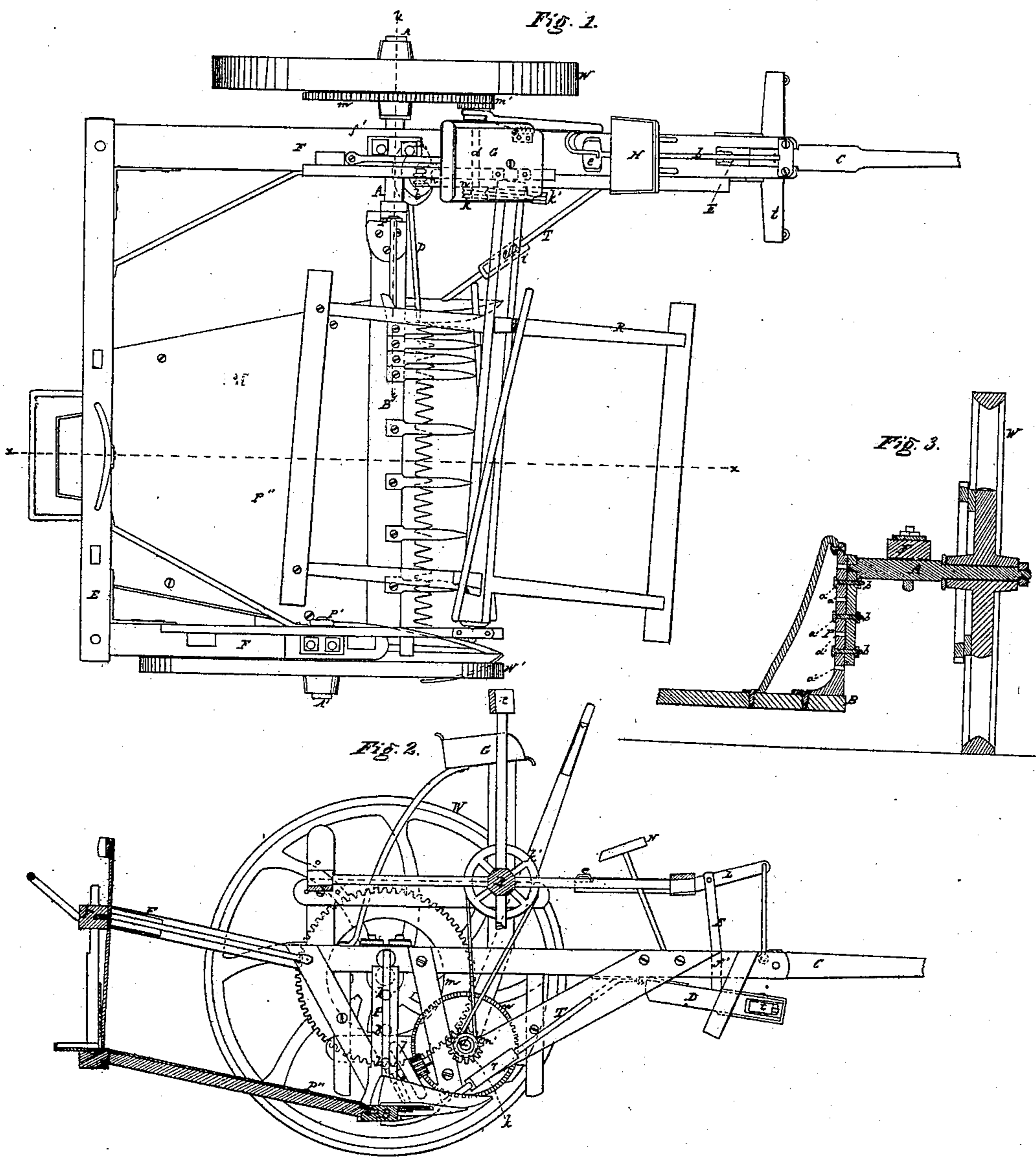


S. WILLIAMS.  
HARVESTER.

No. 20,600.

Patented June 15, 1858.



