W. W. GOLSAN.

Rotary Cultivator.

No 29,877. Patented Sept. 4, 1860.

Fig. 1.

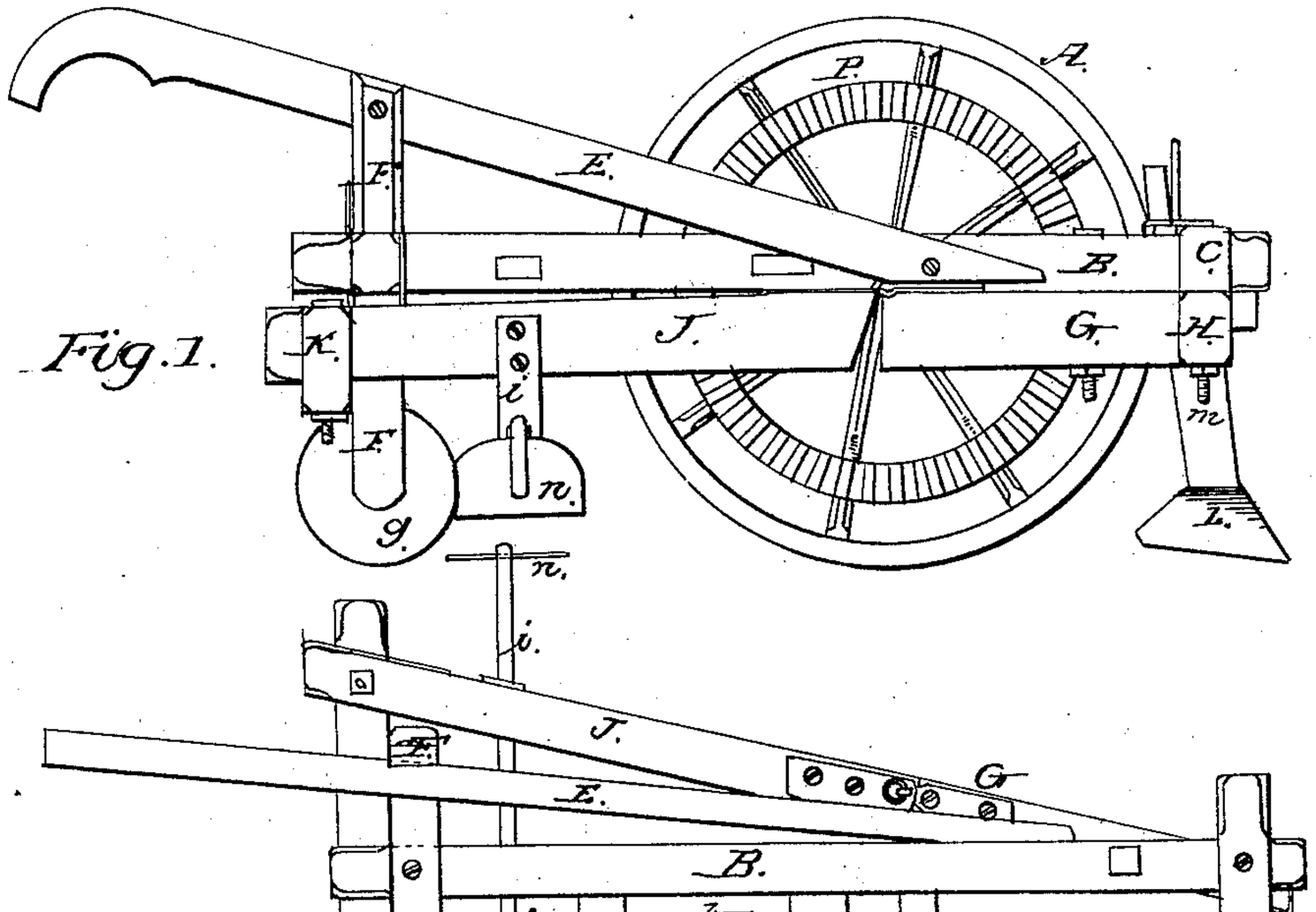

Fig. 2.

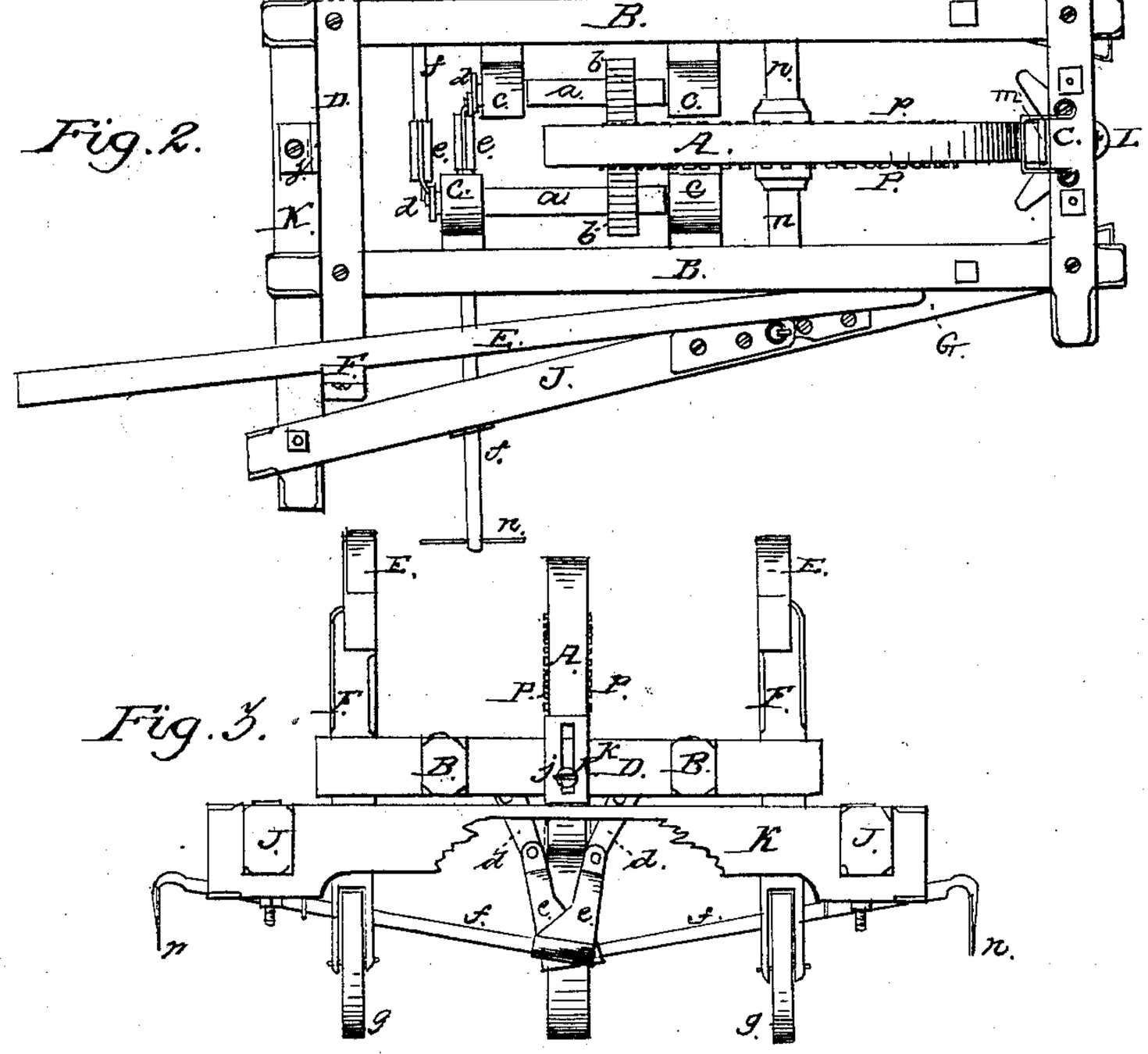

Fig. 3.

WITNESSES:

Z. C. Robbins
Randolph Coyle, Jr.

INVENTOR:

W. W. Golsan

UNITED STATES PATENT OFFICE.

W. W. GOLSAN, OF AUTAUGAVILLE, ALABAMA.

IMPROVEMENT IN COTTON-CULTIVATORS.

Specification forming part of Letters Patent No. **29,877**, dated September 4, 1860.

To all whom it may concern:

Be it known that I, W. W. GOLSAN, of Autaugaville, in the county of Autauga and State of Alabama, have invented a new and Improved Agricultural Implement, which may be termed a "Cotton-Plant Thinning and Cultivating Machine;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a side view of said machine; Fig. 2, a top view, and Fig. 3 a rear view, of the same.

Similar letters indicate corresponding parts in each of the drawings.

The frame of my improved machine for thinning out and cultivating cotton-plants may be constructed in the manner represented in the drawings, or in any other that may be deemed expedient.