# UNITED STATES PATENT OFFICE.

S. WILLIAMS, OF STOCKTON, CALIFORNIA.

## IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 20,600, dated June 15, 1858.

*To all whom it may concern:*

Be it known that I, S. WILLIAMS, of Stockton, in the county of San Joaquin and State of California, have invented a new and useful Improvement in Harvesters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, forming part of this specification, in the several figures of which similar characters of reference denote the same part.

Figure 1 is a top view of the machine. Fig. 2 is a vertical section on  $x x$ . Fig. 3 is a vertical section on  $y y$ .

My invention has reference to the manner of adjusting the cutting apparatus and platform vertically, and to the manner of giving a temporary elevation to the cutting apparatus for the passage of obstacles. The details of construction and operation will readily be understood from the following description and reference to the drawings.

In this machine the cutting apparatus and platform are hung between a pair of large wheels,  $W W'$ , the former of which gives motion to the cutting apparatus and reel  $R$ . These wheels are attached to short axles  $A A'$ , secured to the frame  $F$ , and bent downward to receive the suspension-pieces of the finger-bar  $B$ , as shown in Fig. 3. The suspension-pieces  $P P'$  have a series of holes,  $a a'$ , through which bolts  $b b$  pass to secure them to the axle. By removing the bolts from the holes  $a$  and passing them through the holes  $a'$  and the same holes of the axle-arm the cutter-bar will be elevated. Having a number of these sets of holes, the vertical position of the cutter-bar may be adjusted to any desired elevation.

The platform  $P''$  rests in front upon the finger-bar  $B$ , and is supported in rear from the cross-bar of frame  $F$ .

The pole  $C$  runs forward from frame  $F$ . Beneath side piece of frame  $F$  is hinged a draft-piece,  $D$ , in the end of which is a double-tree,  $t$ , to which the team is attached, and by which the machine is drawn forward. This piece  $D$  has a standard,  $E$ , the head of which forms the fulcrum of a lever,  $L$ , attached at one extremity to the frame  $F$ , and the other provided with a shoe,  $e$ . The driver, who is seated at  $G$ , removes his foot from rest  $H$  and de-

presses long arm of lever  $L$ . This produces the elevation of the front of the frame  $F$ , and with it the elevation of the cutters.

The cutter-bar  $f$  is reciprocated from the forward movement of wheel  $W$  by the combination of gear-wheels  $m n m' n'$ , the wheel  $m$  on the main shaft and  $m'$  meshing with it. Wheel  $n$  is on the same shaft as  $m'$ , and meshes with  $n'$ , the cutter-bar being connected eccentrically with the wheel  $l$  on same shaft by pitman  $p$ . The reel  $R$  is also driven from shaft  $d$  by band-connection between pulleys  $k k'$ . The forward portion of the side piece,  $f'$ , of frame  $F$  is connected with the finger-bar by a brace,  $T$ , made up of two sections connected by a swivel-link,  $r$ . This brings the draft directly upon the finger-bar, and the swivel-link serves to keep the finger-bar in its proper position relative to the frame  $F$ .

The effect of the construction of machine above described is to suspend the cutting apparatus in an adjustable manner between two large wheels, with nothing near the ground except the finger-bar, which, by means of the device before described for lifting the front of the frame, is made to turn readily about the axis of suspension and facilitate the passage over cradle-knolls without any portion of the machine coming in contact therewith.

Having described my invention and the operation thereof, I claim—

1. The combination of the draft-piece  $D$ , side piece,  $f'$ , of frame, standard  $E$ , lever  $L$ , and rod connecting the same with the frame, arranged for joint operation, substantially as described.

2. The short axles  $A A'$ , depending arms thereof, suspension-pieces  $P$ , finger-bar  $B$ , and wheels  $W W'$ , connected together, substantially as described, in combination with the aforesaid arrangement for elevating the finger-bar, the whole being constructed, arranged, and operating substantially as and for the purposes set forth.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

S. WILLIAMS.

Witnesses:

GEO. PATTEN,

JOHN S. HOLLINGSHEAD.