A rectangular frame composed of the parallel longitudinal beams B B and the transverse end beams, C D, forms the main portion of the frame-work of said implement. The ends of the hindmost transverse beam, D, of said frame project a short distance beyond the side beams, B B, thereof, and those ends are securely combined with the central portions of the uprights F F. The forward ends of the shafts of the guiding-handles E E of said implement are combined with the outer sides of the frame-beams B B, and near their after ends the said handle-shafts are securely united to the upper ends of the uprights F F. The lower ends of the uprights F F are forked for the reception of the bearing-rollers *g g*.

A transverse beam, H, is securely bolted to the under side of the front transverse beam, C, of the aforesaid rectangular frame B B C D, and the two short beams G G, which project rearwardly and incline outwardly from their connection with the said transverse beam H, are securely bolted to the under side of the front portions of the frame-beams B B. An open three-sided frame, which is composed of the transverse beam K and the inwardly-inclining side beams, J J, is connected by means of hinges with the after ends of the beams G G; or the said frame may be hinged to the beams B B in case it should be deemed expedient to dispense with the beams G G and H in constructing the frame of said implement.

A slotted vertical plate, *j*, rises from the center of the beam K close by the after side of the beam D of the frame B B C D, and by means of the screw *k*, which passes through the slot in the said plate *j* into the said beam D, the rear end of the frame K J J can be secured in any desired position.

Metallic ears *i i* are secured to the outer sides of the aforesaid beams J J, and descend a short distance below the same, which ears are perforated for the reception of the handles *f f* of the laterally-reciprocating hoes *h h*, as shown in the drawings.

The shank *m* of cultivator-point L is secured by means of suitable fastenings to the central portions of the beams C and H and the front end of the machine, and immediately in the rear of the said cultivator-point a large driving-wheel, A, is placed, the shaft *n* of said wheel working in journal-boxes which are secured to the under side of the frame-beams B B.

An annular series of teeth, *p*, project laterally from each side of the arms or disk of the driving-wheel A, which series of teeth gear into the teeth of the pinions *b b* on the front ends of the parallel crank-shafts *a a*, whose journal-boxes are supported by lugs *c c*, that project from the inner sides of the frame-beams B B, all as represented by Fig. 2 of the drawings. The cranks *d d* on the after ends of the shafts *a a* are connected to the inner ends of the hoe-handles *f f* through the medium of the arms *e e*, as shown in Fig. 3. It will therefore be perceived that the rotation of the driving-wheel A will impart a series of laterally-reciprocating movements to the hoes *h h*. By placing the cranks *d d* in the proper positions before attaching them to the arms *e e* on the inner ends of the hoe-handles the hoes will gradually ascend during their outward movements and gradually descend during their inward movements.

I contemplate using the hoes *h h* in the first place for the purpose of thinning out the superfluous cotton-plants in the field-rows—an operation well known to all cotton-planters, and one by which only such a number of cotton-plants are left standing in the rows as can be judiciously cultivated; and to do this I em-

ploy sharp hoes of the proper width and combine them with handles whose length bears such a relation to the distance between the rows of cotton-plants to be operated upon as will enable the said hoes to perform the work required of them. I next use the reciprocating hoes *h h* for cultivating purposes, or for the purpose of drawing the earth up to the sides of the standing cotton-plants, and for performing this function it may perhaps be advisable to use hoes of a different shape from those employed for thinning out the cotton-plants, and the said cultivating-hoes will also require longer handles than are furnished to the thinning-out hoes.

Instead of the rollers *g g* at the lower ends of the uprights F F, it may be expedient to sometimes combine cultivator-points with said uprights.

The adjustability of the hinged frame K J J enables the operator to cause the hoes *h h* to descend to any desired depth into the ground. The action of the said hoes may also be varied by varying the length of the cranks *d d*. When the said machine is employed for thinning-out purposes in a cotton-field the front cultivator-point, L, serves the purpose of forming a clear and distinct guiding-path for the driving-wheel to run in, which guards the machine against lateral vibrations and insures perfect steadiness of movement.

I do not intend to limit the employment of my said improved agricultural implement to cotton-fields, as it may be found to work admirably well as a corn-cultivator and for various other purposes.

What I claim as my invention, and desire to secure by Letters Patent, is—

The arrangement of the cultivator-point L and the central driving-wheel, A, with the crank-shafts *a a*, the laterally-acting hoes *h h*, and the uprights F F, substantially in the manner and for the purpose herein set forth.

W. W. GOLSAN.

Witnesses:
Z. C. ROBBINS,
RANDOLPH COYLE, Jr